



SOUTH CENTRAL RAILWAY

Headquarters Office,
Personnel Branch,
Secunderabad.

No.SCR/P-HQ/210(a)/JE/Signal/QB & syllabus

Dt. 16.09.2025

Sr.DPO/SC,HYB, BZA, GTL, GNT & NED

Sub:- Administrative reforms in Departmental selections- Standardization of and unification of
Syllabus- Question Bank and syllabus of JE/Signal-Reg.

Ref:- Railway Board letter No. E (NG)/2025/PM1/3 dt. 17.06.2025.

In terms of Railway Board instructions contained in letter dt. 17.06.2025, the standardized and unified syllabus along with the sample question bank for the post of JE/Signal against Promotional quota and LDCE quota approved by PCSTE is enclosed herewith for further necessary action.

Hence all the Divisions are hereby advised to ensure common syllabus may be enclosed along with the notification without any deviation.

Syllabus and sample question bank is available in the official website of SCR.

Encl:- As above.

M. V. Prasad
[M.V. Prasad] 16/09/25
APO/M&EL

For Pr.Chief Personnel Officer

C/- Sr.DSTE/SC,HYB, BZA, GTL, GNT & NED for necessary action.
Dy.CPO/Rectt & Chairman/RRC for kind information please.
Dy.CPO/HQ is requested to place on the official website please.

दक्षिण मध्य रेलवे
South Central Railway



प्रमुख मुख्य सिगनल एवं दूरसंचार इंजीनियर कार्यालय
Office of the Principal Chief Signal & Telecom Engineer
7वां तल, रेल निलयम / 7th Floor, Rail Nilayam
सिकंदराबाद / Secunderabad – 500025

No. SCR-HQ0SNT(ESTB)/2/2021(e- 15662)

Date: 15.09.2025

PCPO/SCR

(Kind Attention: Mr. G.R.S. Rao, CPO/Admin)

Sub: Selections-CBT mode in departmental promotions.

Ref: PCPO/SC's Letter No. SCR/P-HQ/226/SEL/2025 dated 15.7.2025,
30.07.2025 & 06.08.2025.

In connection with CBT mode in departmental promotions in S&T department, the syllabus and question bank for the category of JE/signal submitted by the committee of Sr.DSTE/SC (Convener) and Sr DSTE/HYB is approved by competent authority (copy enclosed). The signed syllabus and question bank copy is furnished in attachments below. It is kindly requested to initiate the selection process at the earliest in view of safety please.

This issues with the approval of PCSTE/SCR.

Encl: As above.

(टी. नीला पावनी / T. Neela Pavani)
उप.मुसिवदूइंजी/प्र.का / Dy.CSTE/HQ
कृते प्रमुसिदूइं/दमरे / For PCSTE/SCR



**OFFICE OF THE SENIOR DIVISIONAL SIGNAL & TELECOM ENGINEER, 2nd
FLOOR, SANCHALAN BHAVAN, SECUNDERABAD DIVISION, SOUTH
CENTRAL RAILWAY, SECUNDERABAD – 500 025**

No.C/SG/I55/Misc

Date:11.09.2025

Dy.CSTE/HQ

Sub: Preparation of Syllabus and Question Bank for JE/Signal LDCE and Promotional Quota.

Ref: 1. Your office Lr.No: SCR-HQ0SNT(ESTB)/2/2021 (e-156622), dt: 26.08.2025.
2. PCPO/SC's Lr.No.SCR/P-HQ/226/SEL/2025 dt: 15.7.2025, 30.07.2025 & 06.08.2025.

With reference to the above, the undersigned & Sr./DSTE/HYB are nominated to drafting and finalizing the syllabus and question bank for the JE/Signal LDCE and Promotional Quota examinations.

Syllabus has been prepared to cover the necessary technical knowledge and operational procedures required for the role of a Junior Engineer/Signal in S&T department. Question bank has been prepared in comprehensive, providing a wide range of questions to adequately test the candidates understanding of the subject contents.

Draft syllabus and question bank for the JE/Signal LDCE and Promotional Quota are hereby submitted for your review and approval.

Encl: As above.

**PRIYA
AGRAWAL**

Digitally signed by
PRIYA AGRAWAL
Date: 2025.09.11
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Sr.DSTE/Co/SC

**YANNA
SRUJAN
KUMAR**

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by YANNA
SRUJAN KUMAR
Date: 2025.09.11
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Sr DSTE/HYB

Syllabus for selection to the posts of JE/Signal 20% LDCE quota and 40% promotional quota

Signaling and interlocking:

- a) Essentials of interlocking.
- b) Preparation of signaling plans and numbering MACLS, PI lay outs.
- c) Preparation of inter cabin allotting.
- d) Signal control circuits for MACLS including PI British type both route setting and non route setting.
- e) Various type of locking in interlocking circuits

Basic signaling concepts:

- a) Role of signaling in Railway operation
- b) Definitions (GR 1.02)
- c) Signaling concepts
- d) Fixed signals, kinds, Aspects & Indications (GP.3.02-3.08)
- e) Designation of signals
- f) Location of signals
- g) Subsidiary signals, Repeaters, Indicators, Markers & Back Lights
- h) Overlaps
- i) Breaking Distance
- j) Sighting Distance & Visibility of signals
- k) Isolation
- l) Simultaneous Reception and Dispatch of trains
- m) Systems of working
- n) Classification of station- Comparison of A, B & C
- o) Standards of interlocking
- p) Operation of points
- q) Inter Cabin control
- r) Level crossing Gate
- s) Section capacity
- t) Principles of Signal Engineering
- u) Intermediate sidings

1. Electrical signaling:-

- a. Relays of various type used in SC Railway.
- b. DC track circuits & their components, Initial adjustments, insulation of points & crossovers etc.
- c. Preparation of track bonding diagrams for different lay outs. (Series, Parallel, series parallel)
- d. Electronic point mechanics, universal and TWS type and their working control and detection circuits.
- e. Various checks to be carried out and measurements to be taken during maintenance.
- f. Colour light signaling, cutting in arrangements. Red lamp protection, and various signaling lamps in
- g. signaling.
- h. Automatic signaling and basic principle and circuitry.
- i. Electric key transmitter and its wiring.
- j. Cables: Various cables used in signaling, parameters of cable, length of parallelism in RE area.
- k. Earthing: Various earths used in signaling instruments of earth values, Maintenance earth and Ring earth.
- l. Various transmitters, rectifier, DC-DC converters used in signaling.
- m. IPS-components of various modules for way side stations, periodical; checking's to be done.
- n. Secondary cells (LMLA) initial charging, deciding of capacity of charger based on cells, Telecom application

- o. chargers used in signaling.
- p. Solar Photo type cells and solar panels.
- q. Generators.
- r. Axle counters: Universal working block diagram, various cards available in the evaluator and their description and function of each card-Adjustment and reading.

2. Block signaling:

- a. Push type button, token less block instrument, PTJ type, Nomenclature of Relays, working principle of various codes transmitted and received.
- b. Signal line Daido block instrument, frequencies used in transmitting and receiving, codes, general working.
- c. SGE double line block instrument, lock and block circuit and LSS control circuit, Dos & Don't, Automatic block signaling circuits.
- d. IBS working principles.
- e. UFSBI along with block panel.
- f. Working principles of HASSDAC, single and dual SSDAC, MSDAC

3. Signaling in general:

- a) Rules applying to railway servants generally
- b) Duties of signal technicians, supervisors and officers
- c) Signal failures and Duties of staff
- d) Schedule of Dimensions-2004
- e) Drawings, Specifications and books of Reference
- F) Layouts of Yards and permanent way
- g) Schedule of Maintenance of signaling apparatus
- h) Painting programme
- i) Periodical Testing and Overhauling of Mechanical and Electrical Signaling Apparatus
- j) Push Trolleys and Motor Trolley
- k) Working of Trains in abnormal Conditions and Emergencies
- l) Rules of working of Automatic Signaling

4. Signaling in 25 KV RE.

- a) SIGNAL CLEARANCE AND VISIBILITY
- b) PROTECTION OF OPERATING AND S & T STAFF
- c) EARTHING ARRANGMENTS IN RE AREA
- e) BLOCK INSTRUMENTS AND CIRCUITS
- f) STRAY CURRENTS
- g) ALTERATIONS TO TRACK CIRCUITS
- h) INDUCTION & IT'S EFFECTS IN SIGNALLING
- i) PERSONNEL SAFTY IN 25KV RE AREA
- j) EVALUATION AND UPGRADATION OF EXISTING SYSTEM DESIGN-VARIOUS PARAMETERS
- K) INDUCED VOLTAGE DUE TO HIGHER CATENARY CURRENTS
- l) REVISED DESIGN OF SINGLING SYSTEM TO SUIT
- m) HIGH CAPACITY CURRENTS

5. Stores:

- a) Various type of stores
- b) Type of tender of work measurements
- c) Various type of estimate and works program
- d) Audit inspection
- e) UDM
- f) Dead stock & T&P maintenance & DMTR
- g) Written of stores and custody
- h) Stock verification and Theft of stores.

6. Establishment matters:

- a) Work men compensation act
- b) HOER & HRMS, IRWCMS
- c) DAR major penalties and minor penalties
- d) Various type of leave rules, pass rules and other welfare measures

- e) Railway conduct rules
- f) PNM, PREM, DCM, Related to trade organization

7. Official language:

- a) A,B,C regions, various incentives issued for implementation of Raj Basha
- b) Equivalent words in Raj Bhasha for certain words in English
- c) Usage of Raj Bhasha in official correspondence.

8. Modern railway signaling:

- a) Electronics interlocking – various types used in SC Railway & their salient feature, various testing procedure for EI commissioning
- b) IPS
- c) Data logger
- d) BPAC, SSDAC, HASSDAC, Dual SSDAC
- e) LED Signals
- f) KAVACH
- g) UFSBI
- h) Automatic signalling.
- i) Inbuilt block working in Electronic Interlocking
- j) Remote Diagnostic and Predictive Maintenance systems

9. Electronic interlocking

- a) PURPOSE ROLE, NECESSITY OF EI
- b) Limitation of RRI
- c) Need of Electronic interlocking
- d) ADVANTAGE OF ELECTRONIC INTERLOCKING SYSTEM OVER RELAY INTERLOCKING
- e) POLICY OF TYPE OF INTERLOCKING TO BE ADOPTED
- f) ELECTRONIC INTERLOCKING SYSTEM
- g) BLOCK DIAGRAM
- h) CLASSIFICATION OF FUNCTIONS
- i) WORKING PRINCIPLE OF EI SYSTEM
- j) CONFIGURATION OF ELECTRONIC INTERLOCKING SYSTEM
- k) CLASSIFICATION BY REDUNDANCY
- l) CLASSIFICATION BY ARCHITECTURE
- m) CRITERIA FOR THE SELECTION OF EI SYSTEM
- n) CLASSIFICATION OF STANDBY CONFIGURATION
- o) BLOCK DIAGRAM OF VARIOUS AVAILABLE SYSTEM
- p) INSTALLATION OF ELECTRONIC INTERLOCKING SYSTEM.

10. Manuals:

- a) SEM
- b) Block working manual
- c) Accident manual
- d) G &SR

JE/Signal EXAM QUESTION BANK

Establishment Matters:-

1. Classification of Railway servants Categories under HOER are_____ ()
a. 3 b. 2 c. 4 d. 1
 2. In HOER an employee in confidential capacity comes under ()
a. Excluded b. Intensive c. Continuous d. Essential Intermittent
 3. An employee in essential intermittent category is ()
a. ASM b. ESM. c. WTM d. Gateman
 4. In continuous category an employee working hours is ()
a. 48hrs/week b. 54hrs/week c. 32hrs/week d. 60hrs/week
 5. Running staff comes under which category? ()
a. Excluded b. Intensive c. Continuous d. Essential Intermittent
 6. Max. working hours/week for an employee in essential intermittent category. ()
a. 48hrs/week b. 54hrs/week c. 72hrs/week d. 42hrs/week
 7. Attenders in waiting rooms comes under which category ()
a. Excluded b. intensive c. essential intermittent d. Intensive
 8. An employee works 42 hours per week and with 30 consecutive hours of rest comes under ()
a. Excluded b. Intensive c. Essential intermittent d. Continuous
 9. SF-1 (Standard Form) is issued to an employee ()
a. To place under suspension b. revocation of suspension
c. both a & b d. None
 10. SF-8 is for in DAR is ()
a. Issuing a charge sheet in case of common proceedings
b. For appointment of an enquiry officer
c. For appointment of a presenting officer.
d. Both b & c.
-

11. SF-5 is proposed to take up an employee for imposition of ()
a. Major penalty b. Minor penalty c. Revocation d. Suspension.
12. Who can avail paternity leave in Indian Railways? ()
a. Male employee b. Women employee
c. both a & b d. trainee employee
13. Censure is _____ penalty. ()
a. Major b. Minor c. both a & b d. none
14. SF-11 is _____ penalty. ()
a. Minor b. Major c. both a & b d. none
15. _____ no. of privilege passes/year for non gazetted employee having ()
more than 5 years of service
a. 1 b. 2 c. 3 d. 4
16. Maternity leave is granted for _____ days. ()
a. 180 days b. 90 days c. 270 days d. 360 days
17. No. of stipendiary leaves for an apprentice in IR. ()
a. 8 b. 10. c. 16 d. 15
18. No of casual leaves for an railway employee of open line in a year. ()
a. 8 b. 10 c. 11 d. 15.
19. Hindi divas is on ()
a. 22 August b. 14 September c. 12 June d. 14 February
20. How many languages is incorporated in 8th schedule? ()
a. 8 b. 12 c. 16 d. 22
21. Which region is Non-speaking Hindi ()
a. A region b. B region c. C region d. both a & b
22. No's of PTO's can be availed by a Railway employee in a year is ()
a. 3 b. 4 c. 2 d. 6
23. A Railway employee maximum how many LAP's can be accumulated in his ()
service
a. 50 b. 200 c. 250 d. 300
24. Child care leave (CCL) is granted for how many years? ()
a. 1 year b. 2 years c. 3 years d. 4 years
25. Per year how many LAP leaves is credited into employee account? ()
a. 15 days b. 20 days c. 25 days d. 30 days
-

26. Per year how many LHAP leaves is credited into employee account? ()
 a. 15 days b. 20 days c. 25 days d. 30 days
27. Duty pass is issued in the form of ()
 a. metal pass b. card pass c. check pass d. all
28. What are the night duty hours ()
 a. 10 PM-6AM b. 9 PM-5AM c. 11PM-6AM d. 12PM-6AM
29. Time limit for submission of claim of travelling allowance (TA) is ___days succeeding the date of completion of journey ()
 a. 30 days b. 60 days c. 90 days d. 120 days
30. Who is the competent authority to approve 3rd chance to ward / widow for appointment on compassionate grounds ()
 a. GM b. AGM c. PCPO D. DRM

A N S W E R S K E Y

1	2	3	4	5	6	7	8	9	10
c	a	d	a	c	c	c	b	a	c
11	12	13	14	15	16	17	18	19	20
a	a	b	a	c	a	c	b	b	d
21	22	23	24	25	26	27	28	29	30
c	b	d	b	d	b	d	a	b	a

MEASURING INSTRUMENTS & PORTABLE HAND TOOLS

- 1) _____ test can be performed with megger ()
a. Earth Fault b. Open circuit c. Short circuit d. All
 - 2) Current can be measured directly without disconnecting the circuit with _____ meter ()
a. Voltmeter b. Ammeter c. Clip-on-meter d. Megger
 - 3) Voltmeter is to be connected in _____ to the circuit. ()
a. Series b. Parallel c. Series-parallel d. none
 - 4) Ammeter is to be connected in _____ to the circuit. ()
a. Series b. Parallel c. Series-parallel d. none
 - 5) Insulation resistance of signaling cable should not be less than _____ per KM. ()
a. 5 M Ω b. 10 M Ω c. 2 M Ω d. 10 Ω
 - 6) Earth leakage detector can be used for _____ ()
a. ON line meggering b. OFF line meggering
c. both a, b d. None
 - 7) Clip on meter is used for measuring _____ in the circuit. ()
a. current without disconnection of links b. voltage
c. resistance d. None
 - 8) ELD measures cable _____ ()
a. voltage b. current c. resistance d. Insulation leakage
 - 9) Earth tester measures _____ ()
a. voltage b. earth resistance
c. cable resistance d. Insulation leakage
 - 10) Signaling cables will be measured with _____ DC megger. ()
a. 500v b. 100v c. 200v d. 110v
 - 11) Quad cable will be measured with _____ DC megger. ()
a. 500v b. 100v c. 200v d. 110v
 - 12) For measuring attenuation loss in Quad cable _____ instrument is used ()
a. TMS kit b. Cross talk measuring set
c. Megger d. OTDR
-

- 13) _____ instrument is used to check continuity of CAT cable ()
a. TMS kit b. LAN tester
c. Megger d. OTDR
- 14) _____ meter is used to measure power loss in OFC ()
a. Optical power meter b. LAN tester
c. Megger d. OTDR
- 15) For measuring attenuation loss in OFC cable _____ instrument is used ()
a. TMS kit b. Cross talk measuring set
c. Megger d. OTDR
- 16) To Increase the range of volt meter, resistance to be added in _____ ()
a. Series b. Parallel
c. Shunt d. Series – Parallel
- 17) To Increase the range of Ammeter, resistance to be added in _____ ()
a. Series b. Parallel
c. Series – Parallel d. None
- 18) Relay contact resistance is measured with _____ meter ()
a. Multi meter b. Earth Tester
c. Megger d. Micro Ohm meter
- 19) Micro Ohm Meter will have _____ No. of probes ()
a. 1 b. 2 c. 3 d. 4
- 20) For working of ELD _____ supply has to be connected to the main terminal ()
a. 24v DC b. 110v DC
c. 110v AC d. 24v AC
- 21) Resistance can be measured with _____ ()
a. Earth Tester b. Megger
c. Micro Ohm meter d. All
- 22) Internal source is compulsory for _____ meter ()
a. Analog Ammeter b. Analog Volt meter
c. Ohm meter d. None
- 23) What happens to the circuit when volt meter is connected in series ()
a. Fuse Blows b. Nothing will happen
c. Current becomes zero d. Voltage becomes zero
-

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
d	c	b	a	a	c	a	d	b	a
11	12	13	14	15	16	17	18	19	20
b	a	b	a	d	a	b	d	D	c
21	22	23							
d	c	c							

POWER EQUIPMENTS. CELLS. BATTERY & IPS

- 1) Inverter gives _____ ()
(a) AC output (b) DC output
(c) Impedance matching (d) None
 - 2) The specific gravity of charged cell is _____ ()
(a) 1180 (b) 1190 (c) 1240 (d) 1220
 - 3) In _____ mode charging, O/P of charger is slightly more than the cell voltage. ()
(a) Initial (b) Boost (c) Float (d) trickle
 - 4) Maximum permissible load on 200AH cell is _____ ()
(a) 20A (b) 12A (c) 10A (d) 24A
 - 5) Trickle charging is given to cells which are in _____ condition. ()
(a) discharged (b) charged (c) idle (d) dead
 - 6) Maximum permissible charging current for 200 AH battery is ()
(a) 10 A (b) 20 A (c) 2 A (d) No maximum
 - 7) End point voltage of the lead acid cell is _____ ()
(a) 1.85 V (b) 1.9V (c) 2.0V (d) 2.2V
 - 8) In Boost charging, terminal voltage of cell is set to _____ volt/cell ()
(a) 2.2V (b) 2.3V (c) 2.4V (d) 2.7V
 - 9) In float charging, terminal voltage of cell is set to _____ volt/cell ()
(a) 2.15V (b) 2.0V (c) 2.4V (d) 2.7V
 - 10) In initial charging terminal voltage of cell is set to _____ volt/cell ()
(a) 2.25 V (b) 2.3V (c) 2.4V (d) 2.7V
 - 11) Output of SMR is _____ ()
(a) 110v AC (b) 110v DC (c) 230vAC (d) 230v DC
 - 12) Input of SMR is _____ ()
(a) 110v AC (b) 110v DC (c) 230vAC (d) 230v DC
 - 13) Inverter converts _____ ()
(a) AC to AC (b) AC to DC (c) DC to AC (d) DC to DC
 - 14) DC to DC converter converts _____ ()
(a) AC to AC (b) AC to DC (c) DC to AC (d) DC to DC
 - 15) Indication that appears when SMR switches from Boost mode to Float mode is ()
(a) system shut down (b) stop DG set
(c) call S & T staff (d) emergency start DG set
 - 16) Electrolyte level should be _____ above the plate level ()
(a) 12mm -15mm (b) 6 mm – 8 mm
(c) up to brim (d) Just above the plates
-

- 17) In IPS system inverters are configured with _____ standby ()
(a) cold (b) warm (c) hot (d) none
- 18) In IPS system TFRs are fed through _____ ()
(a) DC to DC converters (b) Inverters
(c) SMRs (d) CVT
- 19) Capacity of cell is measured in ()
(a) AC (b) AH (c) DC (d) None
- 20) Specific gravity of charged cell is _____ ()
(a) 1200-1220 (b) 1180-1190 (c) 1280 -1300 (d) None
- 21) Specific gravity of discharged cell is _____ ()
(a) 1200 (b) 1180 (c) 1280 (d) None
- 22) Specific gravity is measured with _____ ()
(a) Voltmeter (b) Megger (c) Hydrometer (d) None
- 23) Voltage of charged cell is _____ ()
(a) 2.1 V (b) 1.85 V (c) 1.2 V (d) None
- 24) Voltage of discharged cells is _____ ()
(a) 2.1 (b) 1.85 V (c) 2.2 V (d) None
- 25) Resistance of earth value connected to IPS shall not exceed ()
(a) 10 Ohms (b) 1 Ohm (c) zero Ohms (d) None
- 26) Electrolyte solution in a secondary LA cell is ()
(a) Sulphuric Acid
(b) Sulphuric Acid and Battery grade Distilled water
(c) Battery grade Distilled water
(d) None of the above
- 27) Purpose of IPS is to ()
(a) Integrate supply required for signaling (b) avoid blank signal
(c) achieve redundancy in power supply for signaling (d) All the above
- 28) At 70% DOD of Battery, The output of _____ is cut off ()
(a) Inverter (b) DC-DC converters
(c) Status Monitoring Panel (d) CVT
- 29) In IPS when Battery voltage falls below 98V DC, DC supply is cut off to _____ ()
(a) ACDP (b) DCDP
(c) a & b (d) None of the above
- 30) Capacity of cell depends upon ()
(a) No. of plates inside the cell (b) Thickness of plates inside the cell
(c) Area of plates inside the cells (d) All the above
-

- 31) In IPS, Signal lamp circuit is normally fed by output of ()
 (a) Inverter (b) CVT for signals
 (c) CVT for tracks (d) none of the above
- 32) Stop DG set audio-visual alarm generates whenever FRBC/SMR change over from ()
 (a) Float mode to Boost mode (b) Boost mode to Float mode
 (c) Both the above (d) None of the above
- 33) Output of CVT is _____ ()
 (a) 110 V AC (b) 230 V AC (c) 110 V DC (d) None
- 34) Internal resistance of a secondary cell shall not be more than ()
 a) 2 Ohms b) 0.5 Ohms c) 20 Ohms d) None
- 35) Coidal life of a secondary cell is ()
 a) 2 years b) 4 years c) 8 years d) None
- 36) Efficiency of a secondary cell can be expressed in ()
 a) Current b) Volt c) Watt Hour d) AH or V or WH efficiency
- 37) Earth resistance permitted for IPS is ()
 a) 2 Ohms b) 0.5 Ohms c) 20 Ohms d) None
- 38) Which of the following is NOT associated with IPS ()
 a) CSU b) LVDS c) SMP d) SSD
- 39) Inverters in IPS are connected in ()
 a) Warm standby mode b) Hot standby mode
 c) Both d) None
- 40) Auto/Manual change over switch in IPS shall normally be placed in _ Position ()
 a) Inverter 1 b) Inverter 2 c) CVT d) None
- 41) Current is absorbed in the cell from the charging circuit, and the direction of the current in the cell is _____ ()
 a) From positive plate to negative plate b) From negative plate to positive plate
 c) Can be any direction d) None
- 42) When a cell is on load, the current is given out by the cell ()
 a) From positive plate to negative plate b) From negative plate to positive plate
 c) Can be any direction d) None
- 43) Direction of current within the cell when the cell is discharging is ()
 a) From positive plate to negative plate b) From negative plate to positive plate
 c) Can be any direction d) None
- 44) Battery charger shall be suitable for satisfactory operation with the Input Voltage range of ()
 a) 220V to 270V AC b) 230 V AC
 c) 160V to 270V AC d) 110 V AC
-

- 45) In IRS 86-2000 chargers, the float voltage can be adjustable between ()
 a) 2.2 V to 2.7 V per cell b) 2.12 to 2.3 V per cell
 c) 2.2 V per cell d) 2.4 V per cell
- 46) In IRS 86-2000 chargers, if the current drawn by the battery is more than _____ percent of the set charging current, then the charger automatically switch to boost mode of operation. ()
 a) 8 to 12 percent b) 3 to 5 percent c) 20 to 25 percent d) 50 percent
- 47) When the current drawn by the battery is less than _____ percent of the set charging current and the voltage across the battery terminals is 2.4V per cell, the charger is automatically switched back to the FLOAT mode ()
 a) 8 to 12 percent b) 3 to 5 percent c) 20 to 25 percent d) 50 percent
- 48) Power handling capacity of Normal Ferro Resonant Type Automatic Ac Voltage Regulator (IRS: S-74/89 with Amd.6) ()
 a) 5 KVA to 10KVA b) 0.5 KVA to 10KVA
 c) 10KVA d) 0.5 KVA
- 49) Which of the following with respect to Ferro Resonant AVR is wrong ()
 a) Complete automatic and continuous regulation
 b) Immune to short circuit at O/P
 c) Self-protection against over load.
 d) O/P voltage is not frequency dependent
- 50) Which of the following is not associated with Ferro Resonant AVR ()
 a) Primary winding b) Secondary winding
 c) Split field winding d) Compensating winding

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	d	c	a	c	b	a	c	a	d
11	12	13	14	15	16	17	18	19	20
b	c	c	d	b	a	c	d	b	a
21	22	23	24	25	26	27	28	29	30
b	c	a	b	b	b	d	a	c	d
31	32	33	34	35	36	37	38	39	40
a	b	b	a	b	d	b	d	b	d
41	42	43	44	45	46	47	48	49	50
a	a	b	c	b	a	b	b	d	c

BASIC ELECTRICITY AND MAGNETISM

- 1) Resultant resistance will increase when resistors are connected in ()
(a) Series (b) parallel (c) series and parallel (d) all
 - 2) Resultant resistance will decrease when resistors are connected in ()
(a) Series (b) parallel (c) series and parallel (d) all
 - 3) Condensers of same capacity are connected in parallel, the resultant value ()
(a) becomes double (b) become half
(c) will not change (d) become zero
 - 4) Condensers of same capacity are connected in series, the resultant value ()
(a) becomes double (b) become half
(c) will not change (d) become zero
 - 5) The unit for capacitance is _____ ()
(a) Volts (b) Newton (c) Coulomb (d) Farads
 - 6) 50 Ω & 50 Ω resistors are connected in series the resultant Resistance is ()
(a) 75 Ω (b) 50 Ω (c) 100 Ω (d) 25 Ω
 - 7) 50 Ω & 50 Ω resistors are connected in parallel the resultant Resistance is ()
(a) 50 Ω (b) 100 Ω (c) 25 Ω (d) 150 Ω
 - 8) To measure current in a circuit, Ammeter is connected in _____ ()
(a) Parallel (b) Series (c) Series & Parallel (d) None
 - 9) To measure voltage in a circuit, Voltmeter is connected in _____ ()
(a) Parallel (b) Series (c) Series & Parallel (d) None
 - 10) To measure current in a circuit, circuit need not be disconnected if _____ is used ()
(a) Ammeter (b) Multimeter (c) Clip-on meter (d) None
 - 11) _____ Converts AC to DC. ()
(a) Oscillator (b) Filter (c) Rectifier (d) Inverter
 - 12) In bridge rectifier _____ no. of diodes are used. ()
(a) 1 (b) 2 (c) 3 (d) 4
 - 13) _____ will not change in Transformer ()
(a) Voltage (b) Current (c) Resistance (d) Frequency
 - 14) In step up transformer the voltage on primary side is _____ the voltage on secondary side ()
(a) More than (b) Less than (c) Equal to (d) None
-

- 15) In step down transformer the voltage on primary side is _____ the voltage on secondary side ()
 (a) More than (b) Less than (c) Equal to (d) None
- 16) In 1:1 transformer the voltage on primary side is _____ the voltage on secondary side ()
 (a) More than (b) Less than (c) Equal to (d) None
- 17) Ohm's Law is _____ ()
 (a) $V = IR$ (b) $I = V / R$ (c) $R = V / I$ (d) All
- 18) In an electrical circuit the Power = _____ ()
 (a) $V \times I$ (b) $I^2 R$ (c) V^2 / R (d) All
- 19) In an electrical circuit at constant resistance, if Voltage is increased, Current ()
 (a) decreases (b) increases (c) remains constant (d) None
- 20) In an electrical circuit at constant resistance, if Voltage is decreased Current ()
 (a) decreases (b) increases (c) remains constant (d) None
- 21) In an electrical circuit at constant Voltage, if Resistance is decreased Current ()
 (a) decreases (b) increases (c) remains constant (d) None
- 22) In an electrical circuit at constant Voltage, if Resistance is increased Current ()
 (a) decreases (b) increases (c) remains constant (d) None
- 23) The unit for Power is ()
 (a) Newton (b) Watts (c) Joules (d) Hertz
- 24) The unit for frequency is ()
 (a) Newton (b) Watts (c) Joules (d) Hertz
- 25) Transformer works on _____ principle ()
 (a) Mutual induction (b) Electrostatic induction
 (c) Self induction (d) None
- 26) In a transformer there will be _____ between AC voltages of primary coil and secondary coil ()
 (a) decrease in frequency (b) increase in frequency
 (c) no change in frequency (d) None
- 27) In every magnet _____ number of poles present ()
 (a) 3 (b) 2 (c) 4 (d) 6
- 28) When North pole of a magnet brought nearer to South pole of other magnet ()
 (a) Repels (b) Attracts
 (c) Neither attracts nor repels (d) None
-

- 29) When South pole of a magnet brought nearer to South pole of other magnet ()
(a) Repels (b) Attracts
(c) Neither attracts nor repels (d) None
- 30) An electrical generator converts ()
(a) Electrical energy into Mechanical energy
(b) Mechanical energy into Electrical energy
(c) Electrical energy into Sound energy
(d) Sound energy into Electrical energy
- 31) In a DC generator _____ occurs ()
(a) copper losses (b) Magnetic losses
(c) Mechanical losses (d) All the above
- 32) According to Faraday's Laws of Electromagnetic induction, whenever a conductor cuts magnetic flux _____ is produced ()
(a) induced e.m.f. (b) Heat (c) Light (d) None
- 33) Electrical energy may be converted into _____ energy ()
(a) Mechanical (b) Sound (c) Chemical (d) All
- 34) In a stabilizer, if input voltage increases within the range the output voltage ()
(a) increases (b) decreases (c) remains constant (d) none
- 35) In a stabilizer, if input voltage decreases within the range the output voltage ()
(a) increases (b) decreases (c) remains constant (d) none
- 36) What will be the current in a QN1 relay of coil resistance 400 ohms is operated with 24 V DC ()
(a) 60 mA (b) 50 mA (c) 40 mA (d) 30 Ma
- 37) What will be the current in a QNA1 relay of coil resistance 208 ohms is operated with 24 V DC ()
(a) 80 mA (b) 90 mA (c) 100 mA (d) 115 mA
- 38) _____ is used to protect electrical/electronic equipments from high currents ()
(a) Fuse (b) Resistor (c) Inductor (d) None
- 39) The Power factor is ()
(a) the ratio of true(working) power to apparent power
(b) the ratio of apparent power to true power
(c) product of true power and apparent power
(d) None
- 40) Capacity of the transformer is measured in _____ ()
(a) Volts (b) Amperes (c) VA (d) hertz
-

- 41) _____ shall be given to transformer ()
a) DC Voltage only (b) AC Voltage only
(c) Either AC or DC voltages (d) None
- 42) The transformer will not work for DC voltages due to ()
(a) constant voltage (b) constant current
(c) constant resistance (d) constant flux
- 43) CVT / AVR works in _____ region ()
(a) active (b) magnetic saturation (c) passive (d) cut-off
- 44) CVT means ()
(a) Constant voltage transformer (b) current voltage transformer
(c) Continuous variable transformer (d) None
- 45) In a bridge rectifier, how many diodes will conduct in a half cycle ()
(a) 1 diode (b) 2 diodes (c) 3 diodes (d) 4 diodes
- 46) Resistance x Capacitance = ()
(a) Charging time of capacitor (b) Discharging time of capacitor
(c) Both a & b (d) None
- 47) Zener diode gives _____ voltage ()
(a) regulated (b) varying voltage (c) both a & b (d) None
- 48) Zener diode works in _____ region ()
(a) active (b) passive (c) cut-off (d) reverse breakdown
-

- 49) converts DC voltage to AC voltage ()
 (a) Rectifier (b) Inverter (c) Amplifier (d) Transformer
- 50) An Opto coupler converts _____ ()
 (a) Electrical energy to light energy & vice versa (b) Electrical energy to sound
 (c) Electrical energy to mechanical energy (d) Electrical energy to chemical energy
- 51) The main application of the Opto coupler is to _____ ()
 (a) Isolate two circuits (b) combine two circuits
 (c) Combine three circuits (d) combine four circuits
- 52) Capacitor stores _____ energy ()
 (a) mechanical (b) electrical (c) light (d) chemical

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	b	a	b	d	c	c	b	a	c
11	12	13	14	15	16	17	18	19	20
c	d	d	b	a	c	d	d	b	a
21	22	23	24	25	26	27	28	29	30
b	a	b	d	a	c	b	b	a	b
31	32	33	34	35	36	37	38	39	40
d	a	d	c	c	a	d	a	a	c
41	42	43	44	45	46	47	48	49	50
b	d	b	a	b	c	a	d	b	a
51	52								
a	b								

SAFETY IN TRAIN OPERATION, S O D & D M

- 1) Maximum height above rail level of any part of signal gear provided between rails of track is____ ()
(a) 64 mm (b) 2135 mm (c) 1676 mm (d) none
 - 2) In all new yards, we must follow ()
(a) Existing works (b) New works (c) both (d) none
 - 3) Maximum height of signaling gear above rail level for a width of 1600 mm in BG inside of the track____ ()
(a) 64 mm (b) 2135 mm (c) 6250 mm (d) none
 - 4) As per Revised Schedule of dimensions, New works includes ()
(a) Additions of new lines / structure (b) gauge conversion
(c) Doubling (d) all
 - 5) Minimum horizontal distance of a Point machine in BG from CLOT ()
(a) 64 mm (b) 2135 mm (c) 1600 mm (d) 2360 mm
 - 6) Red aspect of signal should be at a height of____from above the rail level. ()
(a) 3355 mm (b) 3650 mm (c) 3555 mm (d) 4650 mm
 - 7) Minimum horizontal distance of a Location Box in BG from CLOT ()
(a) 1905 mm (b) 2135 mm (c) 1600 mm (d) 2360 mm
 - 8) Minimum horizontal distance of a TLJB in BG from CLOT ()
(a) 1905 mm (b) 2135 mm (c) 1600 mm (d) 2360 mm
 - 9) The nearest part of the signal post from the centre of track for a signal with horizontal route ()
(a) 2.135m (b) 2.84 m (c) 2.36m (d) 2.8m
 - 10) Minimum clearance between toe of open switch and stock rail in new works ()
(a) 95 mm (b) 115 mm (c) 112 mm (d) 118 mm
 - 11) The minimum clearance required from center of track to the signal post is____()
(a) 1600 mm (b) 2135 mm (c) 1905 mm (d) 2360 mm
 - 12) When point is under disconnection, stop signal governing the point____()
(a) need not kept at ON (b) need kept at ON
(c) optional (d) not compulsory
-

- 13) The distance from nearest wire transmission to the CLOT in BG is _____ ()
(a) 1.9 m (b) 2.5 m (c) 3 m (d) 6m
- 14) Minimum horizontal distance of a Gate post in BG from CLOT ()
(a) 4 m (b) 5 m (c) 6 m (d) 3 m
- 15) Minimum horizontal distance of a Gate lodge in BG from CLOT ()
(a) 4 m (b) 5 m (c) 6 m (d) 3 m
- 16) Minimum horizontal distance of a Gate lodge in BG from edge of road ()
(a) 4 m (b) 5 m (c) 6 m (d) 8 m
- 17) Minimum horizontal distance of a Height gauge from CLOT ()
(a) 4 m (b) 5 m (c) 6 m (d) 8 m
- 18) Normal implantation of OHE mast (single OHE) from CLOT ()
(a) 2.5 m (b) 2.8 m (c) 3 m (d) 2.36 m
- 19) Normal implantation of OHE mast (more than one OHE) from CLOT ()
(a) 2.5 m (b) 2.8 m (c) 3 m (d) 2.36 m
- 20) Min. horizontal distance of any telegraph post measured from the centre of & at right angles to the nearest track for New works or alterations to existing works ()
(a) The height of the post plus 2135 mm
(b) The height of the post plus 2360 mm
(c) The height of the post plus 3135mm
(d) The height of the post plus 2560 mm
- 21) Max. gradient in station yards for new works ()
(a) 1 in 100 (b) 1 in 260 (c) 1 in 400 (d) 1 in 1200
- 22) Maintainer shall advise the station master on duty in writing on _____ and obtain the signature before Group-B work is started. ()
(a) written memo (b) Consent memo
(c) Disconnection memo (d) none
- 23) For replacing Signal LED unit _____ Memo is required. ()
(a) written memo (b) Consent memo
(c) Disconnection memo (d) none
-

- 24) For testing of point gauge_____Memo is required for. ()
 (a) written memo (b) Consent memo
 (c) Disconnection memo (d) none
- 25) Point adjustment comes under_____works. ()
 (a) written memo (b) Consent memo
 (c) Disconnection memo (d) none
- 26) _____Memo is required for opening of block instrument for visual inspection ()
 (a) written memo (b) Disconnection memo
 (c) Consent memo (d) none
- 27) EKT maintenance comes under_____works ()
 (a) Group-A (b) Group-B
 (c) Group-C (d) Disconnection memo
- 28) Adjustment of Regulating resistance comes under ()
 (a) Group-A (b) Group-B
 (c) Group-C (d) Disconnection memo
- 29) Divisional disaster management plan is signed by ()
 (a) GM (b) AGM (c) CSO (d) DRM/ADRM
- 30) Divisional disaster management plan is reviewed and updated in_____ ()
 (a) January (b) June (c) July (d) December

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	b	a	d	c	b	d	a	b	c
11	12	13	14	15	16	17	18	19	20
d	b	c	b	c	c	d	b	c	b
21	22	23	24	25	26	27	28	29	30
d	b	c	b	c	c	c	c	d	a

BASIC CONCEPTS OF SIGNALLING

- 1) Position light type CLS shunt signal at ON position displays_____ ()
(a) Two lights horizontally (b) Two lights inclined at 45 degrees to the left.
(c) Two lights vertically (d) No lights
 - 2) Minimum Visibility of main line starter in MACLS is ()
(a) 400 mtrs (b) 300 mtrs (c) 200 mtrs (d) None
 - 3) Minimum distance required between Distant & Home signal in MACLS is____()
a. 1400 mtrs b. 1000 mtrs c. 1200 mtrs d. None
 - 4) Block Section Limit Board Provided on_____and demarcates_____ ()
a. Single line & Block section b. Double line & Station limits
c. Single line & Station section d. Double line & Block section
 - 5) 'P' marker is provided on_____ ()
a. All distant signals b. All distant signals in CLS area
c. All permissive signals d. None
 - 6) A gate cum distant signal will have_____number of aspects. ()
a. 2 b. 3 c. 4 d. none
 - 7) Signal overlap in multiple aspect signaling is ()
a.180 mtrs b. 120 mtrs c. 400 mtrs d. 1000 mtrs
 - 8) Block overlap in multiple aspect signaling is ()
a.180 mtrs b. 120 mtrs c. 400 mtrs d. 1000 mtrs
 - 9) Gate stop signal in MACLS is provided at_____mtrs from the LC gate. ()
a. 180 mtrs b. 400 mtrs c. 120 mtrs d. None
 - 10) Speed of trains in Std-I (R) interlocking is_____ ()
a. 50 kmph b. 110 kmph c. 140 kmph d. 160 kmph
 - 11) Speed of trains in Std-II (R) interlocking is_____ ()
a. 50 kmph b. 110 kmph c. 140 kmph d. 160 kmph
 - 12) Speed of trains in Std-III(R) interlocking is_____ ()
a. 50 kmph b. 110 kmph c. 140 kmph d. 160 kmph
 - 13) Speed of trains in Std-IV (R) interlocking is_____ ()
a.50 kmph b. 120 kmph c. 140 kmph d. 160 kmph
 - 14) Calling on signal is provided_____ ()
a. Below the distant signal b. below the home signal
c. Below the last stop signal d. Below the shunt signal
-

- 15) The normal aspect of inner distant signal is ()
a. Red b. Yellow c. Double yellow d. Green
- 16) The reception signal provided below main home signal ()
a. Co-acting signal b. Repeating signal
c. Calling on signal d. None
- 17) D/signal in double distant territory displays proceed aspect then it indicates ()
a. Run through on main line b. Run through on loop line
c Trains going to be received on main line d. a & c
- 18) Catch siding shall be provided where the gradient steeper than 1:80 is falling towards_____ ()
(a) Station section (b) station siding line
(c) block section (d) All
- 19) The Goods warning board shall be provided at 1 Km in rear of____signal ()
a) Station home b) Gate home c) IB signal d) none of above
- 20) Gate signal under absolute block system shall be provided with_____marker. ()
a) 'G' b) 'AG' c) 'PG' d) Illuminated 'G'
- 21) When the shunt signal and calling on signal are provided below stop signal then Placement of signals from top_____ ()
a) Calling on signal and then shunt signal b) shunt signal and then calling on signal
c) must not be provided d) a or b
- 22) A shunt signal can be provided below_____ ()
a) FSS b) Starters c) Advance starter d) b & c
- 23) Calling-on signal can be provided below_____ ()
a) FSS b) Starters c) Advance starter d) a & b
- 24) R marker is provided for_____signal ()
a) Repeating b) Co-acting c) Routing home d) second distant
- 25) _____signal is provided if the visibility of signal is obstructed due to ROB ()
a) Repeating b) Routing c) Co-acting d) none
- 26) _____marker is provided for the sidings taken off from block section ()
a) P b) S c) R d) C
- 27) C marker is painted with_____ ()
a) Letter C painted in white on black circular disc
b) Letter C painted in black on white circular disc
-

- c) Letter C painted in black on yellow circular disc
d) Letter C painted in yellow on black circular disc
- 28) P marker is painted with _____ ()
a) Letter P painted in white on black circular disc
b) Letter P painted in yellow on black circular disc
c) Letter P painted in black on yellow circular disc
d) Letter P painted in black on white circular disc
- 29) S marker board is painted with _____ ()
a) Letter S painted in white on black circular disc
b) Letter S painted in yellow on black circular disc
c) Letter S painted in black on yellow circular disc
d) Letter S painted in black on white circular disc
- 30) G marker board is painted with _____ ()
a) Letter G painted in black on yellow circular disc
b) Letter G painted in yellow on black circular disc
c) Letter G painted in black on white circular disc
d) Letter G painted in white on black circular disc
- 31) Second distant signal post is painted with _____ ()
a) alternate black and yellow bands b) alternate yellow and white bands
c) alternate black and white bands d) Silver white
- 32) Inner distant signal post is painted with _____ ()
a) alternate black and yellow bands b) alternate yellow and white bands
c) alternate black and white bands d) Silver white
- 33) Signal warning board indicates to the driver that he is approaching a _____ ()
a) Permissive signal b) Stop signal
c) Goods siding line d) 2nd distant signal
- 34) Signal warning board need not be provided in _____ territory ()
a) Double distant signal b) Single distant signal
c) Auto signaling d) none
- 35) Signal warning board is provided at a distance of 1.4 km from _____ ()
a) Double distant signal b) Single distant signal
c) Stop signal d) Routing home
- 36) In single Distant signal territory, the distant signal will display attention aspect for a train _____ ()
a) admitted on loop line b) admitted on main line
c) run through via loop line d) all
-

- 37) In single Distant signal territory, the distant signal will display proceed aspect for a train_____ ()
 a) admitted on loop line b) admitted on main line
 c) run through via loop line d) run through via main line
- 38) The normal aspect of ASS is _____ aspect ()
 a) caution b) proceed c) attention d) none
- 39) Semi automatic stop signal is provided with _____ ()
 a) Illuminated A marker b) Illuminated AG marker
 c) Illuminated S marker d) none
- 40) ASS interlocked with points and LC gate is provided with illuminated — marker()
 a) A b) AG c) A and AG d) none
- 41) Semi automatic stop signal will work as _____ ()
 a) automatic stop signal b) manual stop signal
 c) a and b d) none
- 42) Semi automatic stop signal is operated by _____ knob/lever ()
 a) queen b) king c) commander d) none
- 43) Authority to pass Automatic stop signal at ON position is _____ ()
 a) 2 min by day, 1 min by night b) 1 min by day, 1 min by night
 c) 1 min by day, 2 min by night d) 2 min by day, 2 min by night
- 44) Automatic stop signal can be _____ aspect ()
 a) 2 only b) 3 only c) 4 only d) 3 or 4
- 45) Aspect of ASS will depend upon _____ ()
 a) Aspect of signal ahead b) Condition of track ckt ahead
 c) position of train ahead d) all
- 46) 3 aspect ASS will display __ aspect when 1 signaling section and overlap is clear()
 a) ON b) Caution c) Proceed d) Attention
- 47) 3 aspect ASS will display __ aspect when 2 signaling section and overlap is clear()
 a) Proceed b) Attention c) Caution d) ON
- 48) 4 aspect ASS will display __ aspect when 1 signaling section and overlap is clear()
 a) Caution b) Attention c) Proceed d) ON
- 49) 4 aspect ASS will display __ aspect when 2 signaling section and overlap is clear()
 a) Caution b) Attention c) Proceed d) ON
- 50) 4 aspect ASS will display __ aspect when 3 signaling section and overlap is clear()
 a) Caution b) Attention c) Proceed d) ON
-

- 51) 3 aspect ASS will display caution aspect when_____ ()
a) 1 signaling section & overlap is clear b) 2 signaling sections & overlap is clear
c) 3 signaling sections & overlap is clear d) none
- 52) 3 aspect ASS will display proceed aspect when_____ ()
a) 1 signaling section & overlap is clear b) 2 signaling sections & overlap is clear
c) 3 signaling sections & overlap is clear d) none
- 53) 4 aspect ASS will display caution aspect when_____ ()
a) 1 signaling section & overlap is clear b) 2 signaling sections & overlap is clear
c) 3 signaling sections & overlap is clear d) none
- 54) 4 aspect ASS will display Attention aspect when_____ ()
a) 1 signaling section & overlap is clear b) 2 signaling sections & overlap is clear
c) 3 signaling sections & overlap is clear d) none
- 55) 4 aspect ASS will display proceed aspect when_____ ()
a) 1 signaling section & overlap is clear b) 2 signaling sections & overlap is clear
c) 3 signaling sections & overlap is clear d) none
- 56) Automatic signaling system can be provided on_____ ()
a) S/L b) D/L c) Quadruple line d) all
- 57) Direction of traffic must be established for working of trains on ____ system ()
a) RE S/L automatic b) RE D/L automatic
c) Non-RE S/L automatic d) a and c
- 58) Direction of traffic need not be established for working of trains on __ system ()
a) RE S/L automatic b) RE D/L automatic
c) Non-RE S/L automatic d) a and c
- 59) Automatic signaling system ()
a) Reduces the headway between trains b) Increases the section capacity
c) Safety depends upon the alertness of driver d) all
- 60) Minimum Overlap distance beyond automatic stop signal is ()
a) 120 mt b) 180 mt c) 400 mt d) none
- 61) Relation between number of aspects of signal and overlap is ()
a) No relation b) Directly proportional c) Inversely proportional d) none
- 62) Automatic stop signal provided with illuminated "A" and "AG" marker will display illuminated "A" marker when ()
a) Points are detected b) Closed position of LC is detected
c) a and b d) none
- 63) Automatic stop signal provided with illuminated "A" and "AG" marker will display illuminated "AG" marker when ()
a) Points are detected b) LC gate is defective
-

c) a and b

d) none



- 64) Automatic stop signal provided with illuminated "A" & "AG" marker can display()
 a) either "A" or "AG" marker b) both markers at a time
 c) question is vague d) none
- 65) Automatic stop signal working either as fully automatic signal or manual signal is provided with_____marker ()
 a) Illuminated "A" b) Illuminated "M" c) Illuminated "A" & "M" d) none
- 66) Braking distance will depend upon ()
 a) Speed of the train b) Velocity of wind c) Brake power availability d) all
- 67) Braking distance will depend upon ()
 a) Gradient b) Rollability of wheels c) State of rails (wet/dry) d) all
- 68) Cross bars on signal unit indicates ()
 a) signal not in use b) signal will work during day time only
 c) signal will work during night time only d) defective signal
- 69) Gate signals in automatic section is provided with ()
 a) "G" marker b) "A" marker c) "G" marker & illuminated "A" marker d) a and b
- 70) On Indian railways there are_____systems of train working ()
 a) 4 b) 5 c) 6 d) 7
- 71) Absolute block working system consists of _classes of station ()
 a) 2 b) 3 c) 4 d) 6
- 72) Portion of track situated between outermost signals of the station is called as ()
 a) block limits b) station limits c) shunting limits d) Clear standing room limit
- 73) Point and trap indicators are ()
 a) Signals b) Not signals c) fitted to and work with points d) none
- 74) Entry of trains into block section is controlled by ()
 a) Home signal b) Advance starter
 c) Shunt signal d) Calling-On signal
- 75) Intermediate block signal is substitute of class_____station ()
 a) A b) B c) C d) D
- 76) Terminal stations is also called as_____station ()
 a) Class A b) Class B c) Class C d) Special class
- 77) Approved special instructions are prescribed and approved by ()
 a) CSTE b) COM c) CRS d) AGM
-

- 78) Adequate distance is the distance required for ()
 a) Ensuring safety b) Stabling of vehicles
 c) Shunting of vehicles d) none
- 79) Permission given by block station in advance to block station in rear for train to leave is called as ()
 a) Line block b) Line clear c) Block back d) Block forward
- 80) As per SEM part -1, correction slip no 18 calling initiation time is _____ sec ()
 a) 60 b) 90 c) 120 d) 240
- 81) As per SEM part -1, correction slip no 18 calling on signal below starter can be initiated ()
 a) Immediately after berthing track is occupied
 b) 60 sec after berthing track is occupied
 c) 120 sec after berthing track is occupied
 d) Immediately without berthing track is occupied
- 82) Calling on signal will not detect points in the _____ ()
 a) Route b) Isolation c) overlap d) none
- 83) Movement of trains into auto signaling section is controlled by _____ signal ()
 a) Calling on b) Shunt c) permissive d) Stop
- 84) Automatic signaling arrangement facilitates to _____ line capacity ()
 a) Hamper b) Increase c) Reduce d) none
- 85) Once the signal has been taken OFF, it must not be possible to alter the points unless the _____ has been put back to ON position. ()
 a) Point b) Signal c) Lock bar d) none
- 86) It shall not be possible to take OFF at the same time, any two fixed signals which can lead to _____ movements ()
 a) Conflicting b) Parallel c) Flexible d) To and fro
- 87) _____ signal is a Pre-warning signal ()
 a) Shunt b) Calling-on c) Distant d) none
- 88) Second distant signal is provided at a distance of _____ km from stop signal. ()
 a) 1 b) 1.2 c) 1.4 d) 2
- 89) Advantages of Color light signal is ()
 a) Day and night aspects are same b) Signals are placed at driver's eye level
 c) Long range of operation d) all
- 90) Proceed and be prepared to stop at next stop signal is indicated by _____ aspect of signal ()
 a) ON b) Caution c) Attention d) proceed
-

- 91) Proceed and be prepared to pass next stop signal at restricted speed is indicated by _____ aspect of signal ()
 a) ON b) Caution c) Attention d) proceed
- 92) The Distant signal shall display only _____ aspect where "Distant" and "Inner Distant" signals are provided ()
 a) Attention or Proceed b) Caution only c) Proceed only d) none
- 93) Intermediate starter signal is provided between ()
 a) starter and home b) starter and routing home
 c) starter and advanced starter d) loop line starter and main line starter
- 94) _____ is provided at stations where Uninterrupted shunting operations is required in both directions (to and fro) ()
 a) Position light type shunt signal b) Calling on
 c) Routing starter d) Shunting permitted indicator
- 95) BSLB is provided to distinguish the limit of ()
 a) station limits b) block section c) station section d) none
- 96) Block overlap in class C station provided color light signal is ()
 a) 400 mt b) 180 mt c) 120 mt d) none
- 97) Classification of LC gate is made after conducting level crossing census once in ()
 a) 2 years b) 3 years c) 4 years d) 5 years
- 98) LC gate census will be done by supervisors of ()
 a) Engg and S & T b) Traffic and S & T
 c) S & T, Engg and Traffic d) S & T and operating
- 99) Train vehicle units per day is calculated based on ()
 a) no. of passengers x no. of road vehicle b) no. of trains x no. of pedestrians
 c) no. of trains x no. of passengers d) no. of trains x no. of road vehicle
- 100) Interlocking of LC gate is not required for ()
 a) Special class b) A class c) B class d) D class
- 101) Interlocking of LC gate is required for ()
 a) Special class b) A class c) B class d) all
- 102) Approach Warning to be provided at _____ ()
 a) Special class b) A class c) B class d) all
- 103) LC gate in automatic signaling section shall be ()
 a) Interlocked irrespective of classification b) Provided with approach warning
 c) Approach locking d) all
- 104) Signal protecting LC gate in Automatic signalling section shall be provided with ()
-

- a) Provided with flashing light b) G Marker
c) Illuminated A marker d) b & c
- 105) Trap points are provided for ()
a) Isolation purpose b) Flexibility purpose c) Parallel movements d) all
- 106) "S" marker is provided for out lay sidings taken off from ()
a) station section b) block section c) Pit/washing line d) none
- 107) Passenger line must be isolated from goods /siding lines ()
a) if the speed is more than 50 kmph b) if the speed is more than 75 kmph
c) irrespective of the speed d) none
- 108) Section capacity can be increased by provision of ()
a) MA signaling system b) Simultaneous reception
c) Second distant signal d) all
- 109) Provision of Catch/Slip siding is permitted by ()
a) CSTE b) CRS c) COM d) CE
- 110) Minimum signals required at class C station is ()
a) Distant, home and starter b) Distant and home
c) Home and starter d) only home

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	c	b	d	b	c	b	a	a	a
11	12	13	14	15	16	17	18	19	20
b	c	d	b	b	c	a	a	d	a
21	22	23	24	25	26	27	28	29	30
a	d	d	a	c	b	b	d	b	a
31	32	33	34	35	36	37	38	39	40
a	d	b	a	c	d	d	b	a	c
41	42	43	44	45	46	47	48	49	50
c	b	c	d	d	b	a	a	b	c
51	52	53	54	55	56	57	58	59	60
a	b	a	b	c	d	d	b	d	a
61	62	63	64	65	66	67	68	69	70
c	c	c	a	a	d	d	a	c	c
71	72	73	74	75	76	77	78	79	80
B	b	c	b	c	d	c	a	b	a
81	82	83	84	85	86	87	88	89	90
A	c	d	b	b	a	c	d	d	b
91	92	93	94	95	96	97	98	99	100
C	a	c	d	b	a	b	c	d	d
101	102	103	104	105	106	107	108	109	110
D	d	d	d	a	b	c	d	b	b

EKT & SLOT

- 1) EKT is provided with _____ number of armatures ()
a. one b. two c. three d. four
- 2) Minimum working voltage of EKT is _____ ()
a. 3.75 DC volt b. 18 volt DC c. 24 volt DC d. 12 volt DC
- 3) Resistance of the EKT coil is _____ ()
a) 12.5 Ohms b) 600 Ohms c) 150 Ohms d) 220 Ohms
- 4) Incorrect part related with EKT is ()
a. Quick return gear b) electromagnet auxiliary pole
c) Electromagnet main pole d) none
- 5) Incorrect part related with EKT is ()
a. Electromagnet b) operating piece c) stud d) none
- 6) _____ numbers of brass tumblers control the movement of key ()
a. 2 b) 3 c) 4 d) none
- 7) EKT transmission is provided with separate AC immunized relays in __ area ()
a. RE area b) Non- RE area c) a and b d) none
- 8) Correct statement related with key transmitters is ()
a. key can be extracted by jerk
b. key can be extracted by external force
c. key can be extracted when conditions are favorable
d. key can be extracted without conditions are favorable
- 9) EKT cover can be opened ()
a. when the key is IN and locked condition b) when the key is out
c) a and b d) none
- 10) Incorrect statement related with key transmitters ()
a. need not be tested periodically b) testing done only during inspection
c) must be tested periodically d) none
- 11) Sealing of EKT is ()
a. compulsory b) not compulsory c) optional d) none
- 12) General maintenance of EKT as per SEM ()
a. 7 days b) 15 days c) 21 days d) 30 days
- 13) Slotted signal is controlled by ()
a. one agency only b) more than two agencies
c) more than three agencies d) b and c
- 14) Calling on signal is controlled by ()
-

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
b	a	a	d	d	b	a	c	b	c
11	12	13	14	15	16	17	18	19	20
a	b	d	d	b	a	a	c	d	a
21	22	23	24						
c	d	a	b						

SIGNALLING RELAYS AND CABLES

- 1) Normal rated working voltage of QN1 is____ ()
a. 12v DC b. 24v DC c. 60v DC d. 110v DC
 - 2) Normal rated working voltage of QL1 is____ ()
a. 12v DC b. 24v DC c. 60v DC d. 110v DC
 - 3) Normal rated working voltage of QB3 is____ ()
a. 12v DC b. 24v DC c. 60v DC d. 110v DC
 - 4) Normal rated pick up voltage of QTA2 is____ ()
a. 1.4v DC b. 1.75v DC c. 2.8v DC d. 4.2v DC
 - 5) Normal rated pick up voltage of QBAT is____ ()
a. 1.4v DC b. 1.75v DC c. 2.8v DC d. 4.2v DC
 - 6) QT2 relay is a _____ ()
a. Heavy duty b. Track relay c. Neutral relay d. K-50 relay
 - 7) QBCA1 relay is a _____ ()
a. Heavy duty b. Track relay c. Neutral relay d. K-50 relay
 - 8) Which of the following relay has two coils for picking up and dropping ()
a. QBA1 b. QSPA1 c. QL1 d. QS3
 - 9) Which of the following relay is used in push button type block instrument ()
a. QBA1 b. QSPA1 c. QL1 d. QS3
 - 10) Which of the following relay is used in DAIDO block instrument ()
a. QBA1 b. QSPA1 c. QL1 d. QS3
 - 11) _____ type relay is used in push button block instrument line circuit ()
a. QBA1 b. QB3 c. QL1 d. QN1
 - 12) _____ type relay is used in DAIDO block instrument line circuit ()
a. QBA1 b. QB3 c. QL1 d. QN1
 - 13) _____ type relay is not provided with residual pin ()
a. QBA1 b. QB3 c. QL1 d. QN1
 - 14) For AC immunization feature in the relay _____ is provided ()
a. copper slug b. permanent magnet
c. magnetic shunt d. blow out magnets
 - 15) For biasing feature in the relay _____ is provided ()
a. copper slug b. permanent magnet
c. magnetic shunt d. blow out magnets
-

- 16) For spark quenching at heavy duty contacts in QBCA1 relay,____is provided ()
a. copper slug b. permanent magnet
c. magnetic shunt d. blow out magnets
- 17) ____ohms ACI TR only to be used in RE area irrespective of any TC lengths ()
a. 200 b. 400 c. 9 d. 4.5
- 18) The percentage of release for Q-series track relay is not less than____ ()
a. 33% b. 50% c. 60 % d. 68%
- 19) The percentage of release for Q-series 'B' class line relay is not less than____()
a. 33% b. 50% c. 60 % d. 68%
- 20) The percentage of release for Q-series 'A' class line relay is not less than____()
a. 33% b. 50% c. 60 % d. 68%
- 21) Q-series relays are of____type contacts ()
a. dependent b. independent c. both d. none
- 22) The maximum number of contacts in Q-series relay is____ ()
a. 6 b. 8 c. 12 d. 16
- 23) Contact resistance of Q-series relay is____ ()
a. 0.20 ohms b. 0.18 ohms c. 0.05 ohms d. 1.8 ohms
- 24) For slow to pick up / release in QSPA1 / QSRA1 relay____is provided ()
a. copper slug b. permanent magnet
c. magnetic shunt d. blow out magnets
- 25) The maximum contacts combination available in Q-series relay is____ ()
a. 12F/4B b. 8F/8B c. both d. none
- 26) Q-series relay front & back contacts are made of____ ()
a. silver oxide b. silver impregnated graphite c. both d. none
- 27) Q-series relay arm contacts are made of____ ()
a. silver oxide b. silver impregnated graphite c. both d. none
- 28) In Q-series relay,____contacts are movable contacts ()
a. front b. back c. arm d. none
- 29) ____relay senses the current direction through relay coil ()
a. AC immunized b. polarized c. DC biased d. none
- 30) ____relay is used in indication line circuits of double line block instrument ()
a. AC immunized b. polarized c. DC biased d. none
-

- 31) Polarized relay is provided with_____type of contacts ()
a. dependent b. independent c. both d. none
- 32) Polarized relay coil resistance is_____ohms ()
a. 9 b. 77 c. 200 d. 400
- 33) Polarized relay is provided with_____contacts ()
a. 2F/2B b. 2NC/2RC c. 1F/1B d. 1NC/1RC
- 34) Working voltage of Q-series twin neutral line relay (QNN1) is_____ ()
a. 24v DC b. 10v DC c. 60v DC d. 110v DC
- 35) _____relay is not having POH date ()
a. QN1 b. QT2 c. QTA2 d. QBAT
- 36) Q-series relays are provided with_____type of contacts ()
a. metal to metal b. metal to carbon
c. carbon to carbon d. carbon to metal
- 37) QN1 relay coil resistance is_____ ()
a. 200 ohms b. 400 ohms c. 9 ohms d. none
- 38) QNA1 relay coil resistance is_____ ()
a. 200 ohms b. 400 ohms c. 9 ohms d. none
- 39) The periodical replacement of track relay is once in_____ ()
a. 10 years b. 15 years c. 7 years d. 12 years
- 40) Maximum voltage for QTA2 should be up to _____under maximum B.R. ()
a. 125% of it's normal rated P.U. value
b. 235% of it's normal rated P.U. value
c. 250% of it's normal rated P.U. value
d. 300% of it's normal rated P.U. value
- 41) Minimum voltage for QTA2 should be up to _____under minimum B.R. ()
a. 125% of it's normal rated P.U. value
b. 235% of it's normal rated P.U. value
c. 250% of it's normal rated P.U. value
d. 300% of it's normal rated P.U. value
- 42) Maximum voltage for QBAT should be up to _____under maximum B.R. ()
a. 125% of it's normal rated P.U. value
b. 235% of it's normal rated P.U. value
c. 250% of it's normal rated P.U. value
d. 300% of it's normal rated P.U. value
-

- 57) Conductor size of 2 core signaling Cable used in track circuits is _ ()
a) 25 sq. mm. b) 2.5 sq mm. c) 1.5 sq.mm. d) 50 sq. mm.
- 58) For laying cable, the size of the cable trench shall be_____ ()
a) 1m. width & 30cm. Depth b) 1m. Depth & 30cm. Width
c) 1.5m. depth & 30cm. Width d) 60cm. Depth & 30cm.Width
- 59) Insulation resistance of cable must be_____MΩ / per KM ()
a. Greater or equal to 5 b. below 5
c. Greater than 1 d. None of the above
- 60) 6 Quad cable is used for_____. ()
a) Point Operation b) Signal Operation
c) Axle Counter d) Lever Lock
- 61) While crossing the track, Cable should be laid_____ ()
a) in GI/ RCC Pipe b) perpendicular to track
c) At a depth of 1 Mtr d) All the above
- 62) Spare conductors to a minimum of _____% of the total conductors used shall be provided for in each main cable up to the farthest point zone. ()
a) 0 % b) 10 % c) 20 % d) 50%
- 63) The spare conductors shall be provided on the _____layer. ()
a) Inner most b) Middle c) Outermost d) All the above
- 64) As per SEM part II Para 15.12 the cable laid parallel to the track shall normally be buried at a depth of _____meters from ground level. ()
a) 1.0 mt b) 1.5 mt c) 0.8 mt d) 1.2 mtrs
- 65) _____Cables shall be used in all signalling circuits. ()
a) Screened cables only b) Un Screened cables only
c) Screened and Un screened cables d) None of the above
- 66) Testing the signaling cables is done with ()
a) Multimeter b) Earth leakage detector
c) 500 V DC megger d) both b and c above
- 67) Each layer in an Outdoor Cable ()
a) starts from blue conductor and ends with yellow conductor
b) starts from blue conductor and ends with grey conductor
c) starts from grey conductor and ends with yellow conductor
d) None
-

- 68) The cable shall be laid so that it is not less than one meter from the nearest edge of the mast supporting the catenary or any other live conductor provided the depth of the cable does not exceed ()
a) 0.5 meters. b) 1 meter c) 3 mtrs d) None
- 69) When the cable is laid at a depth greater than 0.5 meters, a minimum distance between the cable and the nearest edge of the OHE structure must be ()
a) 3 mtrs b) 0.3 mtrs c) 1 mtrs d) None
- 70) Insulation value of the cable at the time of commissioning should not be below _____ MΩ/KM at 20°C ()
a) 200. b) 10 c) 5 d) None
- 71) Suitable cable markers should be provided every _____ along the cable route for easy identification ()
a) 10 mtrs b) 15 mtrs c) 20 mtrs d) None
- 72) Outside station limits with OHE mast, the cable should generally be laid at not less than _____ from the centre of the nearest track. ()
a) 5.5 mtrs b) 55 mtrs c) 3 mtrs d) None
- 73) Within station limits without OHE mast, the cable should generally be laid at not less than _____ from the centre of the nearest track ()
a) 5.5 mtrs b) 55 mtrs c) 3 mtrs d) None
- 74) Common faults which develop on conductors of multi-core signalling cables are ()
a) Earth b) Short-Circuit c) Open -Circuit d) all the above
- 75) Earth fault develops in a conductor due to ()
a) defective insulation of conductor b) Short-Circuit between conductors
c) breaking of a conductor d) None
- 76) _____ Megger is used for testing signalling cables ()
a) 500 V AC b) 110 V DC c) 500 V DC d) any of the above
- 77) _____ Megger is used for testing telecom cables ()
a) 500 V AC b) 100 V DC c) 500 V DC d) any of the above
- 78) Wire used for Q series relay wiring is ()
a) 1.5 sq mm copper conductor
b) 16/0.20 mm dia. Flexible Copper wire (Multi strand)
c) 0.6 mm dia. Copper wire.
d) any of the above
-

- 79) If signaling cables are laid in the vicinity of the switching station earthing, the distance of the cable trench shall be _____ ()
- a) atleast 5 mtrs away b) atleast 2 mtrs away
c) very near to switching station earth d) any of the above
- 80) Outside station limits, the cable should generally be laid at not less than _____ from the centre of the nearest track. ()
- a) 8-10 mtrs b) 55 mtrs c) 3 mtrs d) None

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
B	b	a	a	b	b	a	c	c	a
11	12	13	14	15	16	17	18	19	20
B	a	c	a	b	d	c	d	b	c
21	22	23	24	25	26	27	28	29	30
B	d	a	c	c	b	a	c	b	b
31	32	33	34	35	36	37	38	39	40
A	b	d	a	a	b	b	a	d	d
41	42	43	44	45	46	47	48	49	50
A	b	a	c	c	c	b	d	a	a
51	52	53	54	55	56	57	58	59	60
A	b	b	b	a	b	b	b	a	c
61	62	63	64	65	66	67	68	69	70
D	d	c	c	b	d	a	a	a	a
71	72	73	74	75	76	77	78	79	80
B	a	c	d	a	c	b	b	a	a

D.C. TRACK CIRCUIT

- 1) Q-series DC track relays must be replaced once in _____ ()
a. 5 years b. 7 years c. 9 years d. 12 years
 - 2) Size of track tail / lead cable with copper conductor is _____ ()
a. 1.5 sq.mm b. 2.5 sq.mm c. 25 sq.mm d. 15 sq.mm
 - 3) In a TC, the Lead cable is laid in between _____ ()
a. Location box to Location box b. Location box to TLJB
c. TLJB to Track d. none
 - 4) In a TC, the Tail cable is laid in between _____ ()
a. Location box to Location box b. Location box to TLJB
c. TLJB to Track d. none
 - 5) The variable resistance value in non-RE area DC track circuit is _____ ()
a. 0-15 ohms b. 0-30 ohms c. 0-25 ohms d. None
 - 6) The main purpose of Variable Resistance in a TC is _____ ()
a. To protect feed end equipment b. to adjust voltage on T.R.
c. to protect Relay d. a & b
 - 7) The minimum Track Circuit Length should be of _____ lengths ()
a. 1 Rail b. 2 Rail c. 4 Rail d. 5 Rail
 - 8) Maximum permitted Rail resistance for track circuit lengths up to 700m. is _____ ()
a. 0.5 ohms/Km b. 1.5 ohms/Km c. 2 ohms/Km d. None
 - 9) Maximum permitted Rail resistance for track circuit lengths above 700m. is _____ ()
a. 0.5 ohms/Km b. 1.5 ohms/Km c. 2 ohms/Km d. None
 - 10) Minimum permissible ballast resistance for T.C. in station yard ()
a. 2 Ω /km b. 4 Ω /km c. 10 Ω /km d. none
 - 11) Under maximum ballast resistance, the voltage on T.R. is adjusted up to _____ ()
a. 125% of it's normal rated P.U. value
b. 300% of it's normal rated P.U. value
c. 125% of it's normal rated D.A. value
d. 300% of it's normal rated D.A. value
 - 12) Under minimum ballast resistance, the voltage on TR should be not less than _____ ()
a. 125% of it's normal rated P.U. value
b. 300% of it's normal rated P.U. value
c. 125% of it's normal rated D.A. value
d. 300% of it's normal rated D.A. value
 - 13) If feed end & relay end voltages are equal, then the _____ ()
a. Ballast resistance is zero b. Rail resistance is zero
c. Ballast resistance is infinity d. Rail resistance is infinity
-

- 14) If feed end & relay end currents are equal, then the _____ ()
a. Ballast resistance is zero b. Rail resistance is zero
c. Ballast resistance is infinity d. Rail resistance is infinity
- 15) As the BR value increases, the voltage on TR _____ in a TC ()
a. increases b. decreases c. no change d. none
- 16) As the BR value decreases, the voltage on TR _____ in a TC ()
a. increases b. decreases c. no change d. none
- 17) As the RR value increases, the voltage on TR _____ in a TC ()
a. increases b. decreases c. no change d. none
- 18) As the RR value decreases, the voltage on TR _____ in a TC ()
a. increases b. decreases c. no change d. none
- 19) If TC length decreased, the BR value _____ in a TC ()
a. increases b. decreases c. no change d. none
- 20) If TC length increased, the BR value _____ in a TC ()
a. increases b. decreases c. no change d. none
- 21) If TC length increased, the RR value _____ in a TC ()
a. increases b. decreases c. no change d. none
- 22) If TC length decreased, the RR value _____ in a TC ()
a. increases b. decreases c. no change d. none
- 23) In a TC, _____ to be done for keeping maximum Ballast Resistance condition ()
a. no water stagnation b. ballast clearance c. both d. none
- 24) In a TC, _____ to be done for keeping minimum Rail Resistance condition ()
a. double bonding b. neat & tight c. both d. none
- 25) The minimum ballast clearance should be _____ in a track circuit ()
a. 15 mm b. 25 mm c. 50 mm d. 75 mm
- 26) When minimum TSR value is connected across the T.C., the T.R. must drop and voltage on T.R. should be _____ of it's rated drop away value ()
a. more than 85% b. less than 85% c. less than 125% d. less than 300%
- 27) Maximum Broken rail protection is available in _____ ()
a. Series track circuit b. Parallel track circuit
c. Multiple track circuit d. None
- 28) PSC sleeper is tested with _____ before laying in track circuit ()
a. 100 V DC megger b. sensible multi meter
c. 500 V DC megger d. clip-on meter
- 29) To detect defective PSC sleeper is tested with _____ in a track circuit ()
a. 100 V DC megger b. sensible multi meter
c. 500 V DC megger d. clip-on meter
-

- 30) The resistance values between insert to insert of a PSC sleeper before laying in Track circuit should be not less than_____, after 6 months of manufacturing () a. 150 Ω b. 300 Ω c. 500 Ω d. 750 Ω
- 31) Testing of Glued Joints Insulation Resistance is done with_____ () a. 100 V DC megger b. sensible multimeter c. 500 V DC megger d. clip-on meter
- 32) The insulation resistance value should be when tested Glued Insulation Joint in dry condition, before laying in a TC () a. not less than 25 M Ω b. less than 25 M Ω c. less than 3 K Ω d. not less than 3 K Ω
- 33) The insulation resistance value should be_____when tested Glued Insulation Joint in wet condition, before laying in a TC () a. not less than 25 M Ω b. less than 25 M Ω c. less than 3 K Ω d. not less than 3 K Ω
- 34) In any case the dead section should be less than_____in B.G. () a. 6 meters b. 8 meters c. 1.8 meters d. 10.8 meters
- 35) Normally the dead section in the point zone shall be less than_____in BG () a. 6 meters b. 8 meters c. 1.8 meters d. 10.8 meters
- 36) In a point zone, If dead section is more than 1.8m but less than 6m then, the track circuit length on either side of dead section must not be less than_____ () a. 6 meters b. 8 meters c. 10 meters d. 12 meters
- 37) The bond hole / drill bit size is_____mm dia. () a. 6.8 b. 7.2 c. 7.8 d. 8.2
- 38) ___type pandrol clips to be provided for PSC sleepers at Glued Insulation Joints() a. I b. J c. K d. S
- 39) Never bypassed _____ in the track circuit () a. TFBC b. Battery c. VR (RT) d. none
- 40) For each PSC sleeper, ___ number of rubber pads & GFN liners are required () a. 1 & 1 b. 2 & 2 c. 2 & 4 d. 4 & 4
- 41) In a track circuit, the B.R. is always aimed to be_____ohms () a. zero to infinity b. zero c. infinity d. none
- 42) In a track circuit, the R.R. is always aimed to be_____ohms () a. zero to infinity b. zero c. infinity d. None
- 43) In a T.C., if F/E and R/E voltages are equal, then_____is in good condition () a. Ballast resistance b. Rail resistance c. Variable resistance d. none
-

- 44) In a T.C., if F/E and R/E currents are equal, then_____is in good condition ()
 a. Ballast resistance b. Rail resistance
 c. Variable resistance d. None
- 45) Percentage of release of T.R. is calculated with_____ formula ()
 a. $(P.U. \text{ value} \div D.A. \text{ value})100$ b. $(D.A. \text{ value} \div P.U. \text{ value})100$
 c. $(P.U. \text{ value} \times D.A. \text{ value}) \div 100$ b. $(D.A. \text{ value} \times P.U. \text{ value}) \div 100$
- 46) Percentage of release of Track Relay should be not less than_____% ()
 a. 50 b. 60 c. 68 d. 85
- 47) In a T.C., B.R. is calculated by using F/E & R/E voltages and currents as_____()
 a. Difference in voltages $\div$ average of currents
 b. Difference in currents $\div$ average of voltages
 c. Average of voltages $\div$ difference in currents
 d. Average of currents $\div$ average of voltages
- 48) In a T.C., R.R. is calculated by using F/E & R/E voltages and currents as_____()
 a. Difference in voltages $\div$ average of currents
 b. Difference in currents $\div$ average of voltages
 c. Average of voltages $\div$ difference in currents
 d. Average of currents $\div$ average of voltages
- 49) Track relay sensitivity depends upon_____ ()
 a. Pick up value b. Drop away value c. % of Release d. None
- 50) Periodical Over Hauling of Track relay is once in_____years (latest) ()
 a. 10 b. 12 c. 14 d. none

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
d	b	c	b	a	d	b	b	a	a
11	12	13	14	15	16	17	18	19	20
b	a	b	c	a	b	b	a	a	b
21	22	23	24	25	26	27	28	29	30
a	b	c	c	c	b	a	b	d	c
31	32	33	34	35	36	37	38	39	40
a	a	d	a	c	d	b	b	c	c
41	42	43	44	45	46	47	48	49	50
c	b	b	a	b	c	c	a	c	b

'LED' COLOUR LIGHT SIGNAL

- 1) Non-Blanking arrangement in current regulator is provided for home signal aspects _____ ()
a. RG b. HG c. DG d. UG
 - 2) Blanking arrangement in current regulator is provided for home signal aspects _____ ()
a. RG b. HG c. DG d. Both b & c
 - 3) For Yellow aspect of a main signal _____ in current regulator ()
a. Blanking mode shall be selected
b. Non-Blanking mode shall be selected
c. Both a & b depending on the signal
d. None
 - 4) In the current regulator if Blanking / Non-Blanking mode is not selected, the C.R. by default _____ ()
a. works in Blanking mode b. works in Non-Blanking mode
c. doesn't work d. None
 - 5) The power supply coupler of the current regulator gives _____ to the LED's in the main signal lighting unit ()
a. AC voltage b. DC voltage c. Frequency d. None
 - 6) If the input voltage of the current regulator is decreased from 137.5V to 82.5 V AC, the current taken by the current regulator _____ ()
a. decreases b. increases c. remains constant d. None
 - 7) If the input voltage of the current regulator is increased from 82.5V to 137.5 V AC, the current taken by the current regulator _____ ()
a. decreases b. increases c. remains constant d. None
 - 8) In integrated signal LED unit, Blanking / Non-blanking is provided for _____ ()
a. RG unit b. HG unit c. DG unit d. All
 - 9) Codal life of a LED signal is _____ (Mfd : 2011 or later) ()
a. 2 years b. 6 years c. 8 years d. 10 years
 - 10) _____ type of 'AC LED ECR' is only to be used for LED signals ()
a. QSPA1 b. QECX61 c. QNA1 d. both a & b
 - 11) Jumpers on CR for selecting the type of _____ used in the circuit ()
a. power supply b. ECR c. blanking & non blanking d. all
 - 12) When LED illumination falls below 40%, _____ forces to drop ECR ()
a. LED unit b. Sensors c. Current regulator d. HMU
-

- 13) Optical Sensors are provided in the LED unit for_____ ()
a. Energizing ECR b. Sensing illumination in the unit
c. Sensing outside light d. Sensing engine head light
- 14) In latest lamp circuit, ECR relay shall be_____ ()
a. Connected only on BX 110 V side
b. connected only on NX 110 V side
c. connected on BX 110 V or NX 110 V side
d. None
- 15) An ECR relay has_____contacts ()
a. 4F / 4B b. 2F / 2B c. 6F / 6B d. 8F / 8B
- 16) Normal working voltage of LED signal unit is / are_____ ()
a. 110 volt AC b. 24 volt DC
c. 230 AC d. 60 V DC
- 17) The rated voltage at Input terminals of current regulator for main signal ()
a. 110 +/- 20% V AC b. 110 +/- 25%V AC
c. 110 +/- 15 V AC d. 110 +/- 10%V AC
- 18) The rated voltage at Input terminals for Calling-on signal ()
a. 110 +/- 20% V AC b. 110 +/- 25%V AC
c. 110 +/- 15 V AC d. 110 +/- 10%V AC
- 19) The rated voltage at Input terminals for Route LED unit signal ()
a. 110 +/- 20% V AC b. 110 +/- 25%V AC
c. 110 +/- 15 V AC d. 110 +/- 10%V AC
- 20) The rated voltage at Input terminals for Shunt LED unit ()
a. 110 +/- 20% V AC b. 110 +/- 25%V AC
c. 110 +/- 15 V AC d. 110 +/- 10%V AC
- 21) The rated current at Input terminals for Main signal unit ()
a. 150 mA +10%, -20% b. 140 mA +20%, -10%
c. 140 mA +10%, -20% d. 140 mA +20%, -20%
- 22) The rated current at Input terminals for Calling on LED unit ()
a. 140 mA +10%, -20% b. 150 mA +20%, -10%
c. 150 mA +10%, -20% d. 140 mA +10%, -20%
- 23) The rated current at Input terminals for Route LED unit ()
a. 25 mA +/- 20% b. 25 mA +/- 10%
c. 25 mA +/- 5% d. 25 mA +/- 15%
- 24) The rated current at Input terminals for Shunt LED unit ()
a. 55 mA +/- 20% b. 55 mA +/- 10%
c. 55 mA +/- 5% d. 55 mA +/- 15%
-

- 25) _____ colour has more wave length ()
 a. Yellow b. Red c. Green d. White
- 26) In main signal lighting unit LED's are connected in _____ combination ()
 a. series b. series-parallel c. parallel d. none
- 27) The main advantage of LED signals ()
 a. longer visibility b. life is more
 c. power consumption is less d. All the above
- 28) The earth resistance of a signal unit should be less than ()
 a. 40 ohms b. 30 ohms c. 20 ohms d. 10 ohms
- 29) The S.I. unit for illuminance is _____ ()
 a. Flux b. Lux c. Newton d. Weber
- 30) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for RG LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 31) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for HG LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 32) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for DG LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 33) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for Calling-On LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 34) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for Route LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 35) The illumination measured at 1.5 meters from LED signal lighting unit in axial direction at rated voltage for Shunt LED unit should be _____ ()
 a. 150 LUX +40%, -10% b. 175 LUX +40%, -10%
 c. 50 LUX +40%, -10% d. 30 LUX +40%, -10%
- 36) _____ fuse rating is used for the LED signals lamp circuit ()
 a. 830 mA b. 530 mA c. 630 mA d. 730 mA
-

- 37) The working current of ECR relay is _____ ()
a. 128 mA b. 148 mA c. 108 mA d. 208 mA
- 38) When one array fails in the main signal lighting unit ()
a. ECR picks up b. ECR drops c. may pick up or drop d. All
- 39) The minimum visibility distance of Main LED signal lighting unit shall be _____ in clear day light with peak sun rays at rated voltage ()
a. 200 m b. 400m c. 500 m d. 600 m
- 40) The minimum visibility distance of Direction type Route Indicator with three lit LED signal lighting units shall be _____ in clear daylight with peak sun rays at rated voltage ()
a. 200 m b. 400m c. 500 m d. 600 m
- 41) The minimum visibility distance of LED signal lighting units, other than Main and Route signal lighting units, shall be _____ in clear daylight with peak sun rays at rated voltage ()
a. 200 m b. 400m c. 500 m d. 600 m
- 42) In blanking mode, a Main Signal Lighting Unit shall extinguish when input current drawn by the current regulator falls outside specified limits of rated input current or illumination falls to a value _____ ()
a. which is not less than 30% of nominal illumination
b. which is not less than 40% of nominal illumination
c. which is not less than 50% of nominal illumination
d. which is not less than 60% of nominal illumination
- 43) In Non - blanking mode, a Main Signal Lighting Unit shall remain lit when input current drawn by the current regulator falls outside specified limits of rated input current or illumination falls to a value _____ ()
a. which is less than 30% of nominal illumination
b. which is less than 40% of nominal illumination
c. which is less than 50% of nominal illumination
d. which is less than 60% of nominal illumination
- 44) In blanking mode, a Main Signal Lighting Unit shall extinguish when illumination falls to a value which is not less than 40% of nominal illumination due to a failure or any other reason. In such case, current regulator should not draw input current _____ at maximum rated voltage. ()
a. more than 20 mA b. more than 30 mA
c. more than 40 mA d. more than 50 mA
-

UNIVERSAL POINT MACHINE

- 1) The normal working current of Universal point machine ()
a. 2A-3A b. 3A-4A c. 5A-6A d. 8A-9A
 - 2) For obstruction test, gauge is placed from the toe of switch at a distance of ()
a. 100 mm b. 120 mm c. 150 mm d. 175 mm
 - 3) Point is reverse and locked condition_____indication relay picks up ()
a. NWKR b. RWKR c. WCR d. ASR
 - 4) During point operation____&____contacts makes in universal point machine ()
a. ND & RD b. ND & RC c. NC & RC d. RC & RD
 - 5) When point is set and locked in normal position, then_____makes. ()
a. RC contact b. NC contact c. ND contact d. a & c both
 - 6) Drive rod is connected to_____ ()
a. point throw slide b. lock slide c. detection slide d. none
 - 7) With____relay picking up, 110v DC is extended to point location through bus bar ()
a. WLR b. WCR c. PCR d. None
 - 8) "No Go Gauge Obstruction test"_____mm thick obstruction is placed between switch and stock rail. ()
a. 5 mm b. 3.25 mm c. 1.6 mm d. None
 - 9) Friction clutch in IRS type point machine_____ ()
a. self adjusting b. not self adjusting
c. adjusted at workshop only d. a & c are correct
 - 10) The stroke of IRS type electric Point Machine is_____mm ()
a) 115 b) 143 c) 200 d) 100
 - 11) The total movement of drive disc is_____ ()
a. 220 degrees b. 270 Degrees
c. 180 degrees d. 360 degrees
 - 12) Obstruction current shall be_____times the normal working current. ()
a. 1.5 to 2.5 b. 1.5 to 2.0 c. 1.5 to 3.5 d. 2 times
 - 13) When crank handle is inserted for cranking ()
a. 110V DC positive is cut off b. 110V DC negative is cut off
c. 24V DC is cut off d. a & c are correct
 - 14) Which Relay functions as timer in point circuit ()
a. WXR b. WJR c. WCR d. WLR
 - 15) During obstruction test of machine operated point with 5mm test piece_____()
a. Point shall not lock b. Friction clutch shall slip
c. Detection contacts shall not make d. all
-

- 16) The stroke of Point Machine used for Thick Web layout is ____mm ()
a) 115 b) 143 c) 220 d) 160
- 17) The opening of stock rail and tongue rail in TWS layout is ____mm ()
a) 115 b) 160 c) 200 d) 100
- 18) TWS layout is provided with ____type of locking ()
a) Direct locking b) Indirect locking
c) both a and b d) No locking is provided
- 19) Voltage required to operate TWS point is ____ ()
a) 24 V DC b) 110 V AC c) 12 V DC d) None
- 20) Periodical lubrication checks for all gears of point machine should be done at least once in ____by technician. ()
a) Daily b) 7 days c) 15 days d) 30 days
- 21) Point detection circuit voltage is ____ ()
a) 24 V DC b) 110 V DC c) 12 V DC d) None
- 22) In universal point machine ____locking is provided. ()
a) In and Out type b) Rotary type c) Both a and b d) None
- 23) ____type of motor is used in IRS electric point machine ()
a) DC Motor b) Series Motor c) Split field motor d) All
- 24) The possibility of both slides moving together due to rust in case one slide connecting rod breaks is prevented by the provision of ____between them. ()
a) Lubrication b) Brass plates c) Iron plates d) None
- 25) In a cross over point, both the points are operated in ()
a) Series b) Parallel c) Series Parallel d) None
- 26) In a cross over point, Both the points are detected in ()
a) Series b) Parallel c) Series Parallel d) None
- 27) Friction clutch in a point machine is a part of ()
a) Crank handle cut out assembly b) Transmission assembly
c) Reduction gear assembly d) Contactor unit
- 28) Which of the following is not associated with a point machine ()
a) Track locking test b) Correspondence test
c) "No go" test d) Fail safe adjustment
- 29) Which of the following is not associated with a point machine ()
a) 110 V DC b) 24 V DC c) Cross protection d) 110 V AC
-

- 30) With 3.25mm test piece placed at 150 mm from toe of the switch, ()
a) Detection contacts should just make b) detection contacts should break
c) detection contacts should just break d) None of the above
- 31) With 1.6 mm test piece placed at 150 mm from toe of the switch, ()
a) Detection contacts should just make b) detection contacts should break
c) detection contacts should just break d) None of the above
- 32) When a point is operated from N to R With 5 mm test piece placed at 150 mm from toe of the switch, ()
a) NC & RC break b) NC& RC make c) ND & RC break d) None
- 33) With 5 mm test piece placed at 150 mm from toe of the switch, ()
a) Lock dog should not enter lock slide notch
b) Detection contacts should not make
c) Friction clutch should declutch
d) All the above
- 34) Insulation grade of winding in a motor of a point machine shall be ()
a) More than 100 M Ohms b) More than 10 M Ohms
c) More than 10 Ohms c) None of the above
- 35) AC immunity of point motor is ()
a) 160 V DC b) 160 V AC c) Both d) None
- 36) When point is set in N and locked, the following contacts make ()
a) NC & ND b) ND & RC c) NC & RC d) RD & NC
- 37) When point is set in R and locked, the following contacts make ()
a) NC & ND b) ND & RC c) NC & RC d) RD & NC
- 38) When point is not set in N or R, the following contacts make ()
a) NC & ND b) ND & RC c) NC & RC d) RD & NC
- 39) Mode of locking in TWS point layout is ()
a) Rotary type b) Clamp type c) In and out type d) Both a and b
- 40) Mode of locking in conventional IRS point layout is ()
a) Rotary type b) Clamp type c) In and out type d) Both a and b
- 41) As per Schedule of maintenance, SEM para 19.148, Voltages and Currents shall be measured at motor terminals in a point machine by signal maintainer once in ()
a) Fortnight b) Month
c) Month in presence of JE/SSE d) Quarter in presence of JE/SSE
- 42) As per Schedule of maintenance, SEM para 19.148, Obstruction test for a point machine to be conducted by signal maintainer once in ()
-

- a) Fortnight
c) Quarter
 - b) Month
d) Quarter in presence of JE/SSE
- 43) Crank handle key provided for manual operation of the points worked by electric point machine must be interlocked with ()
a) signal HR circuit
b) Point operation circuit
c) WLR circuit
d) Point detection circuit
- 44) The crank handle key for each group of point machines should be so arranged that they ()
a) Can be interchanged if required
b) have same for all points
c) Cannot be interchanged
d) None
- 45) Maximum permissible parallelism in meters between Point Contactor and Point Motor (160 V AC immunity) on single line is ()
a) 910
b) 1000
c) 1100
d) 1500
- 46) Maximum permissible parallelism in meters between Point Contactor and Point Motor (160 V AC immunity) on double line is ()
a) 910
b) 1000
c) 1100
d) 1500
- 47) Inspection and cleaning of inside equipment by opening the covers of point machines comes under ()
a) Group A works
b) Group B works
c) Group C works
d) None
- 48) A point machine should be provided at a minimum distance of _____ meters from centre line of track (CLAT) ()
a) 1
b) 1.5
c) 1.6
d) None
- 49) Which of the following is true for Track locking test conducted on point machine()
a) Point does not operate when track drop
b) Point operation to complete even if track drops during operation
c) Both a and b
d) None
- 50) During obstruction in the point, the feed to point is automatically disconnected within _____ times the normal operating time of point ()
a) 1.5
b) 1.5 to 2
c) 3
d) None
- 51) In a point machine, Conversion of rotary motion into linear motion is achieved by()
a) Friction clutch assembly
b) rack and pinion arrangement.
c) Reduction gear assembly
d) Friction clutch
- 52) In TWS layout, the clearance at junction of rail head (JOH) is ()
a) 60 mm
b) 115 mm
c) 220 mm
d) None

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	c	b	c	d	a	c	a	d	b
11	12	13	14	15	16	17	18	19	20
b	b	b	b	d	c	b	c	d	c
21	22	23	24	25	26	27	28	29	30
a	b	d	b	b	a	b	d	d	c
31	32	33	34	35	36	37	38	39	40
a	b	d	b	b	b	d	c	d	a
41	42	43	44	45	46	47	48	49	50
c	a	a	c	a	c	a	c	c	b
51	52								
b	a								

PANEL INTERLOCKING (BRITISH SYSTEM)

- 1) SEM part -1, correction slip no18 calling on signal initiation time is _____ sec ()
a) 60 b) 90 c) 120 d) 240
 - 2) SEM part-1, correction slip no18 calling on signal below starter can be initiated ()
a) after 60 sec
b) Immediately after berthing track is occupied
c) 120 sec after berthing track is occupied
d) Immediately without berthing track is occupied
 - 3) Calling on signal will not detect points in _____ ()
a) Route b) Isolation c) overlap d) none
 - 4) Relay which ensures one signal one calling on principle is _____ ()
a) COJSLR b) CONJPR c) COCAR d) COAR
 - 5) Calling on signal will lock _____ ()
a) Stop signal above it b) Shunt signal below it
c) a & b d) none
 - 6) Indication locking is proved in _____ Circuit ()
a) TSR b) ASR c) UCR d) HR
 - 7) Back/route locking is proved in _____ Circuit ()
a) TSR b) ASR c) UCR d) HR
 - 8) Indication locking is achieved through _____ ()
a) Signal controlling relays b) Signal lamp checking relays
c) back lock TPR's d) a & b
 - 9) Back/route locking is achieved through _____ ()
a) Signal controlling relays b) Signal lamp checking relays
c) TPR's d) a & c
 - 10) Calling on signal can be provided below _____ ()
a) Adv starter b) Adv starter and Routing home
c) Adv starter and starter d) FSS and routing home
 - 11) Calling on signal cannot be provided below _____ ()
a) Adv starter b) Routing home c) Starter d) First stop signal
 - 12) Color of SH signal button/knob as per SEM is _____ ()
a) Red b) Red with white dot
c) Yellow d) Yellow with white dot
 - 13) Aspect of signal ahead is proved in _____ Circuit ()
a) HR b) UCR c) TSR d) ASR
-

- 14) Relay which prevents unauthorized operation of panel is_____ ()
a) TSR b) UCR c) SMR d) HR
- 15) Re clearance of signal after train movement even though signal knob is reverse is prevented by_____relay ()
a) RR b) UCR c) UGR d) TSR
- 16) Previous routes released & signal knob normalized is proved in_____relay circuit ()
a) RR b) TSR c) UCR d) JSLR
- 17) _____ is proved to achieve approach locking ()
a) UCR b) TSR c) Approach TPR d) b and C
- 18) Back lock TPR's are proved in_____ ()
a) ASR b) JSLR c) TSR d) a and b
- 19) Point indication near point knob is given through_____ ()
a) WKPR b) WSR c) WKR d) WLR
- 20) Aspect of signal ahead not blank is proved in_____ ()
a) Calling ON signal HR b) Main signal HR
c) Shunt signal HR d) all
- 21) Combined TSR can be provided for signals with_____ ()
a) Same route b) Conflicting to each other
c) common controlling TC d) all
- 22) Combined ASR can be provided for signals with_____ ()
a) Same route b) Conflicting to each other
c) common controlling TC d) all
- 23) To achieve locking of conflicting signals_____is proved ()
a) Front contact of ASR b) Back contact of UCR c) Back contact of RR d) all
- 24) UCR back contact is proved in_____circuit ()
a) RLR b) RR c) ASR d) NJPR
- 25) Indication locking and back/route locking is proved in_____circuit ()
a) UCR b) ASR c) WLR d) HR
- 26) Proving aspect of signal ahead is for_____ ()
a) Flexibility b) Safety c) Red lamp protection d) b and c
- 27) OVSF will hold the points in the_____ ()
a) Overlap b) Isolation c) Route d) b and c
- 28) For stopping train OVSF picks up_____ ()
a) after 60 sec b) after 120 sec c) immediately d) none
-

- 29) ____ relay is normally in energized condition ()
a) UCR b) JSLR c) OVSR d) UYR
- 30) Relay controlling the caution aspect of the signal is ____ ()
a) DR b) HHR c) UGR d) HR
- 31) Relay controlling the Attention aspect of the signal is ____ ()
a) HHR b) DR c) HR d) UGR
- 32) Relay controlling the proceed aspect of signal is ____ ()
a) DR b) HHR c) HR d) UGR
- 33) Point zone TPR contacts are proved in ____ ()
a) UCR b) WLR c) TSR d) UGR
- 34) Point zone TPR is bypassed with ____ in WLR circuit ()
a) WLR front contact b) WLR back contact
c) ASR front contact d) ASR back contact
- 35) WLR back contact is proved as cross protection contact in ____ circuit ()
a) WKR b) WSR c) WKPR d) NWR/RWR
- 36) Route slit indication on panel is given through ____ contact ()
a. UCR pick up b. HR pick up c. ASR drop d. ASR UP
- 37) Point slit indication on the panel is given through ____ contact ()
a. WKR UP b. WKPR UP c. WSR UP d. ASR UP
- 38) ____ Relay initiates route cancellation ()
a. JSLR b. RJPR c. NJPR d. ASR
- 39) ____ relay picks up when signal knob is reversed ()
a) TSR b. UCR c. ASR d. NJPR
- 40) Point Free indication near point knob is given through ____ ()
a) ASR and Point zone TPR b) NCR / RCR
c) UCR and HR d. WLR
- 41) Interlocking between conflicting signals is achieved in ____ circuit. ()
a) UCR and ASR b) UCR and TSR c) UCR and HR d) TSR and HR
- 42) ____ is provided to prevent vital circuits do not operate with false feed ()
a. Red lamp protection b. Double cutting
c. Cross protection d. b & c
- 43) ____ locking is provided where there are no track circuits in rear of the signal ()
a) Approach b) Dead approach c) Track d) all
-

- 44) _____locking is provided for the purpose of safety ()
 a) Approach b) Dead approach c) Track d) all
- 45) The correspondence of point knob is proved in_____ ()
 a) WSR b) WKPR c) WKR d) all
- 46) NCR/RCR contacts are proved in_____ ()
 a) WLR b) WSR c) WKPR d) all
- 47) TPR's are not proved in _____ ()
 a) ASR b) UCR c) JSLR d) UYR's
- 48) In home/calling-on RLR circuit _____ interlocking condition is proved ()
 a) partial b) complete c) no d) none
- 49) All the conditions for clearing the signal is proved in_____circuit ()
 a) WLR b) ASR c) UCR d) HR
- 50) Colour of signal knob is_____ ()
 a) Red b) yellow c) blue d) grey
- 51) _____relay picks up after a time lag ()
 a) JSLR b) NJPR c) UYR d) COCAR
- 52) _____relay picks up when calling on track is occupied ()
 a) JSLR b) NJPR c) COAR d) COCAR
- 53) _____relays are made slow to release ()
 a) COCAR b) JSLR c) UYR d) all
- 54) _____relay picks when cancellation button is pressed in route locked condition ()
 a) UYR b) TSR c) JSLR d) none
- 55) _____is mandatory to prove in signal control circuit ()
 a) Signal in advance and rear must not be blank
 b) Signal in advance must not be blank
 c) neither advance nor rear signal condition is proved
 d) Signal in rear must not be blank
- 56) Length of approach track for providing approach locking on home signal is____()
 a) 1 km b) 1.4 km c) 65 mt d) none
- 57) Controlling and back lock tracks are same for_____signal ()
 a) home b) calling on c) starter d) shunt
- 58) Controlling and back lock tracks are different for_____signal ()
 a) home b) starter c) shunt d) a and b
-

- 59) Track red indication on panel appears when_____ ()
a) track is free b) track circuit failed
c) track is occupied d) b and c
- 60) For home signal_____points are proved ()
a) points in the route b) points in overlap
c) points in isolation d) all
- 61) For starter signal_____points are proved ()
a) points in the route b) points in isolation
c) points in overlap d) a and b
- 62) For calling-on signal_____points are proved ()
a) points in the route b) points in isolation
c) points in overlap d) a and b
- 63) Advantages of electrical interlocking is ()
a) easy maintenance b) easy installation
c) efficient and easy operation d) all
- 64) Following conditions are ensured before operating the point ()
a) SM's key IN b) free from track lock
c) free from route lock d) all
- 65) UCR is_____relay ()
a) route holding b) route releasing
c) route checking d) route locking
- 66) When OVSR drops,_____ ()
a) locks overlap points only b) locks points in the route only
c) locks isolation points only d) for unlocking the overlap point
- 67) When ASR picks up_____ ()
a) route is released b) points are unlocked
c) UYR's drop d) all
- 68) In case of dead approach locking, route will be released_____ ()
a) after train movement b) with cancellation
c) a and b d) none
- 69) Which statement is incorrect ()
a) crank handle is interlocked with signal
b) crank handle can be extracted after signal is taken off
c) crank handle cannot be extracted after signal is taken off
d) crank handle can be extracted before signal is taken off
-

- 70) UCR back contact is proved in _____ circuit ()
a) RLR b) RR c) ASR d) NJPR
- 71) Incorrect statement regarding TSR is, _____ ()
a) normally in energized condition b) holds through stick path
c) proved in ASR for approach locking d) proved in UCR circuit
- 72) Incorrect statement regarding COAR is _____ ()
a) normally in drop condition
b) picks up when calling on track occupied
c) pick up contact is not proved in CO HR
d) pick up contact is proved in CO HR
- 73) Incorrect statement regarding SMR is, _____ ()
a) pick up contact is proved in ASR
b) pick up contact is proved in UCR
c) pick up contact is proved in NCR/RCR
d) JSLR
- 74) Incorrect statement regarding UCR is, _____ ()
a) track pick up condition is proved b) must be an authorized operation
c) concern crank handle IN d) conflicting signals are not taken off
- 75) _____ relay proves that cancellation circuit is not in progress ()
a) JSLR b) RJPR c) COCAR d) all
- 76) Relays which pick up during the train movement to release the route after train movement is, _____ ()
a) ASR's/ASPR's b) COAR/COCAR c) JSLR/NJPR d) UYR's
- 77) Siding normal proving relay is _____ ()
a) Siding YPR b) Siding SPR c) Siding NPR d) Siding RPR
- 78) _____ relay proves that prescribed time is lapsed during cancellation ()
a) ASR b) COCAR c) NGPR d) NJPR
- 79) Lamp failure indication relay is _____ ()
a) GXJR b) JXGR c) GEJR d) LFJR
- 80) UYR's are made slow to release, _____ ()
a) till ASR picks up
b) till ASR picks up and holds through its last repeater relay
-

- c) till JSLR picks up and holds through its last repeater relay
- d) none

- 81) JSLR is made slow to release_____ ()
- a) till ASR picks up
 - b) till ASR picks up and holds through its last repeater relay
 - c) till JSLR picks up and holds through its last repeater relay
 - d) none
- 82) GXJR will be_____ ()
- a) Normally energized relay
 - b) Normally de-energized relay
 - c) pick up when signal is operated
 - d) pick up when signal is blank
- 83) For operation of points in route setting type RRI_____position point switches are used. ()
- a) single
 - b) two
 - c) three
 - d) all
- 84) The 3 positions of point switch in RRI are_____ ()
- a) Normal position
 - b) centre position
 - c) reverse position
 - d) all
- 85) For auto operation of points in RRI, point switch must be in_____position ()
- a) normal position
 - b) reverse position
 - c) centre position
 - d) none
- 86) GNR is_____ ()
- a) point button relay
 - b) route button relay
 - c) all signal button normal relay
 - d) none
- 87) All signal button normal relay is_____ ()
- a) UNR
 - b) GNCR
 - c) GNR
 - d) UNCR
- 88) All point button normal relay is_____ ()
- a) WNCR
 - b) WNR
 - c) WRR
 - d) WCNR
- 89) GN is_____ ()
- a) route button
 - b) common route button
 - c) signal button
 - d) common signal button
- 90) Route setting type interlocking is also called as_____ ()
- a) Entry and Entry type
 - b) Entry and Exit type
 - c) Exit and Exit type
 - d) none
- 91) Color light signaling is_____ ()
- a) compulsory in RRI
 - b) compulsory in PI
 - c) optional in PI
 - d) a and c
-

- 104) Relay controlling the proceed aspect of Signal is_____ ()
a) DR b) HHR c) HR d) UGR
- 105) Incorrect statement regarding proving of SMR 'F' contact in_____ ()
a) NCR/RCR b) JSLR c) CH EKT coil d) NJPR

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	b	c	d	c	b	b	d	c	d
11	12	13	14	15	16	17	18	19	20
a	c	a	c	d	b	d	d	c	b
21	22	23	24	25	26	27	28	29	30
d	d	d	c	b	d	a	b	c	d
31	32	33	34	35	36	37	38	39	40
a	a	b	a	d	c	b	a	b	a
41	42	43	44	45	46	47	48	49	50
c	d	b	d	c	a	b	c	d	a
51	52	53	54	55	56	57	58	59	60
b	c	d	c	b	a	d	d	d	d
61	62	63	64	65	66	67	68	69	70
d	d	d	d	c	a	d	c	b	c
71	72	73	74	75	76	77	78	79	80
d	c	a	a	b	d	c	d	a	b
81	82	83	84	85	86	87	88	89	90
b	a	c	d	c	d	b	a	c	b
91	92	93	94	95	96	97	98	99	100
d	a	c	b	c	c	a	c	b	d
101	102	103	104	105					
a	d	d	a	d					

AXLE COUNTERS & BPAC

- 1) In CEL SSDAC data packets consists of _____ ()
a. Count Information b. Reset Information
c. Error Information d. All
- 2) In CEL SSDAC MODEM is _____ ()
a. V-21 b. V-22 c. V-23 d. V-24
- 3) In CEL SSDAC the approximate cycle time is _____ micro seconds ()
a. 50 b. 75 c. 100 d. 125
- 4) In CEL SSDAC for fixing of coils _____ mm dia hole is to be drilled ()
a. 10 mm b. 2 mm c. 14 mm d. 16 mm
- 5) In CEL SSDAC the axle detectors are fixed at a distance of _____ m from Glued Joint ()
a. 23 b. 27 c. 30 d. 33
- 6) The distance between two Axle detectors of two SSDAC systems is at greater than _____ meters to avoid mutual interference ()
a. 1.5 m b. 1.6 m c. 1.8 m d. 2 m
- 7) The Axle detectors are fixed in clear spacing of _____ mm between the two sleepers ()
a. 200 b. 300 c. 400 d. 500
- 8) The default factory address setting for Entry unit is ____ in CEL SSDAC ()
a. 01 h b. 02 h c. 03 h d. 04 h
- 9) The default factory address setting for Exit unit is ____ in CEL SSDAC ()
a. 01 h b. 02 h c. 03 h d. 04 h
- 10) _____ No. of address pairs are designed for setting in CEL SSDAC ()
a. 12 b. 13 c. 14 d. 15
- 11) _____ is the carrier frequency for Entry unit in CEL SSDAC ()
a. 980 Hz b. 1650 Hz c. 1800 Hz d. 2700 Hz
- 12) _____ is the carrier frequency for Exit unit in CEL SSDAC ()
a. 980 Hz b. 1650 Hz c. 1800 Hz d. 2700 Hz
- 13) The MLB keeps the track of _____ counts in CEL SSDAC ()
a. Primary Counts b. Secondary Counts
c. Remote Counts d. All
- 14) The MLB card sends the Primary / secondary counts to the remote SSDAC on regular basis of every _____ milli seconds in CEL SSDAC ()
a. 600 b. 700 c. 800 d. 900

- 15) The 8 LEDs on the MLB Card denotes___error code in CEL SSDAC ()
a. Binary b. Octa Decimal c. Hexa Decimal d. Decimal
- 16) The Event Logger has___MB Flash Memory to store packets in CEL SSDAC ()
a. 2 b. 4 c. 6 d. 8
- 17) In CEL SSDAC Event Logger card_____Pages of data can be stored in Flash Memory. ()
a. 1024 b. 2048 c. 4096 d. 512
- 18) In CEL SSDAC the data can be stored in Flash Memory in___basis ()
a. LIFO b. LILO c. FILO d. FIFO
- 19) The Modem card will have___FSK Modem chip in CEL SSDAC ()
a. 7510 b. 7410 c. 7610 d. 7710
- ()
a. 5 b. 7 c. 8 d. 10
- 20) DIP Switch setting for Entry Unit Reset Box for CEL SSDAC is_____ ()
a. OFF, OFF, OFF, OFF b. OFF, OFF, OFF, ON
c. OFF, OFF, ON, OFF d. OFF, OFF, ON, ON
- 21) DIP Switch setting for Exit Unit Reset Box for CEL SSDAC is_____ ()
a. OFF, OFF, OFF, OFF b. OFF, OFF, OFF, ON
c. OFF, OFF, ON, OFF d. OFF, OFF, ON, ON
- 22) The condition of jumpers J1 and J2 in CEL SSDAC is_____ ()
a. Short Open b. Open Short c. Short short d. Open Open
- 23) The push button and SM's Key are connect___in CEL SSDAC ()
a. Series b. Parallel c. Independent d. None
- 24) Tx coil voltage is___in CEL SSDAC ()
a. 30 – 40 v b. 40 – 50 v c. 50 – 60 v d. 60 – 70 v
- 25) The GG Tronics SSDAC system can be configurable as_____ ()
a. 2DP 1S b. 3DP 1S c. 3DP 2S d. All
- 26) The baud rate for communication between SF & EF units is_____ in GGTronics SSDAC ()
a. 300 bps b. 600 bps c. 900 bps d. 1200 bps
- 27) ___Frequencies are used for driving Axle detectors in GG Tronics SSDAC ()
a. 21 & 23 KHz b. 21 & 25 KHz c. 21 & 27 KHz d. 30 & 31 KHz
-

- 28) ____ Principle is used in sensing passage of wheel in GG Tronics SSDAC ()
a. Amplitude Modulation b. Phase Reversal
c. Both A & B d. Current Damping
- 29) The Axle detectors can sense up to ____ Kmph in GG Tronics SSDAC ()
a. 140 b. 160 c. 200 d. 250
- 30) The system senses wheels above ____ dia in GG Tronics SSDAC ()
a. 400 mm b. 450 mm c. 500 mm d. 550 mm
- 31) Two consecutive motor trolleys entering the same section with in a time gap of more than ____ seconds are allowed in GG Tronics SSDAC ()
a. 3 b. 4 c. 5 d. 6
- 32) If one field unit is Reset and the second one is not Reset within ____ minutes The Reset initiation will be automatically cancelled in GG Tronics SSDAC ()
a. 3 b. 4 c. 5 d. 6
- 33) The voltage window circuit ensures that the Reset potential is maintained within the limits of ____ in GG Tronic SSDAC ()
a. 40 – 48 v b. 38 – 48 v c. 36 – 50 v d. 36 – 52 v
- 34) GG Tronics SSDAC mother board will have ____ No. of slots ()
a. 7 b. 8 c. 9 d. 10
- 35) When train speed is 250 Kmph then the pulse width will be ____ milli sec in GG Tronics SSDAC ()
a. 2 b. 2.2 c. 2.4 d. 2.6
- 36) Frequency of scanning by processor for PD signal is ____ times for every wheel in GG Tronics SSDAC ()
a. 4 b. 5 c. 6 d. 7
- 37) Under no wheel TX & RX signals will be ____ out of phase in GG Tronics SSDAC ()
a. 90 Degrees b. 120 Degrees c. 180 Degrees d. 360 Degrees
- 38) Under wheel condition RX Phase signal voltage will be ____ in GG Tronics SSDAC ()
a. < 1 v b. < 1.5 v c. < 1.8 v d. <2 v
- 39) Start Fed CPU-1 will have an address of ____ in GG Tronics SSDAC ()
a. 01 h b. 02 h c. 03 h d. 04 h
- 40) Start Fed CPU-2 will have an address of ____ in GG Tronics SSDAC ()
a. 01 h b. 02 h c. 03 h d. 04 h
- 41) End Fed CPU-1 will have an address of ____ in GG Tronics SSDAC ()
a. 01 h b. 02 h c. 03 h d. 04 h
-

- 56) In Eldyne maximum communication distance between ACE and DP is _____ KM with 60 V DC centralized power supply and 0.9 mm Quad cable ()
a. 1.5 KM b. 4.2 KM c. 8 KM d. 16 KM
- 57) In Eldyne maximum communication distance between ACE and DP is _____ KM with 110 V DC centralized power supply and 0.9 mm Quad cable ()
a. 1.5 KM b. 4.2 KM c. 8 KM d. 16 KM
- 58) In Eldyne maximum communication distance between ACE and DP is _____ KM with 60 / 110 V DC local power supply and 0.9 mm Quad ()
a. 1.5 KM b. 4.2 KM c. 8 KM d. 16 KM
- 59) In Eldyne the ACE deals with maximum of _____ DP's ()
a. 10 b. 22 c. 32 d. 40
- 60) In Eldyne DP's address setting is provided in _____ board ()
a. Digital board b. Analog board c. Mother board d. none
- 61) In Eldyne MESSAB adjustment is done in _____ board ()
a. Digital board b. Mother board c. Analog board d. none
- 62) In Eldyne analog wheel pulse is known as _____ ()
a. MESSAB b. RADIMP c. PEGUE d. None
- 63) In Eldyne digital wheel pulse is known as _____ ()
a. MESSAB b. RADIMP c. PEGUE d. None
- 64) In Eldyne Digital board is also known as _____ board ()
a. ISDN board b. Communication board
c. CPU d. Mother board
- 65) In Eldyne Digital board transmits Data to ACE using _____ protocol ()
a. ISDN b. TCPIP c. Communication d. FSK
- 66) In Eldyne, power supply unit occupies _____ & _____ slots of 1st basic sub rack ()
a. 1st and 4th b. 1st and 2nd c. 1st and 3rd d. 3rd and 4th
- 67) In Eldyne power supply unit generates _____ & _____ supplies ()
a. 5V DC & 12V DC b. 5V, 12V, 24V & Iso 15V DC
c. 5V, +12V, -12V, +18V, +24V DC d. 5V, +12V, -12V, +24V DC
- 68) In Eldyne serial I / O board receives data from _____ ()
a. Track side equipment b. PDCU
c. ACE d. Parallel I / O board
-

- 69) In Eldyne each serial I / O board assigned to maximum_____number of detection points ()
a. 1 b. 2 c. 3 d. 4
- 70) Track occupancy information is provided by_____board in Eldyne. ()
a. Serial I / O board b. Parallel I / O board c. Digital board d. CPU board
- 71) In Eldyne each parallel I / O module outputs_____relay contacts ()
a. 1 b. 2 c. 3 d. 4
- 72) In Eldyne manual local reset can be done by using a key switch mounted on the front panel of the_____module ()
a. Serial I / O b. Parallel I / O c. Power supply d. CPU board
- 73) In Eldyne Rail contacts (sk) are fixed with_____bolts ()
a. M8 b. M10 c. M12 d. M14
- 74) In Eldyne spanner used to tight the rail contacts is_____ ()
a. 13mm b. 14mm c. 12mm d. 10mm
- 75) In Eldyne_____torque is to be applied for fixing of Rail contacts ()
a. 25 Nm b. 45 Nm c. 35 Nm d. 15 Nm
- 76) In Eldyne MESSAB adjustment is done with_____potentiometer ()
a. R1 b. R2 c. R3 d. R4
- 77) PEGUE adjustment in Eldyne is done with_____potentiometer ()
a. R1 b. R2 c. R3 d. R4
- 78) In Eldyne drill bit size for making holes of Rail contacts ()
a. 13mm b. 14mm c. 12mm d. 11mm
- 79) In Eldyne_____number of wires are connected between PDCU and track side electronic equipment ()
a. 2 b. 3 c. 4 d. 5
- 80) In Eldyne serial interface of diagnostic PC is connected to_____ ()
a. Left side PC b. Right side PC c. Both d. None
- 81) In Eldyne ethernet interface of diagnostic PC is connected to_____ ()
a. Left side PC b. Right side PC c. Both d. None
- 82) Eldyne make rail contacts will monitor up to a train speed of_____kmph ()
a. 250 kmph b.300 kmph c. 350 kmph d. 380 kmph
- 83) In Eldyne rectifiedRX1 voltage (MESSAB1) without dummy wheel is_____()
a. + 80 ----- + 1000 mV b. – 80 ----- –1000 mV
c. + 40 ----- + 1000 mV d. – 40 ----- –1000 mV
-

- 84) In Eldyne rectified RX1 voltage (MESSAB1) with dummy wheel is _____ ()
 a. + 80 ----- + 1000 mV b. - 80 ----- -1000 mV
 c. + 40 ----- + 1000 mV d. - 40 ----- -1000 mV
- 85) In Eldyne transmitter coil SK , voltage is _____ ()
 a. 40 to 85V AC b. 30 to 40V AC c. 60 to 80V AC d. 30V AC
- 86) Superimposed power and data line are connected to _____ terminals at EAK in Eldyne ()
 a. 3, 13 b. 2, 12 c. 1, 10 d. 2, 3
- 87) _____ & _____ terminals are shorted if same pair of conductors is used for super imposed data and power supply is used to EAK in Eldyne ()
 a. 2 & 1, 12 & 11 b. 2 & 1, 13 & 3 c. 3 & 4, 12 & 11 d. 3 & 4, 13 & 3
- 88) In Eldyne if separate power supply is used for installation at EAK _____ terminals are used for communication link ()
 a. 3 & 13 b. 2 & 1 c. 1 & 11 d. 3 & 4
- 89) In Eldyne, if separate power supply is used for installation at EAK _____ terminals are used for connecting power supply ()
 a. 3 & 13 b. 2 & 1 c. 1 & 11 d. 3 & 4
- 90) The EAK has to be connected to the earth with a copper cable of minimum _____ sq. mm in Eldyne ()
 a. 25 sq.mm. b. 16 sq.mm. c. 10 sq.mm. d. 6 sq.mm.
- 91) In Eldyne the EAK housing has to be earthed with the earth resistance of _____ ohm ()
 a. 1 b. 10 c. Less than 4 d. 5
- 92) _____ diode is provided across Vital Relay in Eldyne ()
 a. IN 4007 b. IN 2804 c. IN 5408 d. BY 127
- 93) One parallel I / O board monitors _____ track sections in Eldyne ()
 a. 1 b. 2 c. 3 d. 4
- 94) In Eldyne PDCU is _____ between outdoor equipment (DP) and indoor equipment (ACE) ()
 a. Interface b. Interconnection c. Mediator d. None
- 95) In Eldyne _____ mA fuse is provided inside PDCU ()
 a. 315 mA b. 680 mA c. 1A d. 2A
- 96) In Eldyne resetting pulse duration is _____ sec ()
 a. 3 sec b. 4 sec c. 5 sec d. 2 sec
-

- 97) In Eldyne _____mA fuse is provided in Reset box ()
a. 500 mA b. 315 mA c. 680 mA d. 1 A
- 98) In Eldyne fuse provided in Reset box is of _____type ()
a. Fast blown glass fuse b. Slow blown glass fuse
c. HRC fuse d. Knife edge fuse
- 99) In Eldyne dummy wheel should be set at _____mm for testing ()
a. 20mm b. 30mm c. 40mm d. 50mm

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
d	a	c	c	d	d	c	b	c	d
11	12	13	14	15	16	17	18	19	20
b	a	d	c	c	a	c	d	a	d
21	22	23	24	25	26	27	28	29	30
a	b	a	a	a	d	b	b	b	d
31	32	33	34	35	36	37	38	39	40
d	d	c	d	d	b	d	c	a	A
41	42	43	44	45	46	47	48	49	50
b	c	d	a	b	a	c	a	a	A
51	52	53	54	55	56	57	58	59	60
d	a	b	c	d	a	a	b	c	C
61	62	63	64	65	66	67	68	69	70
c	c	a	b	a	a	a	a	a	B
71	72	73	74	75	76	77	78	79	80
b	b	b	a	a	a	b	a	a	A
81	82	83	84	85	86	87	88	89	90
a	b	d	a	b	a	a	a	a	C
91	92	93	94	95	96	97	98	99	100
a	c	a	a	a	a	a	a	b	C

SINGLE LINE TOKEN LESS BLOCK INSTRUMENT

- [illegible]

- 11) In S/L Handle type Daido B/I, _____ relay picks up at the same station when PB1 & PB2 are pressed simultaneously ()
a. BLR b. NR c. PBPR d. none
- 12) In S/L Handle type Daido B/I, _____ relay picks up at the other end station when PB1 & PB2 are pressed simultaneously. ()
a. BLR b. NR c. PBPR d. none
- 13) In S/L Handle type Daido B/I, _____ relay picks up at the same station when PB1 is pressed for bell beat exchange ()
a. BLR b. NR c. PBPR d. none
- 14) In S/L Handle type Daido B/I, _____ relay picks up at the other end station when PB1 is pressed for bell beat exchange ()
a. BLR b. NR c. PBPR d. none
- 15) In S/L Handle type Daido B/I, _____ relay picks up at the same station when PB1 is pressed for TOL code acknowledgement ()
a. BLR b. NR c. PBPR d. none
- 16) In S/L Handle type Daido B/I, _____ relay picks up at the other end station when PB1 is pressed for TOL code acknowledgement ()
a. BLR b. NR c. PBPR d. none
- 17) In Daido B/I, The carrier frequencies of TX & RX units at one end should be. ()
a) same b) different c) a & b d) none
- 18) In Daido Block Inst, _____ polarity extends on line when PB1 is pressed for TOL code acknowledgement ()
a. + ve b. - ve c. both d. none
- 19) In Daido Block Inst, _____ polarity extends on line when PB1 is pressed for bell beat exchange signals ()
a. + ve b. - ve c. both d. none
- 20) In Daido Block Inst, _____ polarity extends on line when PB1 & PB2 are pressed simultaneously. ()
a. + ve b. - ve c. both d. none
- 21) In Daido Block Inst, TOL buzzer appears at train _____ end ()
a. sending b. receiving c. both d. none
- 22) In Daido Block Inst, shunt key can be extracted in _____ position ()
a. TCF or (TCF + TOL) b. TGT or (TGT + TOL)
c. LINE CLOSED or (TCF + TOL) d. LINE COSED or TGT
- 23) The normal line working current in Daido block instrument is _____ ()
a. 17 mA b. 25 mA c. 60 mA d. 110 mA
- 24) The Normal operating voltage (local supply) of handle type FM coded DAIDO single line token less block instrument is _____ DC ()
a. 12v b. 24v c. 60v d. 110v
-

- 25) In Daido block instt., the line supply will be ____ ()
a. 24v DC + line drop b. 30v DC c. 36v DC d. 24v DC
- 26) S/line token less Daido block instt. is suitable in ____ area ()
a. both RE & non-RE b. only non- RE c. only RE d. none
- 27) S/line token less Daido block instt. is ____ type for normal train operations ()
a. non- cooperative b. cooperative c. both d. none
- 28) S/line token less Daido block instt. is ____ for cancellation operations ()
a. non-cooperative b. cooperative c. both d. none
- 29) S/line token less Daido block instrument POH is ____ ()
a. once in 10 years b. once in 7 years c. both d. none
- 30) S/line token less Daido block instrument working principle is ____ ()
a. AC impulse code b. DC impulse code
c. AC & DC impulse codes d. Frequency modulated
- 31) S1 switch is used for ____ cancellation operation in Daido block instrument ()
a. normal b. push back c. both d. none
- 32) S2 switch is used for ____ cancellation operation in Daido block instrument ()
a. normal b. push back c. both d. none
- 33) In Daido block inst., time release indicator operates when ____ operated ()
a. S1 switch b. S2 switch c. both d. none
- 34) Separate power supply is ____ for telephone circuit in Daido block inst. ()
a. not required b. required c. both d. none
- 35) In Daido block inst., ____ is pressed for bell beat exchange signals ()
a. PB1 b. PB2 c. both d. none
- 36) In Daido block inst., ____ is pressed for TOL code acknowledgement ()
a. PB1 b. PB2 c. both d. none
- 37) In Daido block inst., ____ is pressed for extending co-operation ()
a. PB1 b. PB2 c. both d. none
- 38) In Daido block inst., ____ relay picks up in a line circuit ()
a. BLR b. NR c. a or b d. none
- 39) In Daido block inst., ____ relay picks up in local circuit ()
a. 1R b. 1TPR c. both d. none
- 40) BLR & NR are of ____ type relays provided in Daido block inst. ()
a. QB3 b. QNA1 c. QL1 d. QBA1
- 41) 1R & 1TPR are of ____ type relays provided in Daido block inst. ()
a. QB3 b. QNA1 c. QL1 d. QBA1
- 42) In Daido block inst., TOL indicator is of ____ type indicator ()
a. magnetic latch b. polarized c. neutral d. none
-

- 43) In Daido block inst., time release indicator is of ___type indicator ()
 a. magnetic latch b. polarized c. neutral d. none
- 44) In Daido block inst., galvo is of ___type indicator ()
 a. magnetic latch b. polarized c. neutral d. none
- 45) In Daido block inst., total line circuits are ____ ()
 a. 2 b. 3 c. 4 d. none
- 46) In Daido block inst., total power supplies required are ____ ()
 a. 2 b. 3 c. 4 d. none
- 47) In Daido block inst., minimum line wires required to connect in non-RE is ____ ()
 a. 1 b. 2 c. 3 d. none
- 48) In Daido block inst., minimum ____ of line wires required to connect in RE ____ ()
 a. 1 pair b. 2 pairs c. 3 pairs d. none
- 49) When SM's key is removed in Daido block inst., ____ possible ()
 a. for extending co-operation b. incoming bell beats
 c. for extraction of shunt key d. S1 or S2 operation
- 50) When SM's key is removed in Daido block inst., ____ possible ()
 a. auto TOL code transmission b. auto TOL code reception
 c. incoming bell beats d. all

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
b	a	b	a	a	b	b	b	a	C
11	12	13	14	15	16	17	18	19	20
c	b	d	a	c	b	b	a	b	A
21	22	23	24	25	26	27	28	29	30
c	d	d	b	a	a	b	b	b	D
31	32	33	34	35	36	37	38	39	40
a	b	a	a	a	a	c	c	c	D
41	42	43	44	45	46	47	48	49	50
b	a	a	b	b	b	a	b	b	D

DOUBLE LINE BLOCK INSTRUMENT

- 1) The resistance of a door lock coil in PTJ make SGE block instrument ()
a. 140 ohms b. 50 ohms c. 400 ohms d. 48 ohms
- 2) The bell coil resistance in PTJ make SGE block instrument ()
a. 140 ohms b. 50 ohms c. 400 ohms d. 48 ohms
- 3) The up/down line indicator coil resistance in PTJ make SGE block instrument ()
a. 140 ohms b. 50 ohms c. 400 ohms d. 48 ohms
- 4) The bell line relay coil resistance in PTJ make SGE block instrument ()
a. 140 ohms b. 50 ohms c. 400 ohms d. 48 ohms
- 5) In train arrival circuit in double line _____ are used ()
a. Two track circuits' b. Axle counters
c. Last vehicle check device d. Treadle contact
- 6) One line clear one train movement in SGE D/L B/I is ensured by ()
a. FVTR b. SR1, SR2 c. ASR d. LCPR
- 7) Minimum number of line conductors required for D/L B/I in non-RE area are ()
a. 1 b. 2 c. 3 d. 4
- 8) No. of bands in commutator is _____ for SGE DLBI ()
a. 2 b. 4 c. 6 d. 8
- 9) 1st band of commutator is used in _____ circuit of SGE DLBI ()
a. SR₁, SR₂ b. LCPR c. GNSR d. LSS DR
- 10) In SGE DLBI, GNSR relay picks up when block handle is turned to _____ ()
a. Line Closed b. TOL c. LC d. none
- 11) In SGE DLBI, GNSR relay drops when block handle is turned to _____ ()
a. Line Closed b. TOL c. LC d. none
- 12) One line clear one train feature is achieved by _____ Relays in SGE DLBI ()
a. SR₁, SR₂ b. LCPR, GNSR c. LSS PR, DECR d. None
- 13) SR₁ and SR₂ relays are provided with _____ type of Relay in SGE DLBI ()
a. QN1 b. QBA1 c. QNA1 d. QBCA1
- 14) Normally SR₁ and SR₂ relays are in _____ condition of SGE DLBI ()
a. dropped b. pick up c. both d. none
- 15) Initially SR₁ and SR₂ relays picks up with _____ PR relay in SGE DLBI ()
a. line closed contact b. TOL contact c. LC contact d. none
- 16) Commutator is locked when Block handle is turned from _____ to _____ ()
a. Line closed to TOL b. Line clear to Line closed
c. Line clear to TOL d. Line closed to Line clear

- 17) Periodicity of overhauling for SGE DLBI is _____ ()
a. 7 Years b. 10Years c. 12 Years d. No Overhauling
- 18) In SGE DLBI, Top indicator refers as _____ ()
a. TCF Indicator b. TGT Indicator
c. Line closed Indicator d. None
- 19) In SGE DLBI, Bottom indicator refers as _____ ()
a. TCF Indicator b. TGT Indicator
c. Line closed Indicator d. None
- 20) In DLBI, line clear is given at _____ station ()
a. Train sending station b. Train Receiving Station
c. At Both Stations d. None
- 21) In block clearance circuit of SGE DLBI, _____ relay normally in Pick Up condition ()
a. ZR1 b. ZR2 c. ZR3 d. none
- 22) In SGE DLBI, ZR3 relay drops when block handle is turned to _____ ()
a. Line Closed b. TOL c. LC d. none
- 23) In SGE DLBI, ZR3 relay picks up on arrival of train when block handle is in _____ ()
a. Line Closed b. TOL c. LC d. none
- 24) In DLBI, once ZR3 relay picks up, it remains in up condition with _____ band ()
a. Line Closed b. TOL c. LC d. TOL/LB
- 25) ZR2 is to be provided with _____ feature ()
a. Slow to Pick up b. Slow to Release
c. Both d. None
- 26) If pre-mature TOL is done in SGE DLBI, the LSS aspect _____ ()
a. changes to RG b. remains same DG c. becomes blank d. none
- 27) In SGE DLBI, if train is arrived when block handle is in LC position, then _____ ()
a. block inst. fails b. block inst will not fail c. both d. none
- 28) In SGE DLBI, if Home signal RG gets blank on arrival of train, then _____ ()
a. block inst. fails b. block inst will not fail c. both d. none
- 29) The Block instrument earth value should be not more than _____ ()
a. 1Ω b. 5Ω c. 10Ω d. 12Ω
- 30) Block earths are measured once in _____ ()
a. 1 Year b. 2 Years c. 6 months d. 3 months
- 31) To open DLBI cover _____ is required to be given ()
a. without consent memo b. with consent memo
c. disconnection memo d. none
-

- 32) SGE DLBI is provided with_____arrangement ()
a. double locking b. sealing c. both d. none
- 33) In SGE DLBI, top indicator is interconnected with ____ in the same block ()
a. bottom indicator b. polarized relay c. block handle d. none
- 34) In SGE DLBI, bottom indicator is interconnected with ____ in the same block ()
a. top indicator b. polarized relay c. block handle d. none
- 35) In SGE DLBI, bottom indicator is interconnected with_____of other block inst. ()
a. top indicator b. polarized relay c. block handle d. none
- 36) In SGE DLBI, the total numbers of line circuits are_____. ()
a. 2 b. 3 c. 4 d. 5
- 37) In SGE DLBI, the total number of power supplies required at a station are____()
a. 2 b. 3 c. 4 d. 5
- 38) In SGE DLBI, a separate power supply is_____for telephone circuit ()
a. not required b. required c. both d. none
- 39) When SM's key is taken out in SGE DLBI,_____is not possible ()
a. block handle operation b. bell plunger operation c. both d. none
- 40) AC immunity value of PR is_____V AC ()
a. 50V AC b. 300V AC c. 1000V AC d. 10V AC
- 41) Resistance of Choke (S1) is_____ohms in Block unit ()
a. 40000Ω b. 20000Ω c. 40Ω d. 50Ω
- 42) Resistance of Choke (S2) is_____ohms in Block unit ()
a. 40000Ω b. 20000Ω c. 40Ω d. 50Ω
- 43) Impedance of Choke (S1) is_____ohms in Block unit ()
a. 40000Ω b. 20000Ω c. 40Ω d. 50Ω
- 44) Impedance of Choke (S2) is_____ohms in Block unit ()
a. 40000Ω b. 20000Ω c. 40Ω d. 50Ω
- 45) Filter unit is used for_____line circuits Block instrument ()
a. bell b. telephone c. indication d. None
- 46) Filter unit for Block instrument is provided to block_____voltage ()
a. AC induced Voltage b. DC Voltage
c. Both d. None
- 47) DLBI in RE, bell line circuit is connected with_____to remove induced voltage ()
a. Isolation transformer b. Filter unit
c. Both d. None
-

- 48) In DLBI, block handle locks initially at ___ position while turning towards TOL ()
 a. full notch b. half notch c. Line Closed d. TOL
- 49) In DLBI, ___ contacts makes when bell plunger is not pressed ()
 a. B, L b. B, R c. L, R d. V, L
- 50) ___ pairs of line wires required for connecting both the DLBIs in RE area ()
 a. one b. two c. three d. four

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
b	d	a	c	a	b	c	c	c	C
11	12	13	14	15	16	17	18	19	20
a	a	c	b	b	c	a	b	a	B
21	22	23	24	25	26	27	28	29	30
c	c	b	d	b	b	b	a	c	A
31	32	33	34	35	36	37	38	39	40
c	c	b	c	a	c	c	b	c	D
41	42	43	44	45	46	47	48	49	50
d	c	a	b	c	a	a	b	c	B

UFSBI & SSBPAC

- 1) UFSBI works in _____ media ()
a. Quad only b. OFC only c. both a & b d. none
 - 2) UFSBI works in _____. ()
a. RE & Non RE b. Single line c. Double line d. All
 - 3) Output 2 relay is _____ in UFSBI. ()
a. TGTZR b. TCFXR c. TCFCR d. ASGN CPR
 - 4) Output 3 relay is _____ in UFSBI. ()
a. TGTZR b. TCFZR c. TCFCR d. ASGN CPR
 - 5) Output 4 relay is _____ in UFSBI ()
a. TGTZR b. TCFZR c. TCFCR d. TGTZR
 - 6) Output 5 relay is _____ in UFSBI. ()
a. BLR b. TCFZR c. TGTZR d. ASGN CPR
 - 7) Output 6 relay is _____ in UFSBI. ()
a. TGTZR b. TCFZR c. TCFCR d. TGTZR
 - 8) Output 7 relay is _____ in UFSBI. ()
a. ASGN CPR b. BLR c. TGTZR d. TGTZR
 - 9) UFSBI works with _____ in UFSBI. ()
a. 1 out of 1 logic b. 2 out of 2 logic c. 2 out of 3 logic d. All
 - 10) _____ number of inputs that can be given to each input card in UFSBI ()
a. 08 b. 16 c. 24 d. 36
 - 11) Maximum no. of outputs that can be taken from each output card in UFSBI ()
a. 16 b. 24 c. 08 d. 36
 - 12) _____ Number of Input cards are available in UFSBI ()
a. 6 b. 2 c. 4 d. 8
 - 13) One Line Clear One train feature in UFSBI is achieved by _____ relay. ()
a. VPR b. BTR c. TGTZR d. ASCR
 - 14) Number of Output cards in UFSBI ()
a. 4 b. 1 c. 2 d. 3
 - 15) Output voltages of DC DC converter in UFSBI ()
a. +5V, +12V, -12V, +24V b. +5V, +18V, +12V, +24V
c. +5V, +12V, -12V, +18V d. +5V, +12V, Isol. 15V, +24V
 - 16) _____ relays are latched relays in UFSBI ()
a. TGTZR, TGTZR b. TCFR, TGTZR
c. TCFXR, TCFZR d. TGTZR, TGTZR
-

- 33) How many Q series relays are provided inside UFSBI in double line working. ()
a. 29 b. 30 c. 31 d. 32
- 34) How many QNA1 relays are provided inside UFSBI in single line working? ()
a. 4 b. 5 c. 6 d. 7
- 35) How many QNA1 relays are provided inside UFSBI in double line working? ()
a. 4 b. 5 c. 6 d. 7
- 36) BIPR 1 and BIPR 2 are called as _____ relays in UFSBI. ()
a. Input b. Output c. Read back d. Health checking
- 37) Output relays are of _____ type in UFSBI. ()
a. QN1 b. QNA1 c. QNN1 d. QL1
- 38) _____ ohms of isolation transformer has to be connected to UFSBI side. ()
a. 1120 b. 470 c. 600 d. 1200
- 39) _____ ohms of isolation transformer has to be connected to cable side in UFSBI. ()
a. 1120 b. 470 c. 600 d. 1200
- 40) Error code 10, 20 comes under _____ in UFSBI. ()
a. Input complementary failure b. Output complementary failure
c. BIPR 1 complementary failure d. Output forced pickup
- 41) Error code 18, 28 comes under _____ in UFSBI. ()
a. Input complementary failure b. Output complementary failure
c. BIPR 1 complementary failure d. Output forced pickup
- 42) Error code 30, 31 comes under _____ in UFSBI. ()
a. Input complementary failure b. Output complementary failure
c. BIPR 1 complementary failure d. Output forced pickup
- 43) Error code 33 is _____ in UFSBI. ()
a. link fail b. RSSB mode c. IN Jitter d. Out Jitter
- 44) Error code 37-39 are _____ in UFSBI. ()
a. link fail b. RSSB mode c. CPU bad d. UFSBI address bad
- 45) Error code 92 is _____ in UFSBI. ()
a. link fail b. RSSB mode c. CPU bad d. UFSBI address bad
- 46) Error code 34 is _____ in UFSBI. ()
a. link fail b. RSSB mode c. CPU bad d. UFSBI address bad
- 47) How many 24 volts DC supplies are available in UFSBI? ()
a. 1 b. 2 c. 3 d. 4
- 48) When error code 37 is displayed on CPU card, then _____ indication appears on alarm panel of UFSBI. ()
a. Single CPU fail b. redundant DC-DC fail
c. System fail d. Link fail
-

- 49) When error code 15 is displayed on CPU card, then_____indication appears on alarm panel of UFSBI. ()
a. Single CPU fail b. DC-DC fail c. System fail d. Link fail
- 50) When any one 5V supply is faulty, then_____indication appears on alarm panel of UFSBI. ()
a. Single CPU fail b. DC-DC fail c. System fail d. Link fail
- 51) SSBPAC of Medha works on_____logic. ()
a. 1 out of 1 b. 1 out of 2 c. 2 out of 2 d. 2 out of 3
- 52) SSBPAC of Medha will have_____No of cards. ()
a. 10 b. 11 c. 12 d. 13
- 53) SSBPAC of Medha will have_____no of Power supply card. ()
a. 1 b. 2 c. 3 d. 4
- 54) 2 out of 3 decisions will be taken by_____card in Medha SSBPAC. ()
a. vital input b. Vital output c. CPU d. Voter module
- 55) _____are the Health checking relays in Medha SSBPAC. ()
a. BI PR-1 & BIPR-2 b. HCR -1 & HCR-2
c. VCOR-1 & VCOR-2 d. VR1 & VR2
- 56) _____are the latch relays in Medha SSBPAC. ()
a. TGTR & TCFR b. ASCR c. HS GNCR d. VCOR1 / VCOR2
- 57) For health checking_____type of relay is used in Medha SSBPAC. ()
a. QL1 b. QN1 c. QNA1 d. QNN1
- 58) The input contacts are isolated from the CPU data line by using_____in Medha SSBPAC. ()
a. opto-isolators b. Transformers c. Galvanic isolators d. None
- 59) The vital output card receives vital output from____card in Medha SSBPAC ()
a. CPU card b. Modem card c. Voter module d. Non vital output card.
- 60) The voter module gives the majority voted output for____in medha SSBPAC. ()
a. Vital output card b. Non vital output card c. both d. none.
- 61) The functionality of the modem card is to take the data from_____card ()
a. CPU b. Voters module c. vital output d. Non vital output
- 62) The Event logger card is interfaced to all the CPU's through_____in Medha SSBPAC. ()
a. CAN Bus b. Serial Communication
c. parallel communication d. both B & C.
- 63) For Medha SSBPAC_____provides the necessary interface between all the cards in the system. ()
a. Back Plane b. Keying Plugs
c. Mother board d. Connector Assembly.
-

- 64) User Interface unit contains _____ in Medha SSBPAC. ()
a. User start button b. Buzzer Acknowledge button
c. clear Fault button d. All
- 65) In Medha SSBPAC Configuration jumper setting is done in _____. ()
a. CPU cards b. Input Cards
c. Voter module card d. Mother Board.
- 66) In Medha SSBPAC for inter block communication both self ID and remote ID need to be set in the _____ card. ()
a. CPU cards b. Input cards c. voter module card d. Back plane
- 67) System ID setting consists of _____ jumper in Medha SSBPAC. ()
a. 2 Nos b. 4 Nos c. 8 Nos d. 16 Nos.
- 68) Modem card in Medha SSBPAC is of _____ communication. ()
a. Simplex b. full duplex c. half duplex d. One way.
- 69) The modem Baud rate is _____ in Medha SSBPAC ()
a. 300 b. 600 c. 1200 d. 2400
- 70) To configure modem to Master mode, jumper 1 & 2 and 3 & 4 should be _____ in Medha SSBPAC. ()
a. Short, Open b. Short, Short c. Open, Short d. Open, Open
- 71) To configure modem in slave mode, jumper 1 & 2 and 3 & 4 should be _____ in Medha SSBPAC. ()
a. Short, Open b. Short, Short c. Open, Short d. Open, Open
- 72) Panel outputs are driven through _____ cards in Medha SSBPAC. ()
a. Vital output card b. Non vital output card c. voter module card d. Modem card
- 73) Output-1 Relay is _____ in Medha SSBPAC. ()
a. TGTR b. TGTRY c. TCFR d. TCFRY.
- 74) Output -2 relay is _____ in Medha SSBPAC. ()
a. TGTR b. TGTRY c. TCFR d. TCFRY
- 75) Output-3 relay is _____ in Medha SSBPAC. ()
a. TGTR b. TGTRY c. TCFR d. TCFRY
- 76) Output -4 relay is _____ in Medha SSBPAC. ()
a. TGTR b. TGTRY c. TCFR d. TCFRY
- 77) Output -5 relay is _____ in Medha SSBPAC. ()
a. TGTR b. TCFR c. ASCR d. REP-1
- 78) Output-6 relay is _____ in Medha SSBPAC. ()
a. REP-1 b. REP-2 c. ASCR d. TGTR
- 79) Output-7 relay is _____ in Medha SSBPAC. ()
a. REP-1 b. Rep-2 c. ASCR d. TGTR

- 80) Feedback inputs are connected to _____ cards in Medha SSBPAC. ()
a. CPU b. vital input c. vital output d. Non vital Output
- 81) Two vital cut off relays are incorporated in the system to increase the system _____ in Medha SSBPAC. ()
a. Redundancy b. Safety c. Availability d. Functionality.
- 82) The communication from modem in the local system to the modem in the remote system is established through _____ interface in Medha SSBPAC. ()
a. 2 wire b. 4 wire c. Fsk d. none.
- 83) For OFC communication _____ interface is provided in Medha SSBPAC. ()
a. RS232 b. RS485 c. RS 422 d. RS 222
- 84) LCD screen is used to display _____ in Medha SSBPAC. ()
a. Fault codes b. Software versions c. Checksum d. All
- 85) The Power supply card provides an output of _____ in Medha SSBPAC. ()
a. 4.5V b. 6.2 V c. Both a & b d. 5.8 V
- 86) 6.2 V is used for _____ card in Medha SSBPAC. ()
a. Processor b. Voter module c. Event logger d. output.
- 87) The range of input supply that can be given to Medha SSBPAC is _____. ()
a. 19.2-31.2 V b. 19.2 - 28.8 V c. 21.6 - 28.8 V d. 21.6 - 31.2 V
- 88) The modem voltage is _____ for Medha SSBPAC. ()
a. > 350 mV b. < 350mV c. > 135 mV d. < 135 mV
- 89) Each CPU module contains _____ Kb of program memory in Medha SSBPAC. ()
a. 64 b. 128 c. 256 d. 512
- 90) Each CPU module contains _____ serial ports for inter processor communication in Medha SSBPAC. ()
a. One b. two c. three d. Four
- 91) Each CPU module contains _____ serial ports for inter block communication in Medha SSBPAC. ()
a. One b. two c. three d. Four
- 92) Efftronics SSBPAC consists of _____ number of cards ()
a. 10 b. 11 c. 12 d. 13
- 93) Each input module will have _____ number of opto- isolated digital inputs in Efftronics SSBPAC. ()
a. 8 b. 16 c. 32 d. 60
- 94) Inputs are diverted to different routes by _____ card in Efftronics SSBPAC. ()
a. Input b. Modem c. Scrambler d. CPU
- 95) GPS time synchronization is provided in _____ card of Efftronics SSBPAC ()
a. Input b. Modem c. Scrambler d. CPU
-

- 96) Media changeover logic is provided in _____ card of Efftronics SSBPAC ()
a. Communication b. CPU c. Voter module d. Scrambler
- 97) _____ no of outputs can be connected to non vital output card of Efftronics SSBPAC ()
a. 8 b. 16 c. 24 d. 32
- 98) CPS signal toggling is done for every _____ minutes in Efftronics SSBPAC ()
a. 20 b. 30 c. 34 d. 38
- 99) _____ number of outputs can be connected to vital output card in Efftronics SSBPAC ()
a. 8 b. 12 c. 16 d. 24
- 100) The maintainer terminal connected to SSBPAC Efftronics can store _____ no of latest error codes. ()
a. 10 b. 50 c. 100 d. 200

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
c	d	b	c	d	d	a	b	c	a
11	12	13	14	15	16	17	18	19	20
c	a	b	c	a	b	d	b	c	b
21	22	23	24	25	26	27	28	29	30
a	a	a	c	c	b	c	a	d	c
31	32	33	34	35	36	37	38	39	40
c	c	a	c	d	d	a	c	b	a
41	42	43	44	45	46	47	48	49	50
b	c	a	c	d	b	c	a	c	b
51	52	53	54	55	56	57	58	59	60
d	d	b	d	c	a	d	a	c	c
61	62	63	64	65	66	67	68	69	70
b	b	a	d	a	a	d	c	c	a
71	72	73	74	75	76	77	78	79	80
c	b	a	b	c	d	c	a	b	b
81	82	83	84	85	86	87	88	89	90
c	a	a	d	c	c	a	c	d	b
91	92	93	94	95	96	97	98	99	100
a	b	d	c	d	a	c	c	a	c

SIGNALING IN R.E. AREA

- 1) The minimum Signal clearance should be _____ mm in RE area. ()
a. 2000 b. 200 c. 20 d. none
 - 2) In RE area normally no part of the signal should lie in _____ clearance zone ()
a. signal b. electrical c. both d. none
 - 3) In RE area if any part of the signal lies in signal clearance zone but not in electrical clearance zone, then the signal post is provided with _____ towards OHE mast ()
a. iron screening mesh b. proper earthing for mesh
c. both a & b d. none
 - 4) The nearest part of the signal post from the CLOT shall be _____ ()
a. 3.5 m b. 2.844 m c. 2.5 m d. none
 - 5) The normal implantation of OHE mast from the CLOT shall be _____ ()
a. 3.5 m b. 2.844 m c. 2.5 m d. none
 - 6) In RE, the distance between signal and mast in front of it, must not be _____ ()
a. less than 3m b. less than 10m c. less than 30m d. none
 - 7) In RE, the distance between signal and mast behind it must be not _____ less than if mast is anchored ()
a. less than 3m b. less than 10m c. less than 30m d. none
 - 8) In RE, the distance between signal and mast behind it must be not _____ less than if mast is not anchored ()
a. less than 3m b. less than 10m c. less than 30m d. none
 - 9) Catenary current carrying capacity on double line section in RE area is _____ ()
a. 500A b. 600A c. 800A d. 1000A
 - 10) Catenary current carrying capacity on single line section in RE area is _____ ()
a. 500A b. 600A c. 800A d. 1000 A
 - 11) _____ induction effect can be eliminated in RE area ()
a. electro-magnetic b. electro-static c. both d. none
 - 12) _____ induction effect can not be eliminated but can be reduced in RE area ()
a. electro-magnetic b. electro-static c. both d. none
 - 13) The maximum length of parallelism is permitted for DC circuits on D/L sections in RE area is _____ ()
a. 1 Km b. 1.2 Km c. 2.8 Km d. 2.1 Km
 - 14) The maximum length of parallelism is permitted for DC circuits on S/L sections in RE area is _____ ()
a. 1 Km b. 1.2 Km c. 2.8 Km d. 2.1 Km
-

- 15) Direct feeding range of signals on D/L in new design is _____ ()
a. 180 m b. 120 m c. 600 m d. 220 m
- 16) Direct feeding range of signals on S/L in new design is _____ ()
a. 180 m b. 120 m c. 600 m d. 220 m
- 17) Stray current shall not exceed _____ mA for track circuits longer than 100m ()
a. 1 mA b. 10 mA c. 100 mA d. 1000 mA
- 18) Stray current shall not exceed _____ mA for track circuit lengths up to 100m ()
a. 1 mA b. 10 mA c. 100 mA d. 1000 mA
- 19) Stray voltage shall not exceed _____ mV in a track circuit ()
a. 1 mV b. 10 mV c. 100 mV d. 1000 mV
- 20) Electrical Point Machine non-trailable type (IRS.24 & Siemen's IA), the A.C. immunity level shall not be less than _____ at 50 Hz. ()
a. 300V b. 160V c. 100V d. none
- 21) The maximum permissible distance between the machine and contactor unit should be _____ on double line sections. ()
a. 2.4 Km b. 1.6 Km c. 1.1 Km d. 0.91 Km
- 22) The maximum permissible distance between the machine and contactor unit should be _____ on single line sections. ()
a. 2.4 Km b. 1.6 Km c. 1.1 Km d. 0.91 Km
- 23) The maximum length of parallelism of a power cable is up to _____ ()
a. 2.4 Km b. 1.6 Km c. 1.1 Km d. 0.91 Km
- 24) The other name of isolation transformer is called as _____ ()
a. 1:1 transformer b. Phantom transformer
c. both a & b d. none
- 25) The purpose of isolation transformer in RE area is _____ ()
a. to block induced voltages b. to block line circuit voltages
c. to allow induced voltages d. to isolate induced voltages
- 26) In RE, isolation transformer _____ ohms coil is connected towards line side ()
a. 1120 b. 470 c. 360 d. 120
- 27) In RE, isolation transformer _____ ohms coil is connected towards block side ()
a. 1120 b. 470 c. 360 d. 120
- 28) In RE, isolation transformer _____ ohms coil is with centre tapping ()
a. 1120 b. 470 c. 360 d. 120
- 29) _____ block instrument is not suitable in RE area ()
a. double line b. push button c. daido d. token
-

- 46) The purpose of Condenser in a Filter unit_____ ()
a. to block AC & to allow DC supply b. to block DC & AC supply.
c. to block DC & to allow AC supply d. to allow DC & AC supply
- 47) The Condenser in a Filter unit will have_____number of terminals ()
a. 2 b. 3 c. 4 d. none
- 48) In RE, the filter unit is provided with_____filtering facility ()
a. one stage b. two stage c. three stage d. none
- 49) The purpose of Choke in the filter unit of RE area is_____ ()
a. to block induced voltages b. to block line circuit voltages
c. to allow induced voltages d. to earth induced voltages
- 50) For 25 KV A.C. lateral clearance between any live part of OHE and part of any fixed structure to a moving dimension is_____ ()
a. 400 mm b. 320 mm c. 270 mm d. 220 mm
- 51) For 25 KV A.C. lateral clearance between any live part of OHE and part of any fixed structure to a stationary dimension is_ ()
a. 400 mm b. 320 mm c. 270 mm d. 220 mm
- 52) For 25 KV A.C vertical clearance between any live part of OHE and part of any fixed structure to a moving dimension is_____ ()
a. 400 mm b. 320 mm c. 270 mm d. 220 mm
- 53) For 25 KV A.C. vertical clearance between any live part of OHE and part of any fixed structure to a stationary dimension is_ ()
a. 400 mm b. 320 mm c. 270 mm d. 220 mm
- 54) Longitudinal RE bond is provided for negative rails of_____ ()
a. within the same TC b. adjacent TCs in same line
c. TC to RE mast d. parallel TCs
- 55) Transverse RE bond is provided for negative rails of_____ ()
a. within the same TC b. adjacent TCs in same line
c. TC to RE mast d. parallel TCs
- 56) Structural RE bond is provided for negative rails of _____ ()
a. within the same TC b. adjacent TCs in same line
c. TC to RE mast d. parallel TCs
- 57) Inter track RE cross bond is provided for negative rails of _____ ()
a. within the same TC b. adjacent TCs in same line
c. TC to RE mast d. parallel TCs
- 58) The distance between any OHE mast and point rod shall not be less than _ ()
a. 40 mm b. 50 mm c. 10 mm d. None
-

- 59) A wire insulator to be provided at every_____of wire length transmission ()
 a. 40 m b. 500 m c. 100 m d. 300 m
- 60) Factor of safety in new design is_____ ()
 a. 1.5 b. 1.2 c. 2.5 d. 3.5

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	c	c	b	c	c	b	a	d	c
11	12	13	14	15	16	17	18	19	20
b	a	c	d	d	a	c	b	c	b
21	22	23	24	25	26	27	28	29	30
c	d	a	c	d	b	a	b	b	a
31	32	33	34	35	36	37	38	39	40
b	b	c	b	a	b	b	a	c	a
41	42	43	44	45	46	47	48	49	50
b	d	b	d	d	c	c	c	a	d
51	52	53	54	55	56	57	58	59	60
b	c	b	a	b	c	d	a	d	a

AUTOMATIC SIGNALLING and IBS

- 1) Automatic signals interlocked with level crossing gate and point just ahead of the gate is provided with_____ ()
a. 'A' marker b. 'G' marker
c. Illuminated 'A' & 'AG' marker d. Illuminated 'A' marker
- 2) Semi automatic stop signal is provided with_____ ()
a) 'A' marker only b) 'A' marker & illuminated 'A' marker
c) 'AG' marker only d) 'P' marker
- 3) Adequate distance in automatic block system on double line is_____ ()
a) 180 mts b) 400 mts c) 120 mts d) 300 mts
- 4) If a semi automatic stop signal is protecting LC gate as well as point then _____ shall be provided on the post. ()
a) 'A' marker b) illuminated 'A' marker
c) illuminated 'AG' marker d) b & c
- 5) Adequate distance in automatic block system on single line is_____ ()
a) 180 mts b) 400 mts c) 120 mts d) 300 mts
- 6) The normal aspect of automatic stop signal is_____ ()
a) caution b) proceed c) attention d) ON
- 7) For passing an Automatic signal at ON position the train has to stop for _____ minute by day and _____by night. ()
a) 1 & 2 b) 2 & 1 c) 5 & 5 d) none
- 8) Red lamp protection is provided to avoid approaching a_____signal. ()
a) manual b) blank c) stop d) semi-automatic
- 9) If an automatic signal becomes blank for any reason, the signal in rear shall display_____aspect. ()
a) Attention b) proceed c) ON d) caution
- 10) Semi automatic stop signal will work as_____ ()
a) automatic stop signal b) manual stop signal c) a and c d) none
- 11) Semi automatic stop signal is operated by_____ knob/lever ()
a) queen b) king c) commander d) none
- 12) Automatic stop signal can be_____aspect ()
a) 2 only b) 3 only c) 4 only d) 3 Aspect or 4 Aspect
- 13) Aspect of ASS will depend upon_____ ()
a) Aspect of signal ahead b) Condition of track circuit ahead
c) position of train ahead d) all

- 28) Automatic stop signal working either as fully automatic signal or manual signal is provided with _____ marker ()
 a) Illuminated "A" b) Illuminated "M" c) Illuminated "A" & "M" d) none
- 29) Each automatic block signaling section is divided as _____ track ()
 a) Overlap only b) berthing only c) overlap and berthing d) none
- 30) _____ is compulsory in automatic signaling ()
 a) cascading b) red lamp protection
 c) 3 or 4 aspect signal d) all
- 31) No. of Controlling relays required for 3 aspect automatic signal are ()
 a) 2 b) 3 c) 4 d) none
- 32) No. of Controlling relays required for 4 aspect automatic signal are ()
 a) 2 b) 3 c) 4 d) none
- 33) Controlling relays required for 3 aspect automatic signal are ()
 a) HR b) HHR c) DR d) a and c
- 34) Controlling relays required for 4 aspect automatic signal are ()
 a) HR b) HHR c) DR d) all
- 35) Condition of controlling relays when 3 aspect automatic stop signal is displaying caution aspect ()
 a) $HR \cdot DR$ b) $HR \cdot DR$ c) $HR \cdot DR$ d) none
- 36) Condition of controlling relays when 3 aspect automatic stop signal is displaying proceed aspect ()
 a) $HR \cdot DR$ b) $HR \cdot DR$ c) $HR \cdot DR$ d) none
- 37) Condition of controlling relays when 4 aspect automatic stop signal is displaying caution aspect ()
 a) $HR \cdot HHR \cdot DR$ b) $HR \cdot HHR \cdot DR$
 c) $HR \cdot HHR \cdot DR$ d) $HR \cdot HHR \cdot DR$
- 38) Condition of controlling relays when 4 aspect automatic stop signal is displaying attention aspect ()
 a) $HR \cdot HHR \cdot DR$ b) $HR \cdot HHR \cdot DR$
 c) $HR \cdot HHR \cdot DR$ d) $HR \cdot HHR \cdot DR$
- 39) Condition of controlling relays when 4 aspect automatic stop signal is displaying proceed aspect ()
 a) $HR \cdot HHR \cdot DR$ b) $HR \cdot HHR \cdot DR$
 c) $HR \cdot HHR \cdot DR$ d) $HR \cdot HHR \cdot DR$
-

- 40) Condition of controlling relays when 4 aspect automatic stop signal is displaying ON aspect ()
 a) HR₁ HHR₁ DR₁ b) HR₂ HHR₂ DR₂
 c) HR₃ HHR₃ DR₃ d) HR₄ HHR₄ DR₄
- 41) Condition of controlling relays when 3 aspect automatic stop signal is displaying ON aspect ()
 a) HR₁ DR₁ b) HR₂ DR₂ c) HR₃ DR₃ d) none
- 42) When HR is de-energized, automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 43) When HR and HHR is energized, automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 44) When HR, HHR, and DR is energized, automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 45) With HR₁ and HECR₁ 3 aspect automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 46) With HR₂ and HECR₂ 3 aspect automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 47) With HR₃ DR₃ and DECR₃ 3 aspect automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 48) With HR₄ DR₄ and DECR₄ automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 49) With HECR₁ DECR₁ 3 aspect automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 50) With HECR₂ HHECR₂ DECR₂ 4 aspect automatic stop signal will display ()
 a) ON aspect b) Attention aspect c) Proceed aspect d) none
- 51) When train passes LSS with LSS knob in Reverse position ___ indication with buzzer appears. ()
 a) K1 b) K2 c) K3 d) K4
- 52) To reset the axle counter section of IBS, the receiving end ASM has to press ___ button. ()
 a) PB4 b) PB3 c) PB2 d) PB1
- 53) ___ Relay proves that the Axle counter section is free of any axle. ()
 a) ACSR b) ACZR c) ACPR d) LSS NSR
- 54) ___ Indication appears when train passes IBS at OFF position. ()
 a) K1 b) K2 c) K3 d) K4
- 55) The length of IBS overlap is _____. ()
 a) 400m b) 200m c) 180m d) 120m

- 56) To acknowledge K1 buzzer_____relay has to pick up. ()
a) XR b) CRR c) CPBR d) PBPR
- 57) ACZR picks up through_ relay front contact and maintains through stick path ()
a) PBPR b) CRR c) ACZNR d) ACZR
- 58) _____Relay picks up when K4 buzzer is acknowledged. ()
a) XR b) CRR c) CPBR d) PBPR
- 59) _____Button is to be pressed at dispatch end for axle counter resetting. ()
a) PB4 b) PB3 c) PB2 d) PB1
- 60) _____Button is to be pressed at dispatch end for resetting IB section. ()
a) PB4 b) PB3 c) PB2 d) PB1
- 61) _____Indication appears when IB power fails. ()
a) K1 b) K2 c) K3 d) K4
- 62) For reducing the induced voltages in cables_____is provided for IB operation()
a) RE cut b) remote feed c) Double cutting d) filter unit
- 63) _____Relay picks up when PB3 is pressed. ()
a) XR b) ACZR c) CPBR d) PBPR
- 64) Driver of a train has to communicate with_____station on IB phone. ()
a) Rear b) advance c) both d) none
- 65) When train passes IBS at ON,_____relay drops. ()
a) PBPR b) CRR c) ACZNR d) ACZR
- 66) IB Home signal is provided with_____marker. ()
a) I b) B c) P d) IB
- 67) K4 indication appears when ()
a) IB signal passed at ON b) IB signal passed at OFF
c) LSS passed at ON d) IB signal at blank
- 68) When IB signal is danger and telephone on IB post is not working, the Driver has to wait for_____minutes. ()
a) 15 b) 10 c) 5 d) 0
- 69) LSS is controlled by_____in IBS ()
a) Block instrument b) Axle counter
c) IB signal d) None of the above
- 70) IB signal is controlled by the_____in IBS ()
a) Block instrument b) Axle counter
c) IB signal d) None of the above
- 71) To reset the axle counter in IBS block section, the sending end ASM presses _____push button ()
a) PB1 b) PB2 c) PB3 d) none
-

- 72) The cable extended for power supply to IB location is ()
 a) 24x1.5 sqmm copper cable b) 2x25 sqmm aluminum cable
 c) 30x1.5 sqmm copper cable d) 2x2.5 sqmm copper cable
- 73) IB signal is substitute of _____ station ()
 a) class A b) class B c) class C d) special class
- 74) IB signal splits block section into _____ ()
 a) Single section b) 2 sections c) Multiple sections d) none
- 75) Section capacity increases with _____ signal ()
 a) Home b) routing home c) IB d) all
- 76) The IB signalling is provided to avoid the expenditur on _____ ()
 a) additional Block Instruments b) Station Building
 c) Operating Staff d) all
- 77) 'Rear Section' and 'Advance Section' are related with _____ ()
 a) IB Signalling b) Automatic Signalling c) Outlay siding d) All
- 78) Maximum _____ can be dealt on IB signalling ()
 a) Single train b) 2 trains c) 3 trains d) any number of trains
- 79) Rear section means the section between _____ ()
 a) LSS and IBS including IB overlap b) IB Signal and station home
 c) LSS and station home d) can be anything
- 80) Advance section means the section between _____ ()
 a) IBS and FSS of station in rear b) IBS and FSS of station in advance
 c) IBS and distant signal d) IBS and LSS of station in advance
- 81) IB signal is placed at the point where the section is divided into _____ ()
 a) Single portion b) 2 portions c) 3 portions d) none
- 82) Incorrect statement related to IB signal _____ ()
 a) Provided on D/L b) section capacity increases
 c) can be provided in neutral section d) none
- 83) The IB Signal shall be so located that the running time of _____ ()
 a) Rear Section will be equal to Advance Section
 b) Rear Section will be more than Advance Section
 c) Rear Section will be less than Advance Section
 d) none
- 84) _____ audible buzzers are stopped by pressing the Acknowledgement button ()
 a) K1 & K2 b) K2 & K3 c) K3 & K4 d) K1 & K4
- 85) _____ audible buzzers are stopped by normalizing the LSS & IB Signal controls ()
 a) K1 & K2 b) K2 & K3 c) K3 & K4 d) K1 & K4
-

- 86) IB panel consists of _____ indications ()
 a) IB Signal indication b) IB Distant Signal indication
 c) IB track indication d) all
- 87) IB panel consists of _____ indications ()
 a) LSS Signal indication b) A/C Clear indication
 c) A/C Occupied indication d) all
- 88) K1 indication appears when _____ relay drops ()
 a) NSR b) HSR c) ACZR d) all
- 89) In IB signaling LCPR picks up _____ at station ()
 a) train receiving b) train sending station
 c) both the stations d) none
- 90) Incorrect statement to pick up IBS DR is _____ ()
 a) IB lever reversed b) IB lever Normalized
 c) LCPR up d) IB TPR up
- 91) Correct statement related to IBS HSR _____ ()
 a) Normally up b) A/C section occupied & IBS not taken OFF
 c) A/C section occupied & IBS taken OFF d) None
- 92) ACZR has _____ parallel holding paths ()
 a) 2 b) 3 c) 4 d) none
- 93) In IB signaling LSS NSR drops when _____ ()
 a) Axle counter section fails
 b) LSS control is normal & train entered axle counter section
 c) LSS control is reverse & train not entered axle counter section
 d) LSS control is reverse & train entered axle counter section
- 94) ACZR holds through _____ ()
 a) LSS NSR & HSR & IB TPR &
 b) LSS NSR & HSR & IB TPR &
 c) LSS NSR & HSR & IB TPR &
 d) LSS NSR & HSR & IB TPR &
- 95) ACZR drops when _____ ()
 a) LSS NSR & HSR & IB TPR &
 b) LSS NSR & HSR & IB TPR &
 c) LSS NSR & HSR & IB TPR &
 d) LSS NSR & HSR & IB TPR &
- 96) HSR picks up through _____ ()
 a) ACPR & IBS DR & IBS DECR &
 b) ACPR & IBS DR & IBS DECR &
 c) ACPR & IBS DR & IBS DECR &
 d) ACPR & IBS DR & IBS DECR &
- 97) LCPR picks up when _____ ()
 a) IB TPR & IBS DR & IBS knob R
 b) IB TPR & IBS DR & IBS knob N
 c) IB TPR & IBS DR & IBS knob N
 d) IB TPR & IBS DR & IBS knob R
-

- 98) LCPR picks up when_____ ()
 a) IB TPR Ꞥ IBS DR Ꞥ PR LC contact b) IB TPR Ꞥ IBS DR Ꞥ PR LC contact
 c) IB TPR Ꞥ IBS DR Ꞥ PR LC contact d) IB TPR Ꞥ IBS DR Ꞥ PR LC contact
- 99) ASR 1 and ASR 2 picks up through_____ ()
 a) LSS TPR Ꞥ LCPR Ꞥ PR TOL contact b) LSS TPR Ꞥ LCPR Ꞥ PR TOL contact
 c) LSS TPR Ꞥ LCPR Ꞥ PR TOL contact d) LSS TPR Ꞥ LCPR Ꞥ PR TOL contact
- 100) Intermediate Block Signaling system can be provided on ()
 a) single line b) double line c) multiple line d) all

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
c	b	c	c	c	b	a	b	c	c
11	12	13	14	15	16	17	18	19	20
b	d	d	a	d	a	b	a	a	b
21	22	23	24	25	26	27	28	29	30
c	d	b	d	c	c	a	a	c	d
31	32	33	34	35	36	37	38	39	40
a	b	d	d	b	a	a	b	c	d
41	42	43	44	45	46	47	48	49	50
c	a	b	c	a	d	d	c	a	a
51	52	53	54	55	56	57	58	59	60
b	b	c	c	a	d	c	a	c	d
61	62	63	64	65	66	67	68	69	70
d	a	c	a	d	d	d	c	b	a
71	72	73	74	75	76	77	78	79	80
b	b	c	b	c	d	a	b	a	b
81	82	83	84	85	86	87	88	89	90
b	c	a	d	b	d	d	c	b	b
91	92	93	94	95	96	97	98	99	100
c	b	d	a	d	c	c	c	b	d

SIGNAL INTERLOCKING

- 1) Signaling plan is based on approved _____ plan ()
a) Operating b) Engineering c) Mechanical plan d) S & T
 - 2) The Signaling Plan is approved by _____ ()
a) CSTE b) CRS c) CSE d) COM
 - 3) All the levers in the frame are serially numbered from _____ ()
a) LH to RH b) RH to LH
c) Middle to RH d) Middle to LH
 - 4) Locking tray of a Catch Handle type lever frame will be in combination or multiples of _____ ()
a) 6 & 8 b) 8 & 10 c) 5 & 7 d) 7 & 10
 - 5) The locking tray of a Direct type lever frame will be in combination or multiples of _____ ()
a) 6 & 8 b) 8 & 10 c) 5 & 7 d) 7 & 10
 - 6) Geographical method of numbering is suitable for _____ ()
a) Small yards b) big yards c) Small & Big yards d) none
 - 7) Functions in "Group-cum-Geographical Method" are divided into _____ groups ()
a) 2 b) 3 c) 4 d) 6
 - 8) Group-I consists of _____ ()
a) Points/Lock bar b) Points /LC gate
c) Signals/slots d) all
 - 9) Group-II consists of _____ ()
a) Signals /Lock bar b) Signals /Point
c) Lock bar /Point /LC gate d) none
 - 10) Spare levers are accommodated _____ ()
a) In group-I only b) In group-II only
c) In group-III only d) between the groups
 - 11) Essentials of interlocking as per SEM is given in _____ ()
a) Para 7.82 of part-1, b) Para 8.72 of part-1
c) Para 7.82 of part-2 d) Para 8.72 of part-2
 - 12) Lock retaining bar is required if distance between the Signal and First facing point is _____ ()
a) Less than 120 mt b) More than 120 mt
c) Less than 180 mt d) More than 180 mt
 - 13) Signal is released by point if _____ position of point is required for the signal ()
a) Normal b) Reverse c) both way d) none
 - 14) Signal locks the point if _____ position of point is required for the signal ()
a) Normal b) Reverse c) both way d) none
-

- 15) Signal locks the point both ways for _____ purpose ()
 a) Flexibility b) parallel movement c) Route holding d) none
- 16) In a station different signalling gears are to be operated in a logical sequence for dealing the trains with ()
 a) safe running b) unsafe running c) late running d) none
- 17) The shunt signals are to be numbered after main signals in _____ ()
 a) group 1 b) group 2 c) group 3 d) none
- 18) The main signals are to be numbered after shunt signals in _____ ()
 a) group 1 b) group 2 c) group 3 d) none
- 19) The signaling plan provides _____ information ()
 a) type of signaling b) class of station
 c) standards of interlocking d) all
- 20) Successive _____ locking is the means of route holding ()
 a) point b) lock bar c) slot d) LC gate
- 21) The interlocking between signal lever and point lever is such that point lever cannot be operated unless ()
 a) signal lever is normalized b) signal lever is reversed
 c) signal lever is in middle position d) none
- 22) Signal lever can be reversed only when ()
 a) point lever is in middle position b) $\frac{3}{4}$ th position
 c) point lever is in full normal or full reverse position d) none
- 23) which statement is incorrect ()
 a) signal has relation with point
 b) point can be operated after signal is reversed
 c) point cannot be operated after signal is reversed
 d) none
- 24) conditions to take off signals includes ()
 a) points in the route, overlap and isolation b) conflicting signals not taken off
 c) LC gate is closed d) all
- 25) Incorrect statement related with conditions to take off signals ()
 a) points in the route required b) conflicting signals can be taken off
 c) LC gate must be closed d) points in overlap and isolation required
- 26) Incorrect statement related with conditions to take off signals ()
 a) points in the route required b) conflicting signals cannot be taken off
 c) LC gate can be open d) points in overlap and isolation required
- 27) Incorrect statement related with conditions to take off signals ()
 a) points in the route not required b) conflicting signals cannot be taken off
 c) LC gate must be closed d) points in overlap and isolation required
-

- 28) Incorrect statement related with conditions to take off signals ()
 a) points in the route required b) conflicting signals cannot be taken off
 c) LC gate must be closed d) points in overlap and isolation not required
- 29) lock retaining bar will ensure ()
 a) route releasing b) route holding c) route checking d) all
- 30) Lock bar is free when ()
 a) signal is not taken off b) no train on lock bar c) a and b d) none
- 31) Point will be locked by ()
 a) its own track circuit b) back locks tracks
 c) concerned signal d) a and c
- 32) When cross over point zone track is occupied ()
 a) Only A end point will operate b) Only B end point will operate
 c) A end and B end will not operate d) A end and B end will operate
- 33) If route is locked after train movement, same can be released ()
 a) when back lock tracks fail b) only when back lock tracks pick up
 c) route cancellation applied d) b and c
- 34) When home signal is approach locked, route can be released in ____ways ()
 a) 2 b) 3 c) 4 d) 5
- 35) When home signal is not approach locked, route can be released in ____ways ()
 a) 2 b) 3 c) 4 d) 5
- 36) Starter route is released through ()
 a) UYR's path b) JSLR/NJPR path
 c) TSR/App TPR path d) all
- 37) Conditions proved in UCR, ASR and HR are reflected in ()
 a) Table of control b) Signalling plan
 c) Engineering plan d) cable route plan
- 38) Circuit testing consists of ()
 a) Negative tests b) Dead/Approach locking tests
 c) Back/Route locking tests d) all
- 39) Wire to wire test is done in ____stage ()
 a) single b) 2 stage c) 3 stage d) final only
- 40) Wire to wire test is done ()
 a) after all wires are drawn b) before all wires are drawn
 c) after 20 % of wires are drawn d) none
- 41) Wire to wire test is done ()
 a) after all wires are drawn b) before all wires are drawn
 c) after soldering drawn d) a and c
-

- 42) Bell test is carried out to check whether ()
 a) wiring is done as per wiring sheet b) wire drawn has continuity
 c) any wiring faults are accumulated d) all
- 43) The wireman shall give the following information to the tester after holding the wire ()
 a) name of the relay b) color of the wire
 c) no. of wires in contact cavity d) all
- 44) The wireman after verifying the Relay plug board shall loudly spell out ()
 a) relay name b) rack no c) number of wires d) all
- 45) Approach locking, back locking and conflicting signals are not taken off is reflected in ()
 a) Table of control b) Signalling plan c) route plan d) none
- 46) Cross sheet testing means ()
 a) testing of parallel movements b) testing of crossover movements
 c) testing of conflicting signals d) all
- 47) Conflicting signals are of _____ types ()
 a) 2 b) 3 c) 4 d) none
- 48) _____ conflicting signals are reflected in TOC ()
 a) Indirectly conflicting b) directly c) a and b d) none
- 49) Conditional locking includes ()
 a) locking condition b) free condition c) a and b d) none
- 50) Functional test is to be done ()
 a) when new equipment is commissioned b) indoor equipment is changed
 c) track side equipment/cable is changed d) all

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
b	a	a	b	c	c	b	c	c	D
11	12	13	14	15	16	17	18	19	20
a	d	b	a	c	a	a	c	d	B
21	22	23	24	25	26	27	28	29	30
a	c	b	d	b	c	a	d	b	C
31	32	33	34	35	36	37	38	39	40
a	c	d	c	b	d	a	d	b	A
41	42	43	44	45	46	47	48	49	50
d	d	d	d	a	c	a	b	c	D

EOLB & MOLB

- 1) Open position of lifting barrier shall be within _____ ()
a. $80^{\circ} - 85^{\circ}$ b. $80^{\circ} - 90^{\circ}$ c. $85^{\circ} - 90^{\circ}$ d. $70^{\circ} - 80^{\circ}$
- 2) LXYPR picks up at _____ ()
a. relay room b. gate location box
c. SM room d. ESM room
- 3) _____ motor is used for EOLB ()
a. servo motor b. stepper motor
c. PMDC motor d. synchronous motor
- 4) When booms rest on the meeting post _____ switch makes in MFT EOLB ()
a. LS1 b. LS2 c. LS3 d. CWLS
- 5) _____ relay is used for LXNR/LXRR in MFT EOLB ()
a. QNA1 b. QN1 c. QBA1 d. QBCA1
- 6) _____ relay is used for BCR / BLFR in MFT EOLB ()
a. QNA1 b. QN1 c. QBA1 d. QBCA1
- 7) _____ relay picks up for locking of booms in MFT EOLB. ()
a. BLFR b. BCR c. LXR d. GMR
- 8) _____ relay picks up for unlocking of booms in MFT EOLB ()
a. BLFR b. BCR c. LXR d. GMR
- 9) It shall not be possible to lift the booms by more than _____ degrees after gate is closed and locked against road traffic ()
a. 5 b. 0 c. 10 d. 15
- 10) LC gate census shall be done once in _____ ()
a. 1 year b. 2 year c. 3 year d. 4 year
- 11) _____ Relay extends voltage to pedestal motor to open the gate in MFT-EOLB ()
a. LXRR b. LXNR c. ALXR d. BLXR
- 12) _____ Relay extends voltage to pedestal motor to close the gate in MFT-EOLB ()
a. LXRR b. LXNR c. ALXR d. BLXR
- 13) _____ relay extends voltage to meeting post motor to lock the boom in MFT EOLB ()
a. BLFR b. BCR c. LXNR d. LXRR
- 14) _____ relay extends voltage to meeting post motor to unlock the boom in MFT EOLB ()
a. BLFR b. BCR c. LXNR d. LXRR
- 15) _____ relay picks up at Location when both booms are closed, locked & slot knob reversed in MFT make EOLB. ()
a. LXRR b. BCR c. LXNR d. LXCLR

- 30) Gate Signal distance shall be measured from _____ ()
 a. end of the gate lodge b. center of gate
 c. pedestal d. edge of check rail
- 31) Gate hooter sound must be audible up to _____ meters ()
 a. 120 b. 180 c. 300 d. 400
- 32) _____ band is used for opening of gate in MFT make EOLB ()
 a. 0^0-85^0 b. 80^0-85^0 c. 85^0-5^0 d. 0^0-5^0
- 33) _____ Relay is used for LXYPR in RE area ()
 a. QN1 b. QNA1 c. QBCA1 d. QSPA1
- 34) _____ relay picks up at R/room when LXCLR is picked up at Gate location in MFT make EOLB ()
 a. LXCR b. LXPR c. LXRR d. LXFR
- 35) _____ will avoid electrical operation during crank handle operation in MFT EOLB ()
 a. Cut out switch b. Limit switch c. A boom switch d. B boom switch
- 36) Max. length of LC gate boom is _____ mts ()
 a. 9.75 b. 9.65 c. 9.85 d. 9.9
- 37) Working voltage of MFT make EOLB is _____ ()
 a. 24V AC b. 24V DC c. 110V DC d. 110V AC
- 38) Snubbing is effective while _____ in MFT make EOLB ()
 a. Opening only b. locking c. closing only d. unlocking
- 39) _____ will avoid reverse force in gear drive mechanism for MFT make EOLB ()
 a. snubbing b. drive shaft c. friction clutch d. worm gear
- 40) _____ is provided in between Motor and Gear mechanism ()
 a. snubbing b. drive shaft c. clutch assembly d. worm gear
- 41) _____ type relay is used for opening & closing of booms in MFT make EOLB ()
 a. QBCA1 b. QBA1 c. QN1 d. QNA1
- 42) _____ Relay picks up when gate is closed in HEIDZ make EOLB ()
 a. RR b. BLR c. LXR d. NSR
- 43) _____ Relay picks up when gate is locked in HEIDZ make EOLB ()
 a. RR b. BLR c. LXR d. NSR
- 44) _____ Relay picks up when gate is closed and locked and slot reverse in HEIDZ make EOLB ()
 a. RR b. BLR c. LXR d. NSR
-

- 45) ____ is used for closing in HEIDZ make EOLB ()
a. LS1 b. LS2 c. LS3 d. LS4
- 46) ____ is used for opening in HEIDZ make EOLB ()
a. LS1 b. LS2 c. LS3 d. LS4
- 47) ____ is used for snubbing in HEIDZ make EOLB ()
a. LS1 b. LS2 c. LS3 d. LS4
- 48) ____ is used in RR circuit of HEIDZ make EOLB ()
a. LS1 b. LS2 c. LS3 d. LS4
- 49) NSR relay picks up when gate is ____ in HEIDZ make EOLB ()
a. Close b. Open c. Lock d. Unlock
- 50) Solenoid coil resistance is ____ ohms in HEIDZ make EOLB ()
a. 5 b. 25 c. 48 d. 100

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	b	c	d	d	b	b	a	c	C
11	12	13	14	15	16	17	18	19	20
b	a	b	a	d	b	c	c	d	A
21	22	23	24	25	26	27	28	29	30
a	d	a	a	b	c	d	d	b	D
31	32	33	34	35	36	37	38	39	40
c	a	b	a	a	a	b	c	d	C
41	42	43	44	45	46	47	48	49	50
a	a	b	c	a	b	c	d	b	B

ELECTRONIC INTERLOCKING

- 1) Prime inputs for the EI Interface design are _____ ()
a) SIP, FPD and RCC b) card files c) Software d) cables
 - 2) The calculation of EI card file /OC/Housing is mainly depends on _____ ()
a) Communication ports b) Communication cables
c) Vital & Non vital bit chart d) Software
 - 3) In EI, application software is_____. ()
a) Common to all stations b) Station specific
c) Similar to Executive software d) remotely loaded
 - 4) In case of Distributed Interlocking system, _____ cable is required to be used ()
a) Signaling cable b) Optical Fiber Cable
c) Quad cable d) Power cable
 - 5) In Electronic interlocking system, executive software is _____ ()
a) Station specific.
b) Common to all EI's of same model of same OEM.
c) Similar to Application software
d) separately not required.
 - 6) When any unsafe failures are detected by an EI _____ ()
a) System is steady b) Supply voltage to non vital outputs cuts off
c) No action takes place d) System shutdown and all outputs withdrawn
 - 7) External Data logger provision to EI is _____ ()
a) Not mandatory b) Mandatory
c) It is a part of EI Hardware d) It is a part of VDU
 - 8) By using Object Controllers _____ ()
a) number of inputs can be minimized
b) main signaling cable can be eliminated due to OFC communication
c) number of outputs can be minimized
d) All
 - 9) The _____ converts High level language to Machine Language ()
a) Source code b) Object code
c) Compiler d) Reverse compiler
 - 10) As per latest guide lines _____ standby set up is to be used in EI. ()
a) Cold standby b) Warm standby
c) Power backup d) Hot Standby.
 - 11) _____ cable is required for the VDU connectivity with EI ()
a) 2.5 sq.mm signaling cable b) 1.5 Sq mm Signaling cable
c) power cable d) OFC
-

- 12) The vital output card in an EI ----- ()
a) Drives INPUT b) Drives OUTPUT relays
c) part of CPU d) 12 V DC
- 13) The EI application logic is loaded in to ----- ()
a) Non Vital I/O card b) CPU card
c) Output card d) CPU and Out put cards.
- 14) ----- earthing arrangement is required for EI ()
a) Conventional earthing b) Maintenance free earth
c) Perimeter / ring d) all
- 15) The external Data logger can be connected to EI through----- ()
a) Protocol converter b) Flash EPROMs
c) RS 232 converter d) OC
- 16) To start Application design of EI, the Inputs required are----- ()
a) Approved Signal Interlocking Plan & Front Plate Drawing and RCC
b) CT rack termination details.
c) Details of any additional interlocking equipment only.
d) Communication details only.
- 17) ----- safety Integrity level to be maintained for Hardware of any EI ()
a) SIL 1 b) SIL 2 c) SIL 3 d) SIL 4
- 18) Based on Non Vital I/O bit calculation, ----- can be calculated. ()
a) Panel processor cards b) wires count
c) Power supply details d) communication details
- 19) Self integrity test is the inbuilt feature of----- ()
a) EI b) RRI c) Track circuit d) PI
- 20) The Reverse Compiler converts ----- ()
a) The Source code b) Object code to source code
c) High level language to Machine Language d) Compiler
- 21) -----is connected through Protocol converter ()
a) The external Data logger b) Flasher EPROM
c) OFC d) OC
- 22) The interface between CCIP and the EI is called----- ()
a) OCI b) VDUCT c) PP d) NV I/O card
- 23) SIL 4 safety integrity level is required for ----- ()
a) VDU Hardware b) MTC c) VDU software d) EI Hardware
- 24) ----- contacts are used as Read back contacts ()
a) Vital in put Relay b) Vital output Relay
c) Non Vital d) Event logger

- 25) NWKRs, RWKRs are treated as _____ to the Electronic Interlocking system ()
 A) Vital in puts B) Vital outputs
 C) Non Vital Inputs D) Non Vital outputs
- 26) HRs, DRs are treated as _____ to the Electronic Interlocking system ()
 A) Vital in puts B) Vital outputs
 C) Non Vital Inputs D) Non Vital outputs
- 27) LXCR is treated as _____ to the EI ()
 A) Vital inputs B) Vital outputs
 C) Non Vital Inputs D) Non Vital outputs
- 28) Based on the station interlocking circuits _____ program is prepared ()
 A) Application B) Executive
 C) Station Data D) Communication
- 29) _____ is used as an operating interface to the EI ()
 A) Object controller B) Maintenance PC
 C) VDU/OPC D) Data logger
- 30) Executive program is loaded in to _____ ()
 A) Data EPROMs B) Executive EPROMS
 C) I/O connectors D) VDU PC
- 31) MLK-II EI is provided with _____ feature ()
 A) 2 out of 2 decision B) 2 out of 3 decision C) CRC D) none
- 32) MLK-II EI is having redundancy in _____ ()
 A) hardware B) software C) both D) none
- 33) In MLK-II EI, card file can have maximum _____ number of slots ()
 A) 10 B) 20 C) 30 D) 40
- 34) In MLK-II EI, _____ PCBs will occupy two slots in card file ()
 A) Power Supply B) CPU C) both A & B D) none
- 35) In MLK-II EI, CPU card is placed in _____ slots of a card file generally ()
 A) 16th & 17th B) 18th & 19th C) 20th D) none
- 36) In MLK-II EI, Power Supply card is placed in _____ slots of a card file generally ()
 A) 16th & 17th B) 18th & 19th C) 20th D) none
- 37) In MLK-II EI, each Card File CPU can replace the _____ internal circuit relays ()
 A) 2000 B) 3000 C) 4000 D) 5000
- 38) In MLK-II EI, each Card File CPU can control the _____ routes of a station ()
 A) 200 B) 300 C) 400 D) 500
- 39) In MLK-II EI, normal input supply given to PS PCB is _____ volts DC ()
 A) 12 B) 24 C) 60 D) 110
-

- 40) In MLK-II EI, the constant output supply from PS PCB is_____ ()
 A) +24v, +12v & +5v B) +12v, -12v & +5v
 C) +12v, -12v & +24v D) +12v, -12v & +60v
- 41) In MLK-II EI, VCOR has_____type of contacts ()
 A) independent B) dependent C) both D) none
- 42) In MLK-II EI, VCOR has_____contact combinations ()
 A) 6F/6B B) 8F/8B C) 6F/B D) 8F/B
- 43) In MLK-II EI, supply to VCOR is directly controlled by _____PCB ()
 A) CPU B) PS C) both D) none
- 44) In MLK-II EI, supply to VCOR is indirectly controlled by _____PCB ()
 A) CPU B) PS C) both D) none
- 45) In MLK-II EI, supply to VCOR is given when_____signal is received ()
 A) CPU B) CPS C) CRC D) none
- 46) In MLK-II EI, CPS signal is generated by_____card ()
 A) CPU B) PS C) both D) none
- 47) In MLK-II EI, CPS signal is received by_____card ()
 A) CPU B) PS C) both D) none
- 48) In MLK-II EI, CPS signal frequency is_____Hz ()
 A) 50 B) 150 C) 250 D) none
- 49) In MLK-II EI, VCOR front contacts controls the power supply of____circuits ()
 A) Vital Input B) Vital Output C) NV input D) NV output
- 50) In MLK-II EI, CPS signal is generated as far as _ is intact & working properly()
 A) hardware B) software C) both D) none
- 51) In MLK-II EI, if system is malfunctioning then CPS signal is withdrawn by _ ()
 A) CPU PCB B) PS PCB C) both D) none
- 52) In MLK-II EI, if CPS signal is withdrawn, then supply to VCOR cuts off by _ ()
 A) CPU PCB B) PS PCB C) both D) none
- 53) In MLK-II EI,_____software is common for all station's CPU cards ()
 A) Executive B) application logic C) both D) none
- 54) In MLK-II EI,_____software is different for all station's CPU cards ()
 A) Executive B) application logic C) both D) none
- 55) In MLK-II EI, Executive software version is displayed on _ of CPU front panel()
 A) upper display B) lower display C) both D) none
- 56) In MLK-II EI, application software version is displayed on _ of CPU front panel()
 A) upper display B) lower display C) both D) none
-

- 57) In MLK-II EI, Upper & Lower displays of CPU scrolls the information with ____ character type displays ()
A) 4-numeric B) 4-alfa numeric C) 4-alfa D) none
- 58) In MLK-II EI, CPU PCB has ____ number of communication serial link ports ()
A) 3 B) 4 C) 5 D) 6
- 59) In MLK-II EI, port no. ____ is provided on CPU front panel ()
A) 3 B) 4 C) 5 D) 6
- 60) In MLK-II EI, application logic program can be downloaded or uploaded with ()
A) port no. 3 B) port no. 4 C) port no. 5 D) port no. 6
- 61) In MLK-II EI, Port-1 & Port-2 of CPU card is campatable with_ ()
A) RS 232 B) RS 423/232 C) RS 485 D) all
- 62) In MLK-II EI, Port-4 & Port-5 of CPU card is campatable with_ ()
A) RS 232 B) RS 423/232 C) RS 485 D) all
- 63) In MLK-II EI, Port-3 of CPU card is campatable with_____ ()
A) RS 232 B) RS 423/232 C) RS 485 D) all
- 64) In MLK-II EI, date & time can be adjusted through_____ ()
A) toggle switches on CPU PCB front panel B) Maintenance PC
C) Both A & B D) None
- 65) In MLK-II EI, resetting can be done through_____ ()
A) toggle switches on CPU PCB front panel B) Maintenance PC
C) Both A & B D) None
- 66) In MLK-II EI, CPU PCB is stored with_____ data for accessing & analyzing ()
A) user B) event C) error D) all
- 67) In MLK-II EI, CPU PCB can store user data up to_____ information ()
A) 90,000 B) 5,000 C) 50 D) none
- 68) In MLK-II EI, CPU PCB can store event data up to_____ information ()
A) 90,000 B) 5,000 C) 50 D) none
- 69) In MLK-II EI, CPU PCB can store error data up to_____ information ()
A) 90,000 B) 5,000 C) 50 D) none
- 70) In MLK-II EI, CPS means_____ ()
A) Cycles per Second B) Conditional Power Supply
C) Checks Pulse of Signal D) none
- 71) In MLK-II EI, Port no. 5 of CPU PCB is named as_____ port ()
A) Maintenance B) Diagnostic C) debug D) all
- 72) In MLK-II EI, Port no. 5 of CPU PCB is connected to_____ ()
A) Laptop B) Maintenance PC C) A or B D) both A & B
-

- 73) In MLK-II EI, CPU PCB has 4 numbers of _____ for storing software ()
 A) RAMs B) Flash EPROMs C) EEPROM D) none
- 74) In MLK-II EI, Application & Executive software of CPU is stored in _____ ()
 A) 4 nos. of Flash EPROMs B) EEPROM
 C) 4 nos. of Low power Static Ram D) 2 nos. of Fast Static Ram
- 75) In MLK-II EI, Vital Data Processing in CPU is done by _____ ()
 A) 4 nos. of Flash EPROMs B) EEPROM
 C) 4 nos. of Low power Static Ram D) 2 nos. of Fast Static Ram
- 76) In MLK-II EI, Event / Error Data is stored in CPU by _____ ()
 A) 4 nos. of Flash EPROMs B) EEPROM
 C) 4 nos. of Low power Static Ram D) 2 nos. of Fast Static Ram
- 77) In MLK-II EI, CPU card top pin connector assembly PCB has _____ for storing site specific configuration data ()
 A) EPROMs B) Flash EPROMs C) EEPROM D) none
- 78) In MLK-II EI, the site specific configuration is _____ for all stations ()
 A) same B) different C) both D) none
- 79) In MLK-II EI, site specific configuration data is _____ if CPU card is removed ()
 A) deleted B) remains intact C) changed D) none
- 80) In MLK-II EI, Minimum System Start-Up voltage is _____ ()
 A) 12v DC B) 12v AC C) 11.5v DC D) 11.5v AC
- 81) In MLK-II EI, the processor used in CPU card is _____ ()
 A) Motorola 68832 B) Motorola 68332 C) Motorola 68322 D) None
- 82) In MLK-II EI, maximum _ no. of inputs can be connected to vital Input card ()
 A) 8 B) 16 C) 32 D) 64
- 83) In MLK-II EI, each vital output card can drive _____ relays ()
 A) 8 B) 16 C) 32 D) 64
- 84) In MLK-II EI, Max. _____ no. of I/O can be connected to Non-Vital I/O card ()
 A) 8 B) 16 C) 32 D) 64
- 85) In MLK-II EI, Top & Bottom pin connectors for Non-Vital I/O PCB has _____ ()
 A) 48 & 48 B) 48 & 96 C) 96 & 96 D) none
- 86) In MLK-II EI, Top & Bottom pin connectors of 48 & 96 is provided for _____ card ()
 A) Power Supply B) Vital Input & Output C) CPU D) All
- 87) In MLK-II EI, for _____ Address Select PCB is connected on top pin connector ()
 A) NV I/O cards B) Power Supply card C) CPU card D) All
- 88) In MLK-II EI, for _____ Address Select PCB is connected on top pin connector ()
 A) NV I/O cards B) Vital Output card C) Vital Input card D) All
- 89) In MLK-II EI, on Address Select PCB _____ nos. of jumpers are provided ()
 A) 4 B) 6 C) 8 D) 12
-

- 90) In MLK-II EI, ____ arrangement is provided to prevent plugging of wrong PCB()
 A) Jumpers B) Keying Plugs C) EEPROM D) none
- 91) In MLK-II EI, In Keying plug arrangement ____ plugs are provided out of ____ positions ()
 A) 3, 6 B) 6, 12 C) 5, 16 D) none
- 92) In MLK-II EI, Keying plug arrangement is provided adjacent to _ connector ()
 A) Top B) Bottom C) Both D) none
- 93) In MLK-II EI, ____ pin connector is used for physical wiring ()
 A) Top B) Bottom C) Both D) none
- 94) In MLK-II EI, ____ circuits are provided with single cutting arrangement ()
 A) Non-vital Input B) Non-vital Output C) Vital Output D) all
- 95) In MLK-II EI, ____ circuits are provided with double cutting arrangement ()
 A) Non-vital Input B) Non-vital Output C) Vital Output D) Vital Input
- 96) In MLK-II EI, ____ circuits are protected with poly switches ()
 A) Non-vital Output B) Vital Output C) Both A & B D) None
- 97) In MLK-II EI, ____ relay ensures fail safe functioning of system ()
 A) PCOR B) MCOR C) VCOR D) None
- 98) VCOR Relay contacts current carrying capacity is ____ Amp ()
 A) 1A B) 3A C) 5A D) 0.5A
- 99) Normal working current of VCOR is ____ ()
 A) 3 ma B) 3 A C) 30 ma D) 30 A
- 100) In MLK-II EI, ____ circuit is provided with high side software controlling switch ()
 A) Non-vital Input B) Non-vital Output C) Vital Output D) Vital Input
- 101) MEI 633 is of _____ architecture ()
 a) 2 Out of 2 b) 1 Out of 1 c) 2 Out of 3 d) 2 Out of 4
- 102) Cycle time in MEI633 is _____ ()
 a) 222ms b) 111ms c) 444ms d) 333ms
- 103) Intercommunication between MEI633 and the OCs is _____ ()
 a) CLA b) RS-232/OFC c) RS 485/OFC d) RS-423
- 104) Input supply for the Mini IPS provided in Medha EI room is _____ ()
 a) 24V DC b) 230V AC c) 110V AC d) 110V DC
- 105) The output supply of Dc-Dc converters in the Mini IPS of MEI 633 is _____ ()
 a) 24V DC b) 12V DC c) 110V DC d) 60V DC
- 106) Inter communication between MEI 633 and data logger is _____ ()
 a) RS-485/OFC b) CLA
 c) RS-232/OFC d) RS-423
-

- 107) Max No of OCs that can be connected to MEI 633 is ----- ()
a) 64 b) 128 c) 16 d) 32
- 108) Max No of Input cards can be provided in each OC is ----- in MEI 633 ()
a) 6 b) 4 c) 5 d) 3
- 109) Max No of output cards can be provided in each OC is ----- in MEI 633 ()
a) 6 b) 4 c) 5 d) 3
- 110) Max No of inputs can be connected to each Vital I/P card is -- in MEI 633 ()
a) 8 b) 16 c) 32 d) 12
- 111) MEI 633, max. no. of outputs can be connected to each Vital O/P card is --()
a) 4 b) 16 c) 32 d) 8
- 112) ----- type of power supply card is provided for CVC/VIC card in MEI 633 ()
a) B TYPE b) C TYPE c) A TYPE d) D TYPE
- 113) ----- type of power supply card is provided for CCC card in MEI 633. ()
a) B TYPE b) C TYPE c) A TYPE d) D TYPE
- 114) ----- type of power supply cards are provided for OCs in MEI 633. ()
a) A & B TYPE b) B & C TYPE
c) C & D TYPE d) A & D TYPE
- 115) ----- type of power supply cards are provided for PP in MEI 633. ()
a) A & B TYPE b) B & C TYPE
c) C & D TYPE d) A & D TYPE
- 116) ----- No of Rs485 serial ports are available at CIU in MEI 633 ()
a) 16 b) 12 c) 8 d) 10
- 117) ----- No of Rs232 serial ports are available at CIU in MEI 633 ()
a) 3 b) 8 c) 4 d) 2
- 118) ERROR messages are displayed on ----- of CIU in MEI 633 ()
a) FDP b) FMS c) VIF d) FPD
- 119) Max No of vital I/Os that can be handled by an CIU of MEI 633 is ---- ()
a) 4072 b) 2048 c) 1048 d) 3072
- 120) Max No of Non vital I/Os that can be handled by an CIU of MEI 633 --- ()
a) 4072 b) 2048 c) 1048 d) 3072
- 121) In Medha EI, RM means ----- ()
a) Random Memory b) Relay Module
c) Ring Modem d) Repetition Maximum
- 122) In Medha EI, RMs acts like----- converter ()
a) Serial to OFC b) serial to parallel
c) Parallel-OFC d) serial-USB
-

- 123) In each port of CIU ----- No of OCs can be connected in MEI 633. ()
a) 8 b) 6 c) 4 d) 32
- 124) CIF card is used in ----- in MEI 633 ()
a) OC b) PP c) MT d) CIU
- 125) In MEI 633, The rated voltage of VCOR----- ()
a) 12V DC b) 5 V DC c) 60V DC d) 24V DC
- 126) MEI 633 has ----- standby arrangement ()
a) Hot b) Warm c) Cold d) None
- 127) Max response time for MEI 633 is ----- ()
a) < 1 sec b) < 2 sec c) < 3 sec d) < 4 sec
- 128) Intercommunication between MEI 633 and the PP is ----- ()
a) Parallel b) Rs-232 c) OFC d) Rs-423
- 129) Input supply for the PSB cards provided in Medha EI is ----- ()
a) 5V DC b) 24V DC c) 12V DC d) 4.8V DC
- 130) The output supply of PSB in MEI 633 is ----- ()
a) 4.5V DC b) 5.5V DC c) 4.8V DC d) 5.8V DC
- 131) ----- communication channel provide between MEI 633 and MTC ()
a) Rs-423 b) Rs-232 c) CLA d) Rs-485
- 132) Max No of CIUs that can be inter connected to MEI 633 is ----- ()
a) 2 to 4 b) 2 to 6 c) 2 to 5 d) 2 to 3
- 133) Max No of RS 485 channels provided in each CIU is ----- ()
a) 8 b) 12 c) 10 d) 16
- 134) Max No of RS 232 channels provided in each CIU is ----- ()
a) 6 b) 5 c) 4 d) 3
- 135) Max No of I/Ps connected to each NV Input card of PP ---- in MEI 633 ()
a) 8 b) 16 c) 64 d) 128
- 136) Max no of O/Ps can be connected to each NV O/P card of PP -- in MEI 633()
a) 8 b) 16 c) 128 d) 64
- 137) 'A' - type of power supply card is provided for_____ in MEI 633. ()
a) CIU b) OC c) COUNTER BOX d) PP
- 138) 'C'-type of power supply card is provided for ----- in MEI 633 ()
a) CIU b) OC c) COUNTER BOX d) PP
- 139) 'B'-type of power supply cards are provided for ----- in MEI 633 ()
a) CIU b) Mini IPS c) MTC d) Data logger
- 140) Voltage & Current rating of 'B' type of power supply cards ----- in MEI 633 ()
a) 4.5V @ 8A b) 4.5V @ 3A c) 4.5V @ 6A d) 4.5V @ 2A
-

- 141) Voltage & Current rating of 'C' type of power supply cards ---- in MEI 633 ()
a) 4.5V @ 8A b) 4.5V @ 3A c) 4.5V @ 6A, 5.8@ 2A d) 4.5V @ 2A
- 142) Voltage & Current rating of 'A' type of power supply cards --- in MEI 633 ()
a) 4.5V @ 8A b) 4.5V @ 3A c) 4.5V @ 6A d) 4.5V @ 2A
- 143) Counter digits are displayed on ----- in MEI 633 ()
a) CIU b) OC c) COUNTER BOX Module d) PP
- 144) Max No of Routes that can be handled by an CIU of MEI 633 ----- ()
a) 250 b) 350 c) 450 d) 550
- 145) ----- type of SPD is provided in 24V DC supply in MEI 633 ()
a) A b) B c) C d) D
- 146) WFM means ----- in MEI 633 ()
a) Point function module b) Point frequency module
c) Wayside function module d) Wayside frequency module
- 147) WFP means ----- in MEI 633 ()
a) Warm function processor b) Warm frontend processor
c) Wayside frontend processor d) Wayside function processor
- 148) In each port of CIU ----- No of PPs / VDUs can be connected in MEI 633 ()
a) 4 b) 3 c) 2 d) 1
- 149) ORLD card is used in ----- in MEI 633 ()
a) CIU b) OC c) COUNTER BOX d) PP
- 150) The rated current of VCOR ----- in MEI 633 ()
a) 4 b) 3 c) 2 d) 1
- 151) WESTRACE EI has ----- Architecture ()
a) 1 out of 2 logic b) 1 out of 1 logic
c) 2 out of 2 logic d) 2 out of 1 logic
- 152) VLM means ----- in Westrace EI. ()
a) Vital link model b) Vital link module
c) Vital logic model d) Vital logic module
- 153) NCDM means ----- in Westrace EI. ()
a) Network centre debug module
b) Network centre diagnosis model
c) Network communication debug module
d) Network communication diagnostic module
- 154) VLM includes ----- in Westrace EI. ()
a) VLC & PFM b) VLC & PSU
c) VLC & OPC d) VLC& VL0M
-

- 155) NCDM includes ----- in Westrace EI. ()
a) NCDC & PFM b) NCDC & PSU
c) NCDC & OPC d) NCDC & VLOM
- 156) WESTCAD is used for ----- in Westrace EI. ()
a) MT b) VDU c) PP d) CTC
- 157) MOVOLAW is used as ----- in Westrace EI. ()
a) MT b) VDU c) PP d) CTC
- 158) One WESTRACE consists of Max ----- Housings in Westrace EI. ()
a) 1 b) 2 c) 3 d) 4
- 159) One Housing consists of ----- No of slots in Westrace EI. ()
a) 14 b) 16 c) 18 d) 20
- 160) First Housing can accommodate Max ----- I/O Modules in Westrace EI. ()
a) 9 b) 7 c) 5 d) 3
- 161) Other than 1st Housing can accommodate max ----- I/O Modules in Westrace EI. ()
a) 9 b) 7 c) 5 d) 3
- 162) VLM to be located in ----- slots in Westrace EI. ()
a) 1 & 2 b) 2 & 3 c) 3 & 4 d) 4 & 5
- 163) NCDM to be located in ----- slots in Westrace EI. ()
a) 1 b) 2 c) 3 & 4 d) 4
- 164) In WESTRACE EI, Vital O/P module is named as ---- in Westrace EI. ()
a) VPOM b) VIOM c) VROM d) VLOM
- 165) In WESTRACE EI, Vital I/P module is named as ---- in Westrace EI. ()
a) VPIM b) VRIM c) VLIM d) VIOM
- 166) In WESTRACE EI, Max No of I/Ps that can be connected to a Vital I/P module is ----- ()
a) 8 b) 10 c) 12 d) 16
- 167) In WESTRACE EI, Max No of O/Ps that can be connected to a Vital O/P module is ----- ()
a) 8 b) 10 c) 12 d) 16
- 168) How many WESTRACE EI units can be interconnected? ()
a) 8 b) 10 c) 12 d) 16
- 169) NCDM consists of ----- Serial COM ports in Westrace EI. ()
a) 1 b) 2 c) 3 d) 4
- 170) NCDM consists of ----- Ethernet COM ports in Westrace EI. ()
a) 1 b) 2 c) 3 d) 4
-

- 171) NCDM consists of ----- OFC ports in Westrace EI. ()
a) 1 b) 2 c) 3 d) 4
- 172) IHCL is used for ----- in Westrace EI. ()
a) Interconnects between VLC & OPC
b) Interconnects between VLM & NCDM
c) Intercommunication between NCDM to NCDM
d) Intercommunication between VLM to VLM
- 173) INCL is used for ----- in Westrace EI. ()
a) Interconnects between VLC & OPC
b) Interconnects between VLM & NCDM
c) Intercommunication between NCDM to NCDM
d) Intercommunication between VLM to VLM
- 174) WESTRACE EI can be connected through ----- port. ()
a) SERIAL b) ETHERNET c) OFC d) PARALLEL
- 175) PFM means ----- in Westrace EI. ()
a) Power Factor Module b) Power filter module
c) Protection factor module d) Protection filter module
- 176) OPCR works on ----- voltage in Westrace EI. ()
a) 12V DC b) 24V DC c) 50V DC d) 60V DC
- 177) In WESTRACE EI, the RJ 45 connector is provided in ----- card ()
a) VLM b) NCDM c) VPIM d) VROM
- 178) In WESTRACE EI, OFC ports are provided in ----- card ()
a) VLM b) NCDM c) VPIM d) VROM
- 179) VDU is to be connected to ----- port in Westrace EI. ()
a) Ethernet b) OFC c) Parallel d) Serial / Ethernet
- 180) Moviolaw can be connected to ----- port ()
a) Ethernet / serial b) OFC c) Parallel d) Serial
- 181) In WESTRACE EI, External data logger can be connected to ----- port ()
a) Serial b) Parallel c) OFC d) Ethernet
- 182) System Input supply for the WESTRACE EI is ----- ()
a) 12v & 60v DC b) 24v & 50v DC
c) 24v & 60v DC d) 12v & 60 v DC
- 183) In WESTRACE EI, Slot No ----- is dedicated for PSU ()
a) 1 b) 2 c) 15 d) 16
- 184) In WESTRACE EI, blank slot is filled with ----- ()
a) OPC card b) Blanker card c) VPIM card d) VROM card
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- 185) In WESTRACE EI, Slot no 1&15 in the 1st Housing filled with _____ ()
a) VROM card b) VPIM card c) Blanker card d) VLOM card
- 186) In WESTRACE EI, VSEV means _____ ()
a) Virtual serial emergency voltage b) Vital serial enable voltage
c) Virtual serial enable voltage d) Vital serial emergency voltage
- 187) In WESTRACE EI, VSEV voltage is meant for _____ ()
a) OPCR energization b) Hot standby synchronization
c) Warm standby d) Stand alone working
- 188) In WESTRACE EI, VSEV voltage is _____ ()
a) 5v DC b) 12v DC c) 24v DC d) 50v DC
- 189) In WESTRACE EI, the _____ is provided as mini mother board for VLM & NCDM ()
a) UHVBC b) UHVLM c) UHNCDM d) UHPSU
- 190) In WESTRACE EI, One PSU can be connected to Max _____ Housings. ()
a) 4 b) 3 c) 2 d) 1
- 191) Max _____ No of I/O modules can be accommodated in an WESTRACE ()
a) 16 b) 26 c) 14 d) 12
- 192) The output voltage of VROM is _____ in Westrace EI. ()
a) 5v DC b) 12v DC c) 24v DC d) 50v DC
- 193) _____ voltage relays used as Vital O/P relays in the WESTRACE EI ()
a) Q Series 50v b) Q Series 12v c) K-50 60v d) Q series 24v
- 194) _____ voltage relays used as Vital I/P relays in the WESTRACE EI ()
a) Q Series 50v b) Q Series 12v c) K-50 60v d) Q series 24v
- 195) Input range of PSU in WESTRACE EI is _____ ()
a) 10-18v DC b) 15-25V DC c) 18-30V DC d) 16.5-26.5V DC
- 196) PCGE is used for _____ generation in Westrace EI. ()
a) User data log files b) Application logic files
c) Station Layout files for VDU d) Maintenance tool files
- 197) The interlocking circuits in the WESTRACE EI is called as _____ ()
a) Rings b) Rungs c) Rongs d) Rangs
- 198) _____ logic is used for writing WESTRACE Application program ()
a) Ladder b) Gate c) Maxwell d) Boolean
- 199) In WESTRACE EI, PFM is used as _____ ()
a. SPD b. LPD c. MOV d. ELD
- 200) CAT 5 cable is used for _____ communication in WESTRACE EI. ()
a. Serial b. OFC c. Parallel d. Ethernet
-

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
a	c	b	b	B	d	b	b	c	D
11	12	13	14	15	16	17	18	19	20
d	b	b	c	A	a	d	a	a	B
21	22	23	24	25	26	27	28	29	30
a	c	d	b	A	b	a	a	c	B
31	32	33	34	35	36	37	38	39	40
C	D	B	C	B	A	C	B	A	B
41	42	43	44	45	46	47	48	49	50
B	C	B	A	B	A	B	C	B	C
51	52	53	54	55	56	57	58	59	60
A	B	A	B	A	B	B	C	C	C
61	62	63	64	65	66	67	68	69	70
C	A	B	C	C	D	A	B	C	B
71	72	73	74	75	76	77	78	79	80
D	C	B	A	D	C	C	B	B	C
81	82	83	84	85	86	87	88	89	90
B	B	B	D	C	D	A	D	B	B
91	92	93	94	95	96	97	98	99	100
B	B	A	D	D	C	C	B	C	C
101	102	103	104	105	106	107	108	109	110
a	d	c	d	A	c	d	c	d	A
111	112	113	114	115	116	117	118	119	120
d	a	a	b	A	b	a	d	b	D
121	122	123	124	125	126	127	128	129	130
c	a	c	d	D	a	c	c	b	D
131	132	133	134	135	136	137	138	139	140
b	a	b	d	C	d	d	b	a	B
141	142	143	144	145	146	147	148	149	150
c	a	c	c	D	c	d	a	b	B
151	152	153	154	155	156	157	158	159	160
b	d	d	c	C	b	a	d	b	C
161	162	163	164	165	166	167	168	169	170
b	b	d	c	A	c	a	d	c	A
171	172	173	174	175	176	177	178	179	180
b	d	c	a	D	c	b	b	d	A
181	182	183	184	185	186	187	188	189	190
a	b	d	b	C	b	b	c	a	C
191	192	193	194	195	196	197	198	199	200
b	d	a	d	C	c	b	a	a	D

DATA LOGGER

- 1) In EFFTRONICS Data logger, capacity of each Digital input card is___inputs ()
a) 16 b) 32 c) 64 d) 512
 - 2) In Efftrronics Data logger, all Digital inputs are scanned at the rate of____ ()
a) 16 m.sec b) 32 m.sec c) less than 1 sec d) 1 min.
 - 3) In Efftrronics Data loggers, all the Analog inputs are scanned at the rate of ()
a) less than 3 m.sec b) less than 2 m.sec
c) less than 1 sec d) less than 1 min.
 - 4) Max. Digital input capacity of each DSU in Efftrronics Data logger system is____()
a) 64 b) 512 c) 1024 d) 4096
 - 5) Max. Digital input capacity of Efftrronics Data logger system is____ ()
a) 64 b) 512 c) 1024 d) 4096
 - 6) Max. Analog input capacity of Efftrronics Data logger system is____ ()
a) 24 b) 48 c) 64 d) 96
 - 7) In Efftrronics Data loggers, additional DSU is required only when the system is required to be connected with more than____no. of relays ()
a) 64 b) 512 c) 1024 d) 4096
 - 8) In Efftrronics Data logger, each DSU is provided with maximum____no. of Digital input cards. ()
a) 4 b) 8 c) 12 d) 16
 - 9) In Efftrronics Data logger, each ASU is provided with____no. of Analog input cards. ()
a) 4 b) 2 c)6 d) 8
 - 10) In Efftrronics Data logger, each Analog input card can be connected with ____no. of Analog inputs. ()
a) 4 b) 2 c)6 d) 8
 - 11) In Efftrronics data logger, the total Analog input capacity of each ASU is ()
a) 4 b) 8 c) 16 d) 32
 - 12) In Efftrronics data logger, each digital input will carry____current ()
a) 10 mA b) 5 mA c) 15 mA d) 20 mA
 - 13) FEP means____ ()
a) Feed end program b) Feed end processor
c) Front end processor d) none
 - 14) The Central Monitoring Unit is capable of____ ()
a) collects the data from the FEP b) stores data
c) processes for report generation and analysis d) All above
-

- 15) CPU Module has____ports for serial communication in Efftronics data logger ()
a) 4 b) 8 c) 16 d) 32
- 16) In Efftronics data logger,_____voltage is taken for digital / PFC contacts ()
a) +ve 24 VDC EXT b) -ve 24 VDC EXT
c) DL GND d) Any one of the above
- 17) _____Microprocessor used in Efftronics data logger ()
a) 68332 b) 68000 c) 6800 d) 66000
- 18) In Efftronics data logger, the analog AC voltages shall be_____ ()
a) Given directly to DL
b) Converted to DC voltage and fed to DL
c) connected to 1:1 transformer and fed to DL
d) all
- 19) In Efftronics data logger if CPU module is running normally, on front side of display the following_____will be in "ON" position ()
a) Power LED b) Run LED c) Health LED d) all
- 20) Rating of DC-DC converter for up to 1024 inputs data logger_____ ()
a) 5A b) 10A c) 15A d) 32A
- 21) Rating of DC-DC converter for 1025 to 2048 inputs data logger_____ ()
a) 5A b) 10A c) 15A d) 32A
- 22) Rating of DC-DC converter for 2049 to 4096 inputs data logger_____ ()
a) 5A b) 10A c) 15A d) 32A
- 23) In Efftronics data logger networking_____software is used ()
a) MDNL b) NMDL c) MTNL d) LMDN
- 24) Signal bobbing fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 25) Track bobbing fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 26) Point bobbing logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 27) Point failure logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 28) Sluggish operation of point logic belongs to __ related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 29) Track circuit failure fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
-

- 30) Signal blanking fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 31) Signal flying back to danger fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 32) Point loose packing fault logic belongs to _ related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 33) Point burst fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 34) Clearing of signal without route locking fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 35) Passing of danger signal fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 36) Train passing blank signal fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 37) Late start of train fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 38) Late closure of LC gate fault logic belongs to_____related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 39) Premature operation of Double line block to TOL fault logic belongs to _____ related from RDSO 2011 logics ()
a) Safety b) Maintenance c) Operational d) none
- 40) In Efftronics data logger_____is possible. ()
a) On Line simulation b) OFF Line simulation
c) Both a & b d) none
- 41) Data logger in various stations can be interconnected in a network by using ()
a) Quad cable b) Microwave
c) OFC d) All the above
- 42) The DIP switches to set the unique Identification number to each data logger is provided in the_____card In Efftronics data logger ()
a) DSU b) ASU c) CPU d) Front panel
-

- 43) Data logger acts like a "Black box" which can ()
 a) scan the events
 b) store the events
 c) Process the data for generating various user-friendly reports.
 d) All the above
- 44) Data loggers can be connected in the network which help in monitoring ()
 a) PI b) RRI c) EI d) All
- 45) _____ number of digital inputs shall be connected to Efftronics RTU ()
 a) 16 b) 48 c) 24 d) 64
- 46) _____ number of Analog inputs shall be connected to Efftronics RTU ()
 a) 16 b) 64 c) 84 d) 96
- 47) The CMU is having the _____ software to retrieve data from all networked data logger ()
 a) Graphical User Interface (GUI) b) Database
 c) Spreadsheet d) None
- 48) Data logger is suitable for working on _____ areas ()
 a) Non-RE area b) RE area c) DC electrified d) All
- 49) The working voltage of data logger is ()
 a) 230 V AC b) 110 V AC c) 110 V DC d) 24 V DC
- 50) In Efftronics data logger has the facility to log minimum _____ events with First-In First-Out (FIFO) logic ()
 a) 6 lakhs b) 8 lakhs c) 10 lakhs d) 12 lakhs

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
C	a	c	b	D	d	b	b	b	D
11	12	13	14	15	16	17	18	19	20
C	a	c	d	C	c	b	b	d	A
21	22	23	24	25	26	27	28	29	30
B	c	b	b	b	b	b	b	b	B
31	32	33	34	35	36	37	38	39	40
B	b	a	a	a	a	c	c	c	C
41	42	43	44	45	46	47	48	49	50
D	c	d	d	d	a	a	d	d	C

STORES, TENDERS & CONTRACTS

- 1) AAC means _____ ()
a) Anticipated Annual Consumption b) Actual Annual Consumption
c) Allowed Annual consumption d) None
- 2) DMTR should be verified and signed by store in charge SSE ()
a) Once in week b) Once in fortnight
c) Once in month d) None of the above
- 3) Periodicity of Stock verification of Imprest stores ()
a) 1 year b) 3 years
c) 2 years d) 4 years
- 4) Multimeter comes under _____ category of stores ()
a) Dead stock b) T&P
c) Imprest d) Consumable
- 5) Advice note for returned stores is written in the form ()
a) S1605 b) S1539 c) S1622 d) None of the above
- 6) Adjustment Memo Form no ()
a) S1532 b) S1605 c) E-1461 d) S1302
- 7) Requisition for collection of material for store depot to be submitted on Form no ()
a) S1302 b) S1622
c) S1313 d) None of the above
- 8) A stock verification report is prepared on Form no ()
a) S 1622 b) S1260
c) S 1302 d) S1605.
- 9) In a PL No., the first two digits indicate _____ ()
a) Main Group b) Sub Group
c) S.No of the item d) Check digit
- 10) In a P.L No, the subgroup to which an item belong to is represented by ()
a) First two digits b) 3rd & 4th digits
c) 5th & 6th digits d) 2nd & 3rd digits
- 11) Principal head of stores department in a Zonal Railway is ()
a) Chief Material Manager
b) Controller of Stores
c) Principal Chief Material Manager
d) Chief Controller of Stores & Purchases
- 12) Which one of the system of codification is followed in Indian Railways for codification of stores items ()
-

- a) Fully significant coding system b) Semi significant coding system
c) Non significant coding system d) Color codification coding system
- 13) In Indian Railways, "A" category item represents what percentage of total consumption value ()
a) 50% b) 60% c) 70% d) 90%
- 14) In "ABC" analysis, "A" category item represents ()
a) Low consumption value item b) Important item
c) High annual consumption value item d) high cost item
- 15) In V- E- D analysis, V stands for ()
a) Vague items b) Vital items
c) Very important items d) Very costly items
- 16) Buffer stock limit depend on _____ ()
a) ABC classification of the item
b) VDE classification of the item
c) Combination of ABC & VED classification of the item
d) Stock & Non Stock classification of the item
- 17) Buffer stock is provided _____ ()
a) To meet unforeseen requirement
b) To supply items to other users
c) To make good, short fall due to theft, deterioration etc
d) To have items out of stock
- 18) An item was not issued to any user for the past 24 months, but it is likely to be issued in the near. This item will be classified as ()
a) Dead surplus b) Custody stores
c) Movable surplus d) imprest stores
- 19) An item was not issued to any user for the past 24 months, and is not likely to be utilized on any railway in next 2 years. ()
a) Dead surplus b) Custody stores
c) Movable surplus d) imprest stores
- 20) PAC means ()
a) Proprietary Article certificate b) Party Assurance certificate
b) Private Article certificate d) None of the above
- 21) Proprietary article certificate is issued for an item required to be purchased from ()
a) Single firm only b) RDSO approved firms only
c) Approved firm only d) None of the above
- 22) Inactive items are those stock items, stock of which (c)
-

- a) Is unserviceable
b) More than 3 months old
c) Not been issued to any user for the last 12 months
d) Is more than the requirement for the next 24 months
- 23) Similar nature of work will be issued by ()
a) DRM b) PCSTE c) PFA d) None of the above
- 24) No eligibility criteria is required for tenders up to Value of ()
a) Upto 20 lakhs b) Upto 40 lakhs c) Upto 100 lakhs d) Upto 50 lakhs
- 25) Value of Earnest Money Deposit to be paid by the tenderer along with tender document up to 1 crore tender ()
a) 2% of tender value b) 3% of tender value
c) 4% of tender Value d) 5% of tender value
- 26) Performance guarantee to be paid by the Tenderer after awarding the work ()
a) 10% of contract value b) 20% of contract Value
c) 5% of contract value d) 2% of contract Value
- 27) _____ % of Security Deposit have to be collected from contractor through on going bills ()
a) 10% of contract value b) 20% of contract Value
c) 25% of contract value d) 5% of contract Value
- 28) Normal notice period for calling open tenders ()
a) 30 days b) 21 days
c) 14 days d) 45 days
- 29) Powers of Sr DSTE (JAG) for calling quotations duly dispensing tender without finance concurrence for safety works ()
a) 5 Lakhs b) 2 Lakhs
c) 10 Lakhs d) 8 Lakhs
- 30) In how many days the tenderer has to pay PG without penal interest after issuing Letter of acceptance ()
a) 21 days b) 30 days
c) 45 days d) 60 days
- 31) SSE who recorded the measurements in the Measurement Book is responsible for _____ % check ()
a) 25 % b) 100% c) 50% d) 75%
- 32) RDSO inspection is required for the following material ()
a) Relay Racks b) Fuses & Fuse block c) Hylarn Sheet d) None
-

- 33) Variation of quantities for execution is permitted up to _____ % at same rates()
 a) Up to 125% b) Up to 125%to 140%
 c) Up to 140 to 150% d) Beyond 150%
- 34) Variation of quantities for execution is permitted up to _____ % at same rates()
 a) Up to 125% b) Up to 125%to 140%
 c) Up to 140 to 150% d) Beyond 150%
- 35) Introduction of new NS item of value _____ without finance occurrence()
 a) 2 Lakhs or 5% contract value whichever is less
 b) 3 lakhs or 10%contract value whichever is less
 c) 5 lakhs or 5%contract value whichever is less
 d) 5 lakhs or 10%contract value whichever is less
- 36) Execution of schedule items less than 75% requires approval of _____ ()
 a) SAG officer b) JAG officer c) SS officer d) JS officer
- 37) Non performing contract can be terminated after issuing _____ and _____ notice ()
 a) 21 days & 48 Hrs b) 7 Days & 48 Hrs
 c) 15 days & 24 Hrs d) None of the above
- 38) Security deposit (SD) will be released only after ()
 a) Work completion
 b) Final bill
 c) Maintenance period
 d) None of the above
- 39) Performance Guarantee (PG) will be released after ()
 a) Work completion
 b) Final bill
 c) Maintenance period
 d) None of the above

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
A	a	c	b	b	c	a	b	a	b
11	12	13	14	15	16	17	18	19	20
C	b	c	c	b	c	a	c	a	a
21	22	23	24	25	26	27	28	29	30
A	c	b	d	a	c	d	b	b	a
31	32	33	34	35	36	37	38	39	40
B	b	a	a	c	a	b	c	b	

RAJBASHA

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- 22) How many Lok Sabha members are there in the Parliamentary Committee on Official Language ()
a) 10 b) 20 c) 30 d) 32
- 23) How many Rajya Sabha members are there in the Parliamentary Committee on Official Language ()
a) 5 b) 7 c) 8 d) 10
- 24) At present, how many Sub-Committees are there in the Parliamentary Committee on Official Language ()
a) 3 b) 7 c) 8 d) 10
- 25) Which Sub-Committee of Parliamentary Committee on Official Language inspects the offices of Railway Ministry ()
a) 1st b) 2nd c) 3rd d) none
- 26) What is the periodicity of the meetings of Official Language Implementation Committee is once in ()
a) 1 b) 2 c) 3 d) 6
- 27) Which Ministry prepares Annual Programs on Official Language ()
a) Railways b) Home c) Defense d) Broad casting
- 28) The Question Papers of departmental examination must be provided in which language ()
a) Hindi b) Regional c) no such norms d) Hindi & English
- 29) How many Hindi courses are prescribed for Central Govt. employees ()
a) Prabodh b) Praveen c) Pragya and Parangat d) All
- 30) Which is the elementary Hindi course prescribed for Central Govt. employees()
a) Pragya b) Praveen c) Prabodh d) Parangat
- 31) Which is the final Hindi course prescribed for Central Govt. employees ()
a) Pragya b) Praveen c) Prabodh d) Parangat
- 32) What are all the training facilities available to a Central Govt. Employee to get trained in these Hindi courses ()
a) All b) Regular c) Intensive d) Correspondence & Private
- 33) What is the duration of each Hindi course? (Except Intensive Training) ()
a) 2 months b) 3 months c) 5 months d) 6 months
-

- 34) How many times Hindi examinations (except Intensive Training) are conducted in a year ()
a) 1 b) 2 c) 3 d) 4
- 35) What are all the months in which Hindi examinations are usually conducted ()
a) April & September b) May & October
c) May & November d) June & December
- 36) In how many working days Prabodh course is conducted under Intensive Training ()
a) 20 b) 25 c) 30 d) 35
- 37) In how many Working days Praveen course is conducted under Intensive Training ()
a) 20 b) 25 c) 30 d) 35
- 38) In how many working days Pragya course is conducted under Intensive Training ()
a) 7 b) 10 c) 15 d) 20
- 39) When will an employee become eligible for Cash Award after passing Hindi Examinations ()
a) get above 35% in written b) get above 45% in written
c) get above 55% in written d) get above 60% in written
- 40) What is the amount of Cash Award for Passing Hindi Typing with 90% or more but less than 95% of marks ()
a) Rs 400 b)) Rs 600 c) Rs 800 d) Rs 1200
- 41) What are all the incentives given for passing Hindi Examinations ()
a) Cash Award b) Lumpsum Award & Personal
c) a & b d) None
- 42) What is the amount of Cash Award for Passing Prabodh with 55% or more but less than 60% of marks ()
a) Rs 400 b) Rs 450 c) Rs 500 d) Rs 550
- 43) What is the amount of Cash Award for Passing Prabodh with 60% or more but less than 70% of marks ()
a) Rs 750 b) Rs 800 c) Rs 850 d) Rs 900
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- 44) What is the amount of Cash Award for Passing Prabodh with 70% or more marks()
 a) Rs 1200 b) Rs 1400 c) Rs 1600 d) Rs 1800
- 45) What is the amount of Cash Award for Passing Praveen with 55% or more but less than 60% of marks ()
 a) Rs 200 b) Rs 400 c) Rs 600 d) Rs 800
- 46) What is the amount of Cash Award for Passing Praveen with 60% or more but less than 70% of marks ()
 a) Rs 1200 b) Rs 1300 c) Rs 1500 d) Rs 1700
- 47) What is the amount of Cash Award for Passing Praveen with 70% or more marks ()
 a) Rs 1200 b) Rs 1400 c) Rs 1600 d) Rs 1800
- 48) What is the amount of Cash Award for Passing Pragya with 55% or more but less than 60% of marks ()
 a) Rs 400 b) Rs 600 c) Rs 800 d) Rs 1200
- 49) What is the amount of Cash Award for Passing Pragya with 60% or more but less than 70% of marks ()
 a) Rs 1400 b) Rs 1600 c) Rs 1800 d) Rs 2400
- 50) What is the amount of Cash Award for Passing Pragya with 70% or more marks()
 a) Rs 2400 b) Rs 1800 c) Rs 1600 d) Rs 1200

ANSWERS KEY

1	2	3	4	5	6	7	8	9	10
d	c	b	a	c	c	d	a	b	d
11	12	13	14	15	16	17	18	19	20
a	c	d	b	b	c	a	d	c	b
21	22	23	24	25	26	27	28	29	30
c	b	d	a	b	c	b	d	d	c
31	32	33	34	35	36	37	38	39	40
a	a	d	b	c	b	a	c	c	c
41	42	43	44	45	46	47	48	49	50
c	a	b	c	d	a	d	c	b	a

Q1. Consider the following statements with reference to Shunt signals:

1. More than one shunt signal cannot be placed on same post.
2. When shunt signal is placed below a stop signal, it shall show 2 horizontal lights glow during 'ON' condition.

Which of the above statements are **correct**?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q2. For Starter signals, all concerned points should be set and locked in following:

- A. Route, Isolation only
- B. Route only
- C. Route, Isolation and overlap
- D. Isolation only

Q3. Consider the following statements with reference to Shunting Permit Indicators:

1. They are used at stations where uninterrupted shunting is required in to and fro direction.
2. It is a stop signal.

Which of the above statements are correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q4. The ON aspect of repeater signal is:

- A. Red
- B. Yellow
- C. Green
- D. Double Yellow

Q5. Shunting Limit Boards (SLB) are provided on:

- A. Double line Class A station
- B. Single line Class A station
- C. Double line Class B station
- D. Single line Class B station

Q6. Signal overlap for Automatic signaling on double line is:

- A. 180m
- B. 300m
- C. 240m
- D. 120m

Q7. Distance travelled by train before coming to a stop by sudden application of brake at one stretch is called:

- A. Emergency Braking distance
- B. Service Braking distance
- C. Rolling in distance
- D. Rolling out distance

Q8. Isolation of goods reception line from siding is:

- A. Considered essential if speed > 25kmph
- B. Considered desirable
- C. Considered essential if speed > 50kmph
- D. Considered essential if speed > 75kmph

Q9. With respect to catch siding:

- 1. It can be used for stabling purpose.
- 2. It should be interlocked with block instruments.

Which of the above statements is correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q10. The gradient in close neighborhood where slip siding is to be provided:

- A. Steeper than 1:100 falling away from station.
- B. Steeper than 1:80 falling away from station.
- C. Steeper than 1:100 falling towards the station.
- D. Steeper than 1:100 falling towards the station.

Q11. Read the following:

- 1. Automatic signals cannot be provided on single line.

2. The default glowing aspect of automatic signal is Red.

Which of the above statements is correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q12. Station section on double line in MACLS territory is between:

- A. Between Shunting Limit Boards
- B. Between outermost facing points.
- C. Between Home and last stop signal
- D. Between outermost facing point and last stop signal.

Q13. Consider the following with respect to Class A station:

- 1. They are only in 3 aspect signaling
- 2. There is no station section
- 3. Shunting in face of approaching train not possible.

Which of the above statements is correct?

- A. 3 only
- B. 2 and 3 only
- C. 2 only
- D. 1,2 and 3

Q14. Allowable speed in Standard-III Interlocking is:

- A. Upto 50 kmph
- B. Upto 110 kmph
- C. Upto 140 kmph
- D. Upto 160 kmph

Q15. Consider the following:

1. Increasing length of block section
2. Introducing crossing stations
3. Higher standard of interlocking
4. Proper Timetabling
5. Tokenless block instruments

Which of the above increases section capacity?

- A. 3,4 and 5 only
- B. 2, 3, 4 and 5.
- C. 1,2,3,4,5.
- D. 1,3,4 only

Q16. Motion where vehicle moving oscillates from side to side because of the clearances available between the flanges and gauge faces of the rails are called:

- A. Shuttling motion
- B. Bouncing motion
- C. Lurching motion
- D. None of the above

Q17. Generally, Minimum clearance of checkrail opposite nose of crossing shall be:

- A. 44mm
- B. 48mm
- C. 52mm
- D. 56mm

Q18. Permissible station gradient should extend upto _____ beyond outermost point.

- A. 18m
- B. 36m
- C. 45m
- D. 72m

Q19. The aspects in Loop line starter are:
A. Red and Green

- B. Red, Green and Yellow
- C. Green and Yellow
- D. Red and Yellow

Q20. Currency of Green Notice is:

- A. 30 days
- B. 45 days
- C. 60 days
- D. 90 days

Q21. Goods warning board in single distant territory is placed at _____ metres from Distant signal?

- A. 180m
- B. 400m
- C. 600m
- D. 1400m

Q22. Sectional SSE/JE (Signal) shall carry out footplate inspection of all signals by day and night in both Up and Down directions over his entire jurisdiction:

- A. Once in a month
- B. Once in 2 months
- C. Once in 3 months
- D. Once in 6 months

Q23. The signal staff cadre that should be available as per signaling gears available in division is calculated through:

- A. DISU Guidelines
- B. DESU Guidelines
- C. DASU Guidelines
- D. DISTU Guidelines

Q24. Which of the following requires CRS sanction?

- A. Provision of BPAC in yard
- B. Provision of VDU in place of CCIP
- C. Provision of interlocking of catch siding
- D. Provision of EI in non-passenger line section

Q25. For works requiring CRS sanction, the validity of such sanction is:

- A. 3 months
- B. 6 months
- C. 12 months
- D. 24 months

Q26. All interlocking frames, interlocking key boxes and Station Master's Slide Control frames shall be overhauled once in every:

- A. 1 year
- B. 2 years
- C. 3 years
- D. 4 years

Q27. Class A Level Crossings have TVU in range of.

- A. 5000-10000
- B. 10000-20000
- C. 20000-30000
- D. 30000-50000

Q28. Consider the following regarding LC Gates:

1. Gate between Home signal and distant signal is Traffic Gate.
2. Special Class LC Gates have TVU > 50000

Which of the above statements are correct?

- A. 1 only

- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q29. The minimum distance of lifting barrier from the center line of nearest track shall be atleast:

- A. 2m
- B. 2.5m
- C. 3m
- D. 3.5m

Q30. When the gate is closed to road traffic, clearance between the road surface level and the boom shall be:

- A. 0.6m to 1m
- B. 0.95m to 1.05m
- C. 0.8 m to 1m
- D. 0.9 to 1.1m

Q31. For Mechanical Lifting Barrier, the boom rest (stop post) shall be in alignment with the boom. The open position of the lifting barrier shall be within:

- A. 70° to 90° from horizontal
- B. 80° to 90° from horizontal
- C. 70° to 80° from horizontal
- D. 60° to 80° from horizontal

Q32. At the center of the boom, the lifting barrier shall be provided with a _____mm diameter red disc having red reflector/luminous strip facing the road traffic.

- A. 300mm
- B. 400mm
- C. 500mm
- D. 600mm

Q33. In MLB, winch for the operation of the lifting barrier shall be located at a place not exceeding _____ meters from the gate.

- A. 150
- B. 200
- C. 250
- D. 300

Q34. Height of normal aspect of the Colour Light signal shall be approximately at:

- A. 3.45m
- B. 3.55m
- C. 3.65m
- D. 3.75m

Q35. Gate control provided on control panel when gate is open is:

- A. Red steady
- B. Red Flashing
- C. Yellow steady
- D. Yellow Flashing

Q36. The timer for route cancellation of shunt _____ signal _____ is _____ for:

- A. 30 seconds
- B. 60 seconds
- C. 90 seconds
- D. 120 seconds

Q37. Which of the following is not a component of fire alarm system (AFDAS)?

- A. UV/IV Detector
- B. BLEA Card
- C. Control Panel
- D. Bimetallic sensors

Q38. In single line, the length of DC Circuits on Line Relays (QNA1) with unscreened cable shall be restricted to:

- A. 1 km
- B. 1.2 km
- C. 2.1 km
- D. 2.8 km

Q39. Factor of safety kept while calculating maximum permissible parallelism in RE area is:

- A. 1.2
- B. 1.5
- C. 1.6
- D. 1.8

Q40. A short section of Insulated Dead overhead equipment which separates the sectors fed by two adjacent substations which are connected to different phases is:

- A. Live section
- B. Dead section
- C. Neutral section
- D. Catenary section

Q41. What is the periodicity of maintenance schedule for checking of point motor insulation, cable and wire insulation (by 100 V Megger) by JE/Signal:

- A. Monthly
- B. Quarterly

- C. Half Yearly
- D. Annually

Q42. The maintenance schedule by JE/Signal for measurement of Earth value of SSDAC, including earth continuity up to equipment & painting its value on earth enclosures/nearest wall is called:

- A. DAC1
- B. DAC2
- C. DAC3
- D. DAC4

Q43. In EI stations, System Integrity Test (SIT) to be done once in:

- A. 3 years
- B. 4 years
- C. 5 years
- D. 6 years

Q44. Changeover of EI system shall be done from Main to Hot Standby under which maintenance schedule by JE/Signal?

- A. EI 1
- B. EI 2
- C. EI 3
- D. EI 4

Q45. The periodicity of earth value measurement of Double line block Instrument by JE is:

- A. Once in a month
- B. Once in 3 months
- C. Once in 6 months
- D. Once in 12 months

Q46. The maintenance schedule by JE/Signal to ensure that all the potential free contact of UFSBI (power supply monitor, single CPU failure detection & single system failure detection) is functioning properly and wired in Datalogger is:

- A. UF2
- B. UF3
- C. UF4
- D. UF5

Q47. The maintenance schedule by JE/Signal for cleaning all cells of IPS battery bank & applying petroleum jelly as required is:

- A. IPS 1
- B. IPS 2
- C. IPS 3
- D. IPS 4

Q48. The maintenance schedule by JE/Signal for checking integrity of MLB boom locking and 'E' type lock locking the winch is:

- A. MLB 1
- B. MLB 2
- C. MLB 3
- D. MLB 4

Q49. The maintenance schedule by JE/Signal for measuring the time of operation, working voltage of ELB and operating current is:

- A. LC1
- B. LC2
- C. LC3
- D. LC4

Q50. Record of fuses (Items like date of replacement circuit, position and cause of fusing etc.) should be maintained in which SMC form:

- A. SMC 4
- B. SMC 5
- C. SMC 6
- D. SMC 7

Q51. Voltage required for operating/lighting Signal LED is:

- A. 110 V DC
- B. 110 V AC
- C. 24 V DC
- D. 24 V AC

Q52. Ballast clearance below rail bottom for electric point machine should be:

- A. 30mm
- B. 40mm
- C. 50mm
- D. 60mm

Q53. The ideal working current in Rotary Key Transmitter should be:

- A. 350 mA
- B. 400 mA
- C. 450 mA
- D. 500 mA

Q54. Which of the following machines is used by Engineering Dept. for ballast cleaning?

- A. UNIMAT
- B. MPT
- C. BCM
- D. TMS

Q55. DMTR abbreviates as:

- A. Daily Monitoring of Transactions Register
- B. Daily Material Transformation Register
- C. Dummy Material Transaction Register
- D. Daily Material Transaction Register

Q56. Signal Sighting Committee (SSC) for checking a newly erected signal will comprise of:

- A. Signal Inspector, Loco Inspector and P way Inspector
- B. Signal Inspector, Loco Inspector and Traffic Inspector
- C. Signal Inspector, Traffic Inspector and P way Inspector
- D. Traffic Inspector, Loco Inspector and P way Inspector

Q57. The open line organization in zone for S & T dept is headed by:

- A. Sr. DSTE
- B. CSE
- C. PCSTE
- D. CCE

Q58. In which of the following situations, disconnection is essentially required?

- A. Replacement of bulbs
- B. Replacement of fuses
- C. Replacement of rodding transmission
- D. Lubrication of point

Q59. The test check to be done by **SSES/Incharge** for measurement of work in his jurisdiction is:

- A. 20%
- B. 50%
- C. 80%
- D. 100%

Q60. In cascading arrangement for 3 aspect home signal if green LED fuses, signal will go to which aspect?

- A. Yellow
- B. Red
- C. Will become blank
- D. Double yellow

Q61. It must not be possible to take 'OFF' a signal unless the following are ensured not only in the actual portion of the track on which the train has to travel, but also in the overlap. Which of the following condition is not required for taking OFF signal?

- A. All the points are correctly set.
- B. All the facing points are locked (at site).
- C. All the interlocked level crossing gates are closed and locked against road traffic.
- D. All the trailing points are locked (at site).

Q62. ESP full form is:

- A. Engineering Station Plan
- B. Engineering Signal Plan
- C. Engineering Scale Plan
- D. Engineering Substitute Plan

Q63. The classification of level crossings is made after conducting the level crossing census once in _____ years by a team

consisting of supervisors of Engineering and traffic department.

- A. 2
- B. 3
- C. 4
- D. 5

Q64. The speed of a Motor Trolley shall not exceed _____ over points and crossings.

- A. 15 kmph
- B. 20 kmph
- C. 25 kmph
- D. 30 kmph

Q65. Station working rules shall revise once in 3 years or after issue of _____ correction slips.

- A. 3
- B. 4
- C. 5
- D. 6

Q66. Type of block instrument to be installed at a station is approved by:

- A. DRM
- B. PCSTE
- C. CRS
- D. GM

Q67. The signaling drawings requiring CRS sanction in NWR are sent to CRS headquarter at:

- A. Ahmedabad
- B. Mumbai
- C. New Delhi
- D. Jodhpur

Q68. In MACLS, how much is the block overlap?

- A. 90m
- B. 120m
- C. 400m
- D. 180m

Q69. The codal life of QBCA1 relay on B route station is:

- A. 5 years
- B. 10 years
- C. 25 years
- D. 28 years

Q70. Which of the following signaling materials is essentially procured through stores department?

- A. Point machines
- B. Signaling Cables
- C. Signal Units
- D. Cable route locators

Q71. Maximum curvature permitted on B.G. is:

- A. 10 degree
- B. 8 degree
- C. 12 degree
- D. 16 degree

Q72. The codal life of Electrical Lifting Barrier (ELB) is:

- A. 5 years
- B. 10 years
- C. 25 years

- D. 28 years

Q73. Which is not a type of leave that could be taken by a railway servant?

- A. Casual Leave
- B. LAP
- C. Emergency Leave
- D. LHAP

Q74. LAP shall be credited to a Railway servant at the rate of

- A. 2 ½ days per month
- B. 3 days per month
- C. 2 days per month
- D. 1 ½ days per month

Q75. How many days of LHAP can be accumulated to an employee in his service life?

- A. 300 days
- B. 450 days
- C. 600 days
- D. Un limited

Q76. Who is authorised to sanction National Holiday Allowance (NHA)?

- A. GM
- B. DRM
- C. ADRM
- D. Sr. DSTE

Q77. A Railway servant shall be granted leave of any kind for a continuous period of not exceeding.....

- A. 3 Years
- B. 4 years

C. 5 years

D. 6 years

Q78. As per HOER the category of Office Superintendent (OS) is:

- A. Continuous
- B. Essential Intermittent
- C. Intensive
- D. Excluded

Q79. As per HOER, how much is the daily work hours and weekly rest in the intensive roster?

- A. 6 hrs and 24 hours respectively
- B. 8 hours and 24 hours respectively
- C. 8 hours and 30 hours respectively
- D. 6 hrs and 30 hours respectively

Q80. What is the limit for weekly working hours for (E I) essential intermittent class?

- A. 45 hours
- B. 54 hours
- C. 75 hours
- D. 78 hours

Q81. For Group C & D employees having worked 3 years are eligible for how many sets of privilege passes?

- A. 1 set
- B. 2 sets
- C. 3 sets
- D. 4 sets

Q82. Consider the following statements with respect to Railway employee:

- 1. Unmarried daughter can be included in privilege pass

- 2. Widow sister can be included in privilege pass as dependent.

Which of the above statements is correct?

- A. Only 1
- B. Only 2
- C. Both 1 & 2
- D. Neither 1 nor 2

Q83. Which geographical direction is essentially shown in signaling plan?

- A. North Point
- B. East Point
- C. South Point
- D. West Point

Q84. ESP should contain following information:

- A. Class of station
- B. Standard of interlocking
- C. Aspect Control Chart
- D. Clear Available Length of all lines

Q85. Which of the following is a permissive signal?

- A. Home
- B. Starter
- C. Advance Starter
- D. Warner

Q86. All tentative signaling plans should be signed by at least which divisional officer:

- A. Sr. DSTE
- B. CSTE
- C. DSTE
- D. ASTE

Q87. In any relay interlocking installation relay contacts used shall be shown in.

- A. Contact analysis chart
- B. Relay rack particular sheet
- C. Cable corage plan
- D. Cable route plan

Q88. The concerned department will have to apply for green notice before commencement of work:

- A. At least 1 day before
- B. At least 3 day before
- C. At least 5 day before
- D. At least 7 day before

Q89. Calling on signal cannot be placed below:

- A. Main line Starter
- B. Advance Starter
- C. Home
- D. Loop line Starter

Q90. As Per the Revised New Design Norms Induced voltage For Single Line (Only un-screened cable)

- A. 95V/KM
- B. 116V/KM
- C. 55V/KM
- D. 75V/KM

Q91. What should be ideal Earth resistance of maintenance free earth?

- A. 10-20 Ω
- B. 0-10 Ω
- C. 5-10 Ω
- D. 0-1 Ω

Q92. A driver shall pass IBS signal at 'ON'.

A. If he feels everything is ok.

B. He can pass the signal after talking to the guard.

C. He can start his train after talking to the station master of rear station

D. He can start his train after talking to the station master of ahead station.

Q93. Consider the following with respect to ASR circuit:

- 1. Indication Locking
- 2. Back Locking
- 3. Approach Locking

Which of the above are proved in ASR Circuit?

- A. 1 & 2 only
- B. 1 & 3 only
- C. 2 & 3 only
- D. 1, 2 and 3

Q94. Which relay is used to identify sequential occupation of tracks?

- A. UCR
- B. UYR
- C. ASR
- D. HR

Q95. WJR Picks up when _____

- A) NWR/RWR pickup and WXR drop
- B) NWR/RWR pickup and WXR pick up
- C) NWR/RWR drop and WXR drop

D) NWR/RWR drop and WXR pick up

Q96. In relay interlocking which relay is also called as “Cross Protection Relay”.

- A. WKRI
- B. WKR2
- C. WKR3
- D. Z3WR

Q97. Approach Locking Track circuit for Loop Line Starter Signals is:

- A. Berthing Track
- B. Not required for loop line starter
- C. From the berthing track to first control track circuit of the Home signal
- D. Dead Approach locking

Q98. Screened Cable screening factor is

- A. 0.4
- B. 0.2
- C. 0.3
- D. 0.5

Q99. The senior most Official at railway accident site shall submit a briefing note to the _____

- A. GM
- B. AGM
- C. ADRM
- D. DRM

Q100. Below is the list of safety gears for S & T staff with frequency to be provided:

1. Safety shoes: Once in an year
2. Winter Jacket: Once in 2 years
3. Raincoat with cap hood: Once in an year

Which of the above frequencies are correct for mentioned safety gears?

- A. 1 & 2 only
- B. 1 & 3 only
- C. 2 & 3 only
- D. 1, 2 and 3

Quest ion No.	Ans wer	Quest ion No.	Ans wer	Quest ion No.	Ans wer
1	D	46	D	91	D
2	A	47	A	92	C
3	A	48	A	93	D
4	B	49	C	94	B
5	D	50	B	95	A
6	D	51	B	96	B
7	A	52	C	97	A
8	B	53	A	98	A
9	B	54	C	99	D
10	A	55	D	100	C
11	D	56	B		
12	D	57	C		
13	B	58	C		
14	C	59	D		
15	B	60	A		
16	C	61	D		
17	A	62	C		
18	C	63	B		
19	D	64	A		
20	D	65	A		
21	B	66	C		
22	A	67	B		
23	B	68	D		
24	C	69	B		
25	C	70	B		
26	C	71	A		
27	D	72	B		
28	B	73	C		
29	D	74	A		
30	C	75	D		
31	B	76	B		
32	D	77	C		
33	A	78	A		
34	C	79	D		
35	A	80	C		
36	D	81	A		
37	B	82	C		
38	C	83	A		
39	B	84	D		
40	C	85	D		
41	C	86	C		
42	D	87	A		
43	C	88	D		
44	A	89	B		
45	C	90	B		

Q 1: With reference to Plug in relays, consider the following statements:

1. Plug in relays are light and compact when compared to shelf type relays.
2. Plug in relays provides more no. of contacts than shelf type relays.
3. Plug in relays has less voltage of operation than shelf type relays.
4. Replacement of plug in relay takes less time than shelf relay.

Which of the above statements are correct?

- A. 1,2,3,4
- B. 1 and 4 only
- C. 1,2 and 4
- D. 1 and 3 only.

Q 2: In order to make Q series relays AC Immunized following is provided at armature end:

- A. Magnetic shunt
- B. Copper Slug
- C. Residual pin
- D. Pusher Spring

Q 3: For Q series TR relays, which relay is commonly used as TPR:

- A. QNA1
- B. QBCA1
- C. QSRA1
- D. QSPA1

Q 4: What is minimum percentage release of track relays?

- A. 25% of rated pick up value.
- B. 78% of rated pick up value.
- C. 68% of rated pick up value.
- D. 55% of rated pick up value.

Q 5: How much is the minimum permissible resistance of a concrete sleeper after 6 months from date of manufacture in AC RE area?

- A. 250 Ω
- B. 100 Ω
- C. 150 Ω
- D. 500 Ω

Q 6: Maximum permissible rail resistance (per km) for a track circuit of length 400m will be:

- A. 1.5 Ω
- B. 1 Ω
- C. 2 Ω
- D. 0.5 Ω

Q 7: What can be maximum excitation at relay end for QBAT relays?

- A. 250% of its rated pick up value.
- B. 235% of its rated pick up value.
- C. 125% of its rated pick up value.
- D. 300% of its rated pick up value.

Q 8: In Broad Gauge territory, dead section on point zones shall not be more than:

- A. 1m
- B. 1.4m
- C. 2.8 m
- D. 1.8 m

Q 9: In Universal Axle Counter (UAC), which of the following sections is not a part of pulse shaper card?

- A. Schmitt Trigger
- B. Impulse Time Filter
- C. High Pass Filter
- D. Level Convertor

Q 10: In SSDAC (DACF 700 AP) Unit, Card no. 7 is:

- A. Event Logger Card
- B. Relay Driver Card
- C. Modem Card
- D. DC-DC Convertor Card

Q11. While checking error code in SSDAC of CEL make, ESM/RHG finds LEDs 1 & 3 of LSB glowing along with LED 5 & 6 of MSB. All other LEDs are off. What is the error code appearing in LED Matrix:

- A. 33
- B. 35
- C. 53
- D. 55

Q 12: In SSDAC of CEL make, set of carrier frequencies generated by SCC Cards and transmitted to Tx. coils is:

- A. 21KHz and 22KHz
- B. 21KHz and 23KHz
- C. 21KHz and 25KHz
- D. 23KHz and 25KHz

Q 13: Voltage used for resetting SSDAC is:

- A. 12 V DC
- B. 24 V DC
- C. 5 V DC
- D. 48 V DC

Q 14: In MSDAC, the interface between outdoor equipment (detection points DP) and indoor equipment (Axle counter Evaluator ACE) is done through:

- A. Power Data Coupling Units (PDCU)
- B. Serial Cards
- C. Parallel Cards
- D. CPU Cards

Q 15: In order to solve track circuits failures due to excessive waterlogging in Sikar Yard of Jaipur division, MSDAC of which make has been commissioned recently:

- A. Efftronics
- B. CEL
- C. Siemens
- D. Sigma Rail

Q 16. In SSDAC used in block working, type of reset used is:

- A. Direct Hard Reset
- B. Conditional Hard Reset
- C. Preparatory Reset
- D. Any of the above

Q 17. Red Lamp protection is used to:

- A. Protect Blank Signal
- B. Prevent blanking of signal
- C. Shifting to restrictive aspect of signal
- D. Both A & B

Q 18. The proceed aspect is displayed in four aspect automatic section when _____ automatic sections ahead and overlap are clear.

- A. 2
- B. 3
- C. 4
- D. 5

Q 19. The signal lamp terminal voltage shall not be more than _____ of rated voltage.

- A. 90%
- B. 98%
- C. 80%
- D. 12%

Q 20. The no load current of signal transformer shall not be more than:

- A. 5 A

B. 15 A

C. 5 mA

D. 15 mA

Q 21. The digital input scanning time in datalogger of Efftronic make complying to IRS: S-99/2006 is:

- A. 2 millisecond
- B. 4 millisecond
- C. 8 millisecond
- D. 16 millisecond

Q 22. *“With TPR is Down, the time difference of (NWKR/RWKR) (Up to Down to Up) is in between 250 ms to 2 sec”.*

For the above fault description in Efftronic datalogger, the corresponding Fault name would be:

- A. Point burst
- B. Point loose packing
- C. Point failure
- D. Signal failure

Q 23. Status of HECR/DECR & ASR when clearing of signal without route locking occurs is:

- A. HECR/DECR UP & ASR UP
- B. HECR/DECR UP & ASR DN
- C. HECR/DECR DN & ASR UP
- D. HECR/DECR DN & ASR DN

Q 24. Total storage capacity in standard Efftronic datalogger equipment's is:

- A. 1 lakh events
- B. 5 lakh events
- C. 10 lakh events
- D. 20 lakh events

Q25. The serial communication ports provided in datalogger to communicate with other data logging equipment's, RTU, EI systems are:

- A. RS 232
- B. RS 282
- C. RS 485
- D. RS 465

Q 26. Which of the following is not a make of double line block instrument?

- A. Madras Make
- B. Byculia Make
- C. Howrah Make
- D. Podanur make

Q 27. The schedule of checking Conditional TOL Locking in Double Line Block Instruments by an ESM is:

- A. Fortnightly
- B. Monthly

C. Quarterly

D. Half Yearly

Q 28. Consider the following statements regarding Double line block instruments:

1. It is non-cooperative type block instrument.
2. All operations are carried by receiving end block instrument.

Which of the above statements are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Q 29. Prescribed code of bell signals for train entering block section in DLBI is:

- A. 0
- B. 00

C. 000

D. 0000

Where 0 indicates stroke or a beat.

Q 30. The period of overhauling of Neales Ball Token Block Instrument is:

- A. 7 years
- B. 10 years
- C. 5 years
- D. 12 years

Q 31. Which of the following is not a position of commutator handle in Double line block instrument?

- A. Line closed (LB)
- B. Train on line (TOL)
- C. Train Coming From (TCF)
- D. Line Clear (LC)

Q 32. Resistance of door lock coil in SGE DLBI is:

- A. 40 Ω
- B. 50 Ω
- C. 80 Ω
- D. 160 Ω

Q 33. Polarised relay is provided as a part of Block instrument internally in:

- A. Podanur make only
- B. Howrah make only
- C. Both Podanur and Howrah makes
- D. Byculia make only

Q 34. The code life of DLBI is:

- A. 7 years
- B. 15 years
- C. 25 years
- D. 20 years

Q35. Certificate of competency for operation of block instruments is valid for a period of:

- A. 1 year
- B. 2 years
- C. 3 years
- D. 4 years

Q 36. The body of Double line block instruments should be painted:

- A. Grey Enamel
- B. Black Enamel
- C. Green Enamel
- D. Red Enamel

Q 37. The difference between operating current under obstruction and normal operating current should not be less than:

- A. 0.5 A
- B. 1 A
- C. 1.5 A
- D. 2 A

Q 38. In Thick Web Switches, a spring setting device (SSD) is provided at Junction of rail

head (JOH) in lieu of stretcher bars between sleeper no. :

- A. 13 & 14
- B. 12 & 13
- C. 11 & 12
- D. 2 & 3

Q39. Consider the following statements regarding Thick Web Switches (TWS):

1. It ensures proper setting of stock rail and switch rail.
2. It reduces the chances of under wheel flashing.
3. Only 2 stretcher bars are used.
4. Stroke of machine is 160 mm.

Which of the above statements are correct?

- A. 1 only.
- B. 1 and 2 only.
- C. 1, 2 and 3.
- D. 1, 2 and 4.

Q40. When point is set and locked in reverse following contacts make:

- A. ND & RC
- B. ND & RD
- C. RD & NC
- D. RD & RC

Q41. Line clear cancellation relay which also operates as time release indicator in single line tokenless handle type block instrument is:

- A. 1R
- B. 2R
- C. 3R
- D. 4R

Q 42. Three step polar impulse coding for setting the instrument to Train Going to (TGT

Mode) in push button token less block instruments is:

- A. - + +
- B. - - -
- C. - + -
- D. - - +

Q 43. The carrier frequencies used in FM Type block Instruments are:

- A. 1800 Hz & 2400Hz
- B. 1800 Hz & 2700Hz
- C. 800 Hz & 1400Hz
- D. 800 Hz & 1700Hz

Q 44. The codal life of Earth Leakage detector is:

- A. 5 years
- B. 10 years
- C. 15 years
- D. 20 years

Q 45. The codal life of Electrical Signalling system is:

- A. 15 years
- B. 20 years
- C. 24 years
- D. 25 years

Q 46. In SM Room, IPS Status monitoring panel displays red LED with "START GENERATOR" command when batteries are on load and discharged by:

- A. 30% DOD
- B. 40% DOD

C. 50% DOD

D. 60% DOD

Where DOD is depth of discharge.

Q 47. With reference to IPS batteries, consider the following statements:

1. While preparing electrolyte, always add distilled water to acid.
2. Batteries should be exposed to direct sunlight.

Which of the above statements are correct?

- A. Only 1
- B. Only 2
- C. Both 1 & 2
- D. Neither 1 nor 2.

Q 48. As per latest guidelines, what is the codal life of LMLA cell used in IPS Batteries?

- A. 3 years
- B. 4 years
- C. 5 years
- D. 6 years

Q 49. Consider a single line station JILO of division. What shall be supply sources connected to CLS panel at this station?

- A. AT, RSEB, DG
- B. AT, BT, RSEB
- C. RSEB, DG1, DG2
- D. AT, BT, DG

Q 50. What will be size of input feeder cable from Auxilliary transformer to IPS Room for 10KVA AT:

- A. 2x25 sq. mm Aluminum conductor

- B. 2x35 sq. mm Aluminum conductor
- C. 2x45 sq. mm Aluminum conductor
- D. 2x70 sq. mm Aluminum conductor

Q 51. In IPS System, inverter output is used for load of:

- A. UP & DN side tracks.
- B. UP & DN side signals
- C. Block telephones
- D. Point machines.

Q 52. Most common element used in manufacturing of Solar Panels is:

- A. Iron
- B. Aluminum
- C. Copper
- D. Silicon

Q 53. A solar photovoltaic module performs the following conversion:

- A. Mechanical energy to Electrical energy
- B. Electrical energy to Mechanical energy
- C. Solar energy to Electrical energy
- D. Electrical energy to Solar energy

Q54. Varistors and Gas discharge Tubes (GDT) are following class of surge protection devices:

- A. Class A
- B. Class B
- C. Class C
- D. Class D

Q55. Consider the following properties with respect to earth enhancement material used to improve earth resistance for earthing:

Property	Characteristics
1. Conductivity	High
2. Water solubility	High

Which of the above characteristics are correct?

- A. 1 only
- B. 2 only
- C. Both 1 & 2
- D. Neither 1 nor 2

Q56. Consider the following for improving ring earth resistance value:

- 1. Adding salt water to earth
 - 2. Adding other earth in parallel
- Which of the above helps in attaining good earth resistance?
- A. Only 1
 - B. Only 2
 - C. Both 1 & 2
 - D. Neither 1 Nor 2

Q57. Specific gravity of LMLA cell _____ with increase in temperature.

- A. Increases
- B. Decreases
- C. Remains Constant
- D. Increases drastically

Q 58. End point voltage of lead acid cell is:

- A. 1.8 V
- B. 1.9 V
- C. 2.0 V
- D. 2.2 V

Q 59. Specific gravity of fully charged cell is _____ in terms of hydrometer reading:

- A. 1180

B. 1195-1205

C. 1205-1215

D. 1235-1245

Q 60. Initial charging voltage of lead acid cell is:

A. 2.2V

B. 2.3V

C. 2.4V

D. 2.7V

Q 61. SMRs of IPS system are provided with following configuration, where N is the no. of modules required to cater actual current requirement.

A. N

B. N+1

C. N+2

D. N+3

Q 62.If LMLA Battery is idle, then normal charge is given in:

A. Once in 3 months

B. Once in fifteen days

C. Once in a month

D. Once in 2 months

Q 63. If lead acid cells are continuously used in float charging, then equalizing charge must be given in:

A. Once in 3 months

B. Once in fifteen days

C. Once in a month

D. Once in 2 months

Q 64. Maximum permissible load of battery bank with capacity 200AH is:

A. 25A

B. 20A

C.30A

D. 40A

Q 65. For an IPS for 4 line without AFTC in RE area, the configuration of DC-DC Convertors used for deriving input for panel indications are:

A. 24-32V/5A

B. 12-28V/1A

C. 12-28V/5A

D. 3-6V/0.1A

Q 66. Visibility of Distant signal is:

A. 180m

B. 200m

C. 360m

D. 400m

Q67. Consider following statements regarding Relay interlocking circuits:

1. TSR (Track Stick Relay) ensures one signal one train movement.
2. When ASR (Approach stick relay) picks up, route is locked.

Which of the above statements are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Q68. Which type of wire is used for relay base contact wiring of metal to carbon relays?

A. PVC 16 strand 0.2 mm dia

- B. PVC single strand 0.6 mm dia
- C. PVC single strand 1 mm dia
- D. None of the above

Q69. In British RRI, the relay NNCR

- A. Drops when any button is stuck up on the panel
- B. Picks up when any button is stuck up on the panel
- C. Stops the alarm of button stuck up on the panel
- D. None of the above

Q70. In British RRI system which of the following is NOT proved in ASR circuit?

- A. Back locking
- B. Indication locking
- C. Approach locking
- D. Track locking

Q71. In British RRI, which relay is allowed to pickup along with GNR to throw the signal to danger in case of emergencies irrespective of whether relay SMR/SMCR is pick up or drop?

- A. EWNR
- B. GNCR
- C. EGGNR
- D. GECR

Q72. In British RRI, which of the following is the main function of relay WJR?

- A. It switches heavy duty contact relay WCR (QBCA)
- B. It is situated at location box near point location
- C. It controls 110V DC to point motor for a fixed time.
- D. None of the above

Q73. In British RRI the colour of calling-on signal button on operating panel is.

- A. Blue
- B. Red
- C. Yellow with White dot
- D. Red with White dot

Q74. In British RRI, which of these relays are associated with sectional route release?

- A. WNR/WRR
- B. NWKR/RWKR
- C. NR/RR
- D. TRSR/TLR

Q75. In British RRI, where there is no track circuit on the approach of the signal, the route release is effective only after a time delay, then such locking is termed as

- A. Approach locking
- B. Dead-approach locking
- C. Back locking
- D. Indication locking

Q76. In British RRI the signal control circuit for Starter signal ensures that all track circuits concerned are clear

- (a) In route up to the next signal in advance
- (b) In route & isolation
- (c) In route, isolation and overlap
- (d) No track circuit in route /berthing / overlap need be proved

Q77. In British RRI the main function of relay UCR is

- A. Route releasing
- B. Route checking
- C. Route initiating
- D. Route holding

Q78. In British RRI which of the following relays performs the function of route holding

- A. UCR
- B. ASR
- C. TSR
- D. WLR

Q79. Route Relay Interlocking system is also called as:

- A. Non-Route setting type Relay Interlocking
- B. Route setting type Relay Interlocking
- C. Electronic Interlocking
- D. Solid state Interlocking

Q80. As per Railway Board policy, Route Relay Interlocking should be provided for centralized operation of points and signals at stations which have

- A. Upto 50 routes
- B. 50 to 100 routes
- C. 100 to 200 routes
- D. Above 200 routes

Q81. In Siemens RRI the Point Group Lock Relay is

- A. WKRI
- B. (R/N)WLR
- C. W(R/N)LR
- D. WLR

Q82. In crank handle interlocking circuit which of these relays is provided at site?

- A. CHKLR
- B. CHKLCR
- C. CHKLCPR
- D. CHY(R/N)R

Q83. In Siemens RRI, the supply used for Internal relays is

- A. 24 V DC
- B. 60 V DC
- C. 110 V DC
- D. 12 V DC

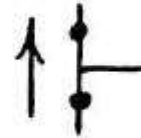
Q84. In Siemens RRI, the major point group consists of total

- A. 17 relays
- B. 18 relays

C. 19 relays

D. 20 relays

Q85. In Siemens RRI, the following symbol indicates



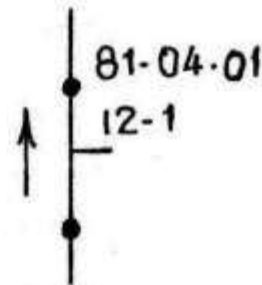
A. Front contact of a normally energized neutral relay

B. Back contact of a normally energized neutral relay

C. Front contact of a normally de-energized neutral relay

D. Front contact of a normally de-energized neutral relay

Q86. In Siemens RRI, the number 04 shown in the following figure indicates



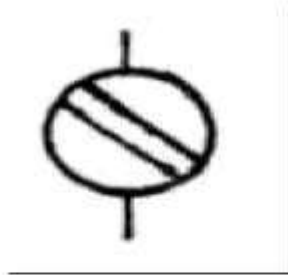
A. Contact termination on tag block

B. Rack number on which the relay is provided

C. Position of the relay in relay rack

D. Contact number of the relay

Q87. In Siemens RRI, the following symbol is used for



- A. Point locking relay
- B. Point detection relay
- C. Route checking relay
- D. Route locking relay

Q88. Which aspect comes in middle in 3 aspect signal arrangement?

- A. Red
- B. Green
- C. Yellow
- D. White

Q89. What is signal overlap in MACLS territory?

- A. 180m
- B. 400m
- C. 120m
- D. 1000m

Q90. Which port is provided for connecting datalogger to printer?

- A. Serial Port
- B. Parallel Port
- C. Either serial or parallel
- D. None of the above

Q91. The calculation of no. of OCs and card file mostly depends on:

- A. Communication ports
- B. Communication cables
- C. Vital and Non Vital bit chart
- D. Software

Q92. In EI, Application software is:

- A. Common to all stations.
- B. Station specific
- C. Similar to executive software
- D. Remotely loaded

Q93. As per latest guidelines _____ standby setup is to be used in all new EIs.

- A. Cold Standby
- B. Warm Standby
- C. Hot Standby
- D. Power backup

Q94. Safety Integrity Level to be maintained in hardware of any EI:

- A. SIL 1
- B. SIL 2
- C. SIL 3
- D. SIL 4

Q95. Which of the following contacts are used as readback contacts in EI system?

- A. Vital input relay
- B. Vital output relay
- C. Non vital inputs and outputs
- D. Eventlogger

Q96. LXPR, LCPR are treated as _____ to EI.

- A. Vital Inputs
- B. Vital Outputs
- C. Non-Vital Inputs
- D. Non-Vital Outputs

Q97. Microlok-II EI is an example of:

- A. Hardware redundant EI

- B. Software redundant EI
- C. No redundancy provided
- D. 2 out of 2 architecture

Q98. The interface between CCIP and EI is called:

- A. Object Controller
- B. Non vital inputs
- C. Non vital outputs
- D. Panel Processor

Q99. Recently commissioned Chota Gudha (COD) station in division is commissioned with which make EI?

- A. Hitachi Make
- B. Kyosan Make
- C. Medha Make
- D. Westrace Make

Q100. Individual resistances of 8 earths are 0.8Ω each. When these resistances are

connected in ring configuration for EI, the equivalent earth value should be:

- A. 0.4Ω
- B. 6.4Ω
- C. 0.1Ω
- D. 1.6Ω

Question No.	Answers	Question No.	Answers	Question No.	Answers
1	C	38	A	75	B
2	B	39	B	76	A
3	D	40	C	77	B
4	C	41	C	78	B
5	D	42	D	79	B
6	A	43	B	80	D
7	B	44	B	81	C
8	D	45	D	82	A
9	C	46	C	83	B
10	B	47	D	84	C
11	B	48	C	85	A
12	B	49	A	86	C
13	D	50	D	87	C
14	A	51	B	88	C
15	C	52	D	89	B
16	C	53	C	90	B
17	A	54	D	91	C
18	B	55	A	92	B
19	A	56	C	93	C
20	D	57	B	94	D
21	D	58	A	95	B
22	B	59	C	96	A
23	A	60	D	97	B
24	C	61	C	98	D
25	A	62	C	99	B
26	A	63	A	100	C
27	A	64	B		
28	C	65	C		
29	C	66	D		
30	B	67	A		
31	C	68	A		
32	B	69	A		
33	A	70	D		
34	D	71	C		
35	C	72	C		
36	C	73	D		
37	A	74	D		

Annexure 1

1. Full form of TCAS is (a)
 - a) Train Collision Avoidance System
 - b) Traffic Collision Avoidance System
 - c) Train Collision Advance System
 - d) Traffic Collision Advance System
2. TCAS/Kavach is mainly established to (c)
 - a) Avoid Signal Failures
 - b) Avoid Signal failures
 - c) Protect from SPAD
 - d) Calculate train height
3. ATP stands for (d)
 - a) Automatic Traffic Protection
 - b) Absolute Train Protection
 - c) Absolute Traffic Protection
 - d) Automatic Train Protection
4. Which of the following is/are features of Kavach (c)
 - a) Prevention of Side collision
 - b) LC gate automatic whistling
 - c) Both a & b
 - d) None of the above
5. Station Kavach (STCAS) is located at (b)
 - a) LC Gates
 - b) Station
 - c) Locos
 - d) IB Huts
6. RIU stands for (a)
 - a) Remote Interface Unit
 - b) Remote Intelligence Unit
 - c) Restore Interface Unit
 - d) Restore Intelligence Unit
7. Stationary Kavach doesn't require which information among the following (b)
 - a) Berthing Track TPR's
 - b) Point Zone TPR's
 - c) Calling on TPR's
 - d) Point Indications
8. Which of the following is not a track side equipment (d)
 - a) RFID Tags
 - b) Antenna
 - c) Tower

- d) RFID Tag Reader
9. Gate tag shall be installed at a distance of at least of ____ in approach of a LC gate for auto whistling (c)
- a) 350mts
 - b) 100mts
 - c) 600mts
 - d) 1000mts
10. RFID Tag is a ____ device (a)
- a) Passive
 - b) Active
 - c) On-Board
 - d) None of the above
11. Which of the following is not under the list of classification of Tags (c)
- a) Adjustment Tag
 - b) Normal Tag
 - c) Indication Tag
 - d) Gate Tag
12. KMS Stands for (b)
- a) Kinetic Movement System
 - b) Key Monitoring System
 - c) Key Management System
 - d) Key Maintenance System
13. The number of modes in Kavach Version 3.2 is ____ (c)
- a) 10
 - b) 12
 - c) 13
 - d) 8
14. Frequency of operation of RFID Tag ____ (a)
- a) 700-725 MHz
 - b) 865-867 MHz
 - c) 520-522 MHz
 - d) 430-435 MHz
15. Communication between Onboard Kavach and Stationary Kavach shall be in ____ mode communication mode (d)
- a) Simple-duplex
 - b) Half-duplex
 - c) Quarter-duplex
 - d) Full-duplex
16. A single cycle of Kavach is of ____ seconds (c)
- a) 5

- b) 1
 - c) 2
 - d) 3
17. BIU stands for (b)
- a) Board Interface Unit
 - b) Brake Interface Unit
 - c) Break Intelligence Unit
 - d) Board Intelligence Unit
18. All RFID tags are placed in _____ architecture (a)
- a) 2 out of 2
 - b) 2 out of 3
 - c) a & b
 - d) None
19. Distance between normal tags in case of block section, is generally (d)
- a) 2 Km
 - b) 500mts
 - c) 3 Km
 - d) 1 Km
20. Station Kavach can be connecting minimum _____ of RIU in one direction (c)
- a) 4
 - b) 5
 - c) 6
 - d) 2
21. The number of frequencies on which loco to loco communication takes place for Kavach is (d)
- a) 3
 - b) 4
 - c) 2
 - d) 1
22. RIU can be provided for gathering remote inputs at _____ (d)
- a) Automatic Section Huts
 - b) LC gate
 - c) IB
 - d) All of the above
23. What is the mode to be used for passing stop signal at Danger on paper authority (a)
- a) Override Mode
 - b) Trip Mode
 - c) Post Trip Mode
 - d) Staff Responsible Mode
24. NMS in Kavach system stands for (b)

- a) Network Management System
 - b) Network Monitoring System
 - c) Network Monitoring Service
 - d) Network Management System
25. How are keys transmitted to Loco Kavach and Stationary Kavach from KMS (c)
- a) GPRS
 - b) GPS
 - c) GSM
 - d) None of the above