

Syllabus for Promotion as JE in TRS organisation against 26% LDCE Quota

1. Study of Electricity Ohms law magnetism Flemings R.H Rule, L.H Rule, Lenz's Law, BM Induction Parameters of D.C Circuits, working principles of D.C Machines, Characteristics, Speed Control.
2. Study of Characteristics, Armature, Reaction, Commutation Improvements for commutation and suitability of D.C Series Motor for Traction Duty – Study of Traction Motor used in A.C Locomotives WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU Maintenance, repairs overhaul.
3. A.C Circuits, Parameters of A.C Circuits, Simple calculations, study of power supply arrangements of A.C Traction.
4. Study of current collection in Locos & EMU/MEMU, study of roof equipment's of Locos & EMU/MEMU.
5. Study of Transformer principle, overhaul and maintenance of Transformers, Auto transformers, condition for parallel operation of transformer, study of transformer used in A.C Loco WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU maintenance and overhauling tests to be conducted on the transformer, study of tap changer, operation method for voltage control, Testing of transformer.
6. Study of fuse protectors, switches and isolators, construction and working detail of circuit breaker of WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU
7. Study of various types of contactors and relays, study of relays and contactors used in WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU . Function of blow out coil and arc chutes.
8. Study of Batteries, commissioning (initial charging) maintenance and reclamation and battery charging procedures.
9. Study of Rectification methods, filters, silicon rectifier, smoothening reactor in the Loco & EMU/MEMU. Study of semi-conductor devices, battery charger.
10. Safe working on the Loco & EMU/MEMU precautions to be taken, Fire preventive measures and study of fire-fighting.
11. Study of transmission lines and distribution lines and underground cables. Study of erecting the lines determination of conductor size and re-cabing of Locos & EMU/MEMU.
12. Study of 3-Phase induction motors principle, maintenance and overhauling, study of induction generator, working principles, study of Arno, Aux machines of A.C Loco. Maintenance of 3- Phase traction motors and its cooling arrangement. Speed sensor and temperature sensor of traction motor and their importance in 3- Phase Locos & EMU/MEMU.
13. Study of Earth testing procedure, insulation test for various equipment's and testing of insulators.
14. Study of Power factor and the improvement methods demand and economy in installation of Electrical Energy.

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15. Study of circuit analysis of WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU i.e., study of circuits, cabling index and other drawings.
16. Three phase locomotives: Battery charging arrangement in 3-Phase locomotives, Auxiliary power supply and load sharing between BURs during normal condition and during isolation of one BUR. Understanding the working of various contactors associated with Harmonic filter. Understanding of various MCBs provided in HB and SB panels and their importance in trouble shooting various faults.
17. Three phase Locos & EMU/MEMU Pneumatic brake system arrangement.
18. Three phase Locos – protective functions , working of VCD, Failure mode operation, Inching mode operation, constant speed control, Traction Interlock, SR Interlock and Indication of Faults using BPFA & LSFL.
19. Measurements of Resistance, Current voltage, Power study of various types meters and equipment used, megger, diode tester, ammeter, voltmeter etc. uses of shunts, multipliers.
20. Study of Bogie, wheel arrangements, suspension arrangements and all mechanical features like elements of vibration, oscillation, damping devices, elasticity etc. in Locos & EMU/MEMU
21. Study of sander gear and brake rigging, various types of brake systems in Locos & EMU/MEMU
22. Study of pneumatic circuitry of Locos & EMU/MEMU, Study of various pneumatic valves, braking system.
23. Study of stores and accountal correspondence.
24. Study of maintenance schedules for various equipment's in Locos & EMU/MEMU, its periodicity.
25. Study of Locos & EMU/MEMU testing, engine fitness and trouble-shooting procedures.
26. RDSO modification and SMIs implementation and maintenance of various records.
27. New equipment's in Loco such as MPCS, SIV, VCD and WMUCS and understanding basic features of M/s BHEL Make IGBT locomotives , medha Make EMUs
28. Railway service conduct rules, Pass rules, D&A Rules , Hours of Employment regulations , Payment of wages Act, WC Act
29. Procurement of stores – stocked items and non-stock items-imprest stores, Disposal of unserviceable stores – stock verification.
30. Rules, Regulations & implementation of official language (HINDI).

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ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

Objective questions

Sl.No	Question	Answer
1.	Rating of EMU transformer is (a) 1200KVA (b) 1000KVA (c) 800 KVA (d) 1100KVA	(b)
2.	Voltage rating of EMU Traction Motor is (a) 500 V (b) 580 V (c) 535 V (d) 550 V	(c)
3.	New wheel diameter of EMU Motor Coach/Trailer coach (a) 900 mm (b) 950 mm (c) 850 mm (d) 952 mm	(d)
4.	Total auxiliary motors in EMU motor coach are (a) 5 (b) 4 (c) 3 (d) 2	(a)
5.	Total No. of traction motors in a EMU Motor Coach is (a) 2 (b) 3 (c) 4 (d) 5	(c)
6.	The Safety device provided in EMU for detecting gassing and the protection of Transformer is: (a) OLP (b) TTR (c) BUD (d) PRV	(c)
7.	The Safety device fitted in the EMU Transformer for its protection against explosion: (a) PRV (b) OLP (c) BUD (d) TTR	(a)
8.	The Ampere hour capacity of EMU battery is : (a) 80 Ah (b) 90 Ah (c) 100 Ah (d) 75 Ah	(b)
9.	In EMU, the setting of Parking brake governor cut in/cut out is : (a) 6.0/7.0 kg/cm ² (b) 3.3/4.3 kg/cm ² (c) 2.6/3.2 kg/cm ² (d) 4.0/5.0 kg/cm ²	(c)
10.	In EMU the setting of MCP Governor cut in /cut out is : (a) 5.0/6.0 kg/cm ² (b) 7.0/8.0 kg/cm ² (c) 4.5/5.5 kg/cm ² (d) 6.0/7.0 kg/cm ²	(d)
11.	In EMU one of the following is a part of brake controller : (a) Tripple valve (b) Equalising discharge valve (c) Safety valve (d) Application magnet valve	(b)
12.	In EMU one of the following is a part of EP unit :	

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	(a) Tripple valve	(b) Equalising discharge valve	(c) Puppet valve	(d) Self lapping cylinder	(a)
13.	In EMU the setting of equipment governor cut in/cut out is				
	(a) 4.5/5.5 kg/cm ²	(b) 2.2/3.8 kg/cm ²	(c) 4.2/3.3 kg/cm ²	(d) 4.4/5.2 kg/cm ²	(c)
14.	In EMU the setting of control governor cut in/cut out is				
	(a) 5.5/4.3 kg/cm ²	(b) 4.2/3.3 kg/cm ²	(c) 3.2/4.8 kg/cm ²	(d) 5.5/6.5 kg/cm ²	(b)
15.	In EMU the BC Pressure for MC is :				
	(a) 2.0 kg/cm ²	(b) 1.6 kg/cm ²	(c) 3.5 kg/cm ²	(d) 1.5 kg/cm ²	(b)
16.	In EMU the BC Pressure for TC is :				
	(a) 2.0 kg/cm ²	(b) 1.6 kg/cm ²	(c) 1.2 kg/cm ²	(d) 1.5 kg/cm ²	(c)
17.	In EMU the MR Pressure is :				
	(a) 5.0 kg/cm ²	(b) 6.0 kg/cm ²	(c) 7.0 kg/cm ²	(d) 8.0 kg/cm ²	(c)
18.	The type of Traction Motor used in EMU is :				
	(a) 4001 BX	(b) 4601 BX	(c) 6040 BX	(d) None of the above	(b)
19.	The wheel diameter condemn limit for MC is :				
	(a) 952 mm	(b) 900 mm	(c) 877 mm	(d) 857 mm	(c)
20.	The wheel diameter condemn limit for TC is :				
	(a) 952 mm	(b) 900 mm	(c) 877 mm	(d) 857 mm	(d)
21.	The width of EMU coach is :				
	(a) 3250 mm	(b) 3600 mm	(c) 3650 mm	(d) 3660 mm	(d)
22.	The No of teeth in EMU traction motor pinion is :				
	(a) 19	(b) 20	(c) 55	(d) 91	(b)
23.	The gear ratio in EMU is ;				
	(a) 1 : 4	(b) 1 : 5	(c) 1 : 4.55	(d) 1 : 5.55	(c)

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	The type of EMU pantograph is ;				
	(a) AM-10	(b) AM-12	(c) AM-14	(d) None of the above	(b)
25	The type of strip used in EMU pantograph is ;				
	(a) Metalised carbon	(b) Carbon	(c) Mild steel	(d) None of the above	(a)
26	The pantograph strip thickness condemn limit is ;				
	(a) 2.5 mm	(b) 3.5 mm	(c) 4.5 mm	(d) None of the above	(b)
27	The control voltage in EMU is ;				
	(a) 110 V AC	(b) 230 V AC	(c) 110 V DC	(d) 230 V DC	(c)
28	The rating of EMU traction motor is :				
	(a) 150 KW	(b) 535 KW	(c) 230 KW	(d) 167 KW	(d)
29	The type of cooling of transformer oil is :				
	(a) OFAF	(b) OF	(c) AF	(d) None of the above	(a)
30	The voltage of primary winding of EMU transformer is :				
	(a) 25 KV	(b) 266 V	(c) 782 V	(d) None of the above	(a)
31	The voltage of Secondary winding of EMU transformer is :				
	(a) 25 KV	(b) 266 V	(c) 782 V	(d) None of the above	(c)
32	The voltage of Auxiliary I winding of EMU transformer is :				
	(a) 25 KV	(b) 266 V	(c) 782 V	(d) None of the above	(b)
33	The voltage of Auxiliary II winding of EMU transformer is :				
	(a) 141 V	(b) 266 V	(c) 782 V	(d) None of the above	(a)
34	The capacity of oil pump in EMU is :				
	(a) 363.6 lpm	(b) 263.6 lpm	(c) 360 lpm	(d) 400 lpm	(d)
35	The No of main poles in EMU traction motor is :				

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	(a) 2	(b) 4	(c) 6	(d) None of the above	(b)
36	The setting of thermostat in EMU transformer is :				
	(a) 75 °C	(b) 85 °C	(c) 65 °C	(d) None of the above	(b)
37	The BDV stands for :				
	(a) Break down value	(b) Break down voltage	(c) Break drop voltage	(d) None of the above	(b)
38	The BDV for new filtered oil for transformer is :				
	(a) 40 KV	(b) 60 KV	(c) 30 KV	(d) None of the above	(a)
39	The capacity of main compressor in EMU is:				
	(a) 900 lpm	(b) 1000 lpm	(c) 500 lpm	(d) None of the above	(b)
40	The rating of MCP in EMU is:				
	(a) 12 HP	(b) 10 HP	(c) 20 HP	(d) None of the above	(a)
41	The No of carbon brushes in TM are :				
	(a) 2	(b) 4	(c) 6	(d) 8	(d)
42	The condemning size of TM carbon brush is :				
	(a) 32 mm	(b) 40 mm	(c) 35 mm	(d) None of the above	(a)
43	The type of TM suspension in EMU is ;				
	(a) Fixed	(b) Axle hung nose suspended	(c) Mounting pad	(d) None of the above	(b)
44	The type of Schaku coupler in EMU is :				
	(a) Semi-permanent	(b) Permanent suspended	(c) Screw coupling	(d) None of the above	(a)
45	The location of Air Dryer in EMU is				
	(a) HT compartment	(b) LT compartment	(c) Rear of MC	(d) None of the above	(c)
46	The location of ASL in EMU is				

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	(a) HT compartment	(b) LT compartment	(c) Bogie	(d) None of the above	(a)
47	The function of Aux rectifier is to feed :				
	(a) Aux I circuit	(b) Battery charger	(c) Main Compressor	(d) None of the above	(c)
48	The function of DC-DC converter is to feed :				
	(a) Flasher light	(b) Head light	(c) Tail lamp	(d) None of the above	(b)
49	The number of batteries available in EMU are :				
	(a) 5	(b) 8	(c) 10	(d) None of the above	(c)
50	Total time required to get complete notches from starting to full power :				
	(a) 5-15 sec	(b) 10-12 sec	(c) 15-20 sec	(d) None of the above	(b)
51	Notches will not respond if one of the following is 'Off' ::				
	a) OL reset	(b) CR	(c) BIV	(d) BL switch	(c)
52	If Traction motor No 4 is grounded, which of the following relay will act?				
	a) OL 1&2	(b) OL 3&4	(c) EFRP	(d) EFRA-II	(c)
53	If any one of the MAIN Rectifier fuse is blown				
	a) SR will not pickup	(b) ABB will trip	(c) Only indication will come	(d) TLTE	(c)
54	Auxiliary compressor is a				
	a) DC motor	(b) Single phase AC motor	(c) 3 phase AC motor	(d) none of these	(a)
55	Conservator is part of				
	a) Traction motor	(b) Transformer	(c) Main compressor	(d) VCB	(b)
56	MCB's will not trip if				
	a) AWS on	(b) HL switch on	(c) Flasher switch on	(d) HOBA fault	(d)
57	LTR relay is provided in				

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	a) Power circuit	(b) Auxiliary I Circuit	(c) Auxiliary II circuit	(d) Control circuit	(c)
58	In case of earth fault in Emergency light which relay will act				
	a) EFRP	(b) OLP	(c) EFRA II	(d) RFAR	(c)
59	Setting of OL 5& 6 relays in EMU				
	a) 4000 A	(b) 3000 A	(c) 2000 A	(d) 1000 A	(a)
60	SR not picking up with MSTWL, problem is				
	a) Tap changer contactor not closing	(b) Motor contactor not closing	(c) SR relay I/L bad contact	(d) Control switch defective	(b)
61	KF -1 is a				
	a) Radiator cooling fan motor	(b) Contactor	(c) Change over Switch	(d) Rectifier Cooling Fan motor	(a)
62	Function of Main Rectifier is				
	a) To Convert DC to AC	(b) To Convert AC to DC	(c) To Convert DC to Variable DC	(d) To Convert 3 phase AC to DC	(b)
63	Total no. of air filters for traction motors in EMU are:				
	a) 4	(b) 8	(c) 16	(d) 32	(c)
64	Color of good silica gel in AC conventional EMU is				
	a) Black	(b) Blue	(c) Pink	(d) White	(b)
65	VCB will trip for following relay				
	a) TTR	(b) RFAR	(c) CBAR	(d) BIR	(d)
66	Which of the following is an Air flow relay				
	a) ARR	(b) RFR	(c) RFAR	(d) TTR	(b)
67	When TTR act the following lamp will glow:				
	a) ABB	(b) UFL	(c) CHBA OFF	(d) MSTWL	(b)
68	CC I is used for				
	a) Aux. Compressor	(b) Main Compressor	(c) Oil pump	(d) Traction	(b)

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				motors	
	Location of EAS in EMU:				
	a) Roof	(b) HT room	(c) Cab	(d) LT room	(a)
70	CHBA output voltage is				
	a) 110V AC	(b) 141 V AC	(c) 266 V AC	(d) 110 V DC	(d)
71	Fans in EMU are working with				
	a) 110 V AC	(b) 110 V DC	(c) 141 V AC	(d) 266 V AC	(c)
72	Location of OL 1 &2 relay is				
	a) Tap changer	(b) Relay panel	(c) Switch group I	(d) switch group II	(c)
73	Relay to detect abnormalities in Transformer				
	a) EFRA II	(b) RFAR	(c) BIR	(d) OL 1 & 2	(c)
74	Circuit Breaker used in MMTS EMU is				
	a) ABB	(b) SF-6	(c) VCB	(d) OCB	(c)
75	Location of SL in EMU is				
	a) HT Room	(b) LT Room	(c) Choke Tank	(d) Cab	(c)
76	Pick up Voltage of OVR is				
	a) 140V	(b) 540V	(c) 230V	(d) 840V	(b)
77	To reset OL the following switch is to be put off:				
	a) ABB	(b) Control	(c) EP	(d) Panto Raise	(b)
78	Safety relays are				
	a) TTR,CBAR	(b) TTR, RFAR	(c) CBAR, NVR	(d) BIR,OLP	(d)
79	In Twin Beam Head light the rating of bulb is				
	a) 24 v, 70/75w	(b) 110v, 70/75w	(c) 24v, 90/100w	(d) 110v, 90/100w	(c)

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	The input/output voltage of DC-DC converter are				
	a) 110v/110v	(b) 110v/100v	(c) 110v/24v	(d) 110v/32v	(c)
81	MCP motor is				
	a) 110v DC motor	(b) 144v AC motor	(c) 266v AC motor	(d) 230v AC motor	(a)
82	SR relay is				
	a) EM type	(b) EP type	(c) latching type	(d) electronic type	(a)
83	Total no. of notches in EMU				
	a) 11	(b) 22	(c) 20	(d) None of the above	(b)
84	No of jumpers in MMTS EMU				
	a) 5	(b) 4	(c) 10	(d) 8	(a)
85	Electrolyte used in a Lead acid battery is				
	a) Concentrated sulphuric acid	(b) Diluted sulphuric acid	(c) Nitric acid	(d) Hydro chloric acid	(b)
86	The rating of HRC fuse for control circuit is				
	a) 50A	(b) 32A	(c) 63A	(d) 10A	(b)
87	ARR stands for:				
	a) Air Reset Relay	(b) ABB Reset Relay	(c) ABB act Relay	(d) None of the above	(b)
88	CBAR stands for:				
	a) Current Balancing Auxiliary Relay	(b) Current Balancing Air Relay	(c) Current Breaking Auxiliary Relay	(d) Current Breaking Air Relay	(a)
89	The following is not a safety item				
	a) ACP	(b) Head light	(c) Flasher Light	(d) Spot light	(d)
90	Rating of OLP relay is				
	a) 100A	(b) 100V	(c) 160A	(d) 160V	(c)

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	When earth fault occurs in Auxiliary compressor the following will trip				
	a) ABB	(b) EFRA II	(c) MCB	(d) EFRP	(c)
92	Battery used in EMU is				
	a) Ni-Cd Cell	(b) Lead acid cell	(c) Dry cell	(d) Edison cell	(b)
93	Location of PB relay is				
	a) HT Room	(b) LT Room	(c) In relay panel	(d) in rectifier cubic	(b)
94	If BP pressure is less than 4 kg/cm.sq, SR will not pick up through which governor				
	a) Aux. Comp governor	(b) Equipment governor	(c) Control Governor	(d) Main compressor Governor	(c)
95	DMH is a part of				
	a) Break controller	(b) Master controller	(c) Guard brake	(d) BL box	(b)
96	Breather is a part of				
	a) Transformer	(b) Traction motor	(c) VCB	(d) Main compressor	(a)
97	Silica gel is used				
	a) To lubricate Bearing of TM	(b) to cool Transformer oil	(c) To absorb moisture	(d) to lubricate servo motor piston	(c)
98	CBAR will trip only when				
	a) One bridge fuse blown	(b) Two bridges fuse blown	(c) For both a & b	(d) Rectifier Fan not working	(b)
99	To operate EAS, which of the following key is required?				
	a) BL key	(b) Reverser key	(c) BIV key	(d) No key is required	(b)
100	Location of control governor of EMU is in				
	a) HT Room	(b) LT Room	(c) Cab	(d) Near to	(c)

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				main compressor	
101.	Tap changer contactor auxiliary interlock gap is				
	a) 2 - 4 mm	(b) 1 - 2 mm	(c) 2.4-3.2 mm	(d) 1.4-2.2 mm	(c)
102.	SR Relay				
	a) Can be packed only up to shunt power	(b) can be packed only on Emergency	(c) Should not be packed	(d) can be packed up to half power	(c)
103.	Pick up voltage of LTR is				
	a) 70 V	(b) 100 V	(c) 110 V	(d) 120 V	(a)
104.	Buchholz relay is to protect				
	a) Transformer	(b) Traction motor	(c) Main Rectifier	(d) MCP	(a)
105.	When AWS is switched ON only notches will come upto				
	a) Shunt	(b) Half power	(c) Full power	(d) No notches	(a)
106.	Location of PB governor is				
	a) LT Room	(b) HT Room	(c) Trailer Coach 'C'	(d) Motor coach or Trailer Coach 'D'	(d)
107.	PRV is to protect				
	a) TM	(b) Transformer	(c) Main compressor	(d) Rectifier	(b)
108.	Size of cable used in control circuit is				
	a) 3 Sq.mm	(b) 10 sq.mm	(c) 25 sq.mm	(d) 50 sq.mm	(a)
109.	BP Pressure in EMU coach				
	a) 5 Kg/cm ²	b) 6 Kg/cm ²	c) 4 Kg/cm ²	d) 7 Kg/cm ²	(a)
110.	Main Compressor Governor Cut out pressure				
	a) 6 Kg/cm ²	b) 6.3 Kg/cm ²	c) 7 Kg/cm ²	d) 7.5 Kg/cm ²	(c)

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	Main Compressor Governor Cut in pressure				
	a) 6 Kg/cm ²	b) 6.3 Kg/cm ²	c) 7 Kg/cm ²	d) 7.5 Kg/cm ²	(a)
112.	Main Reservoir Safety valve setting				
	a) 6.75 Kg/cm ²	b) 8 Kg/cm ²	c) 7.75 Kg/cm ²	d) 7 Kg/cm ²	(c)
113.	Panto raising time				
	a) 6-10 Sec	b) 8-10 Sec	c) 7-10 Sec	d) 7-12 Sec	(a)
114.	Which oil is to be added in ELGI Make Auxiliary Compressor.				
	a) SAE 40	b) SAE 150	c) SP 100	d) SP 68	(d)
115.	Number of Pantograph mounting Insulators				
	a) 4 Nos.	b) 5 Nos.	c) 6 Nos.	d) 8 Nos.	(a)
116.	DMH Brakes will be apply through				
	a) VEPT Valve	b) Pilot Valve	c) Duplex Check Valve	d) Levelling Valve	(b)
117.	Wheel to Wheel Distance in mm on EMU Bogies				
	a) 1600 mm	b) 1575 mm	c) 1625 mm	d) 1550 mm	(a)
118.	Secondary Suspension in MMTS EMU is				
	a) Helical Spring	b) Air Suspension	c) Bolster Frame	d) Dash Pot	(b)
119.	Ultrasonic Test is carried out to detect				
	a) Oil Leakages	b) Cracks	c) Temperatures	d) None of these	(b)
120.	New EMU Brake block size in mm				
	a) 46	b) 47	c) 48	d) 49	(d)
121.	No. of Brake cylinders available in EMU 'C' Coach				
	a) 6	b) 7	c) 8	d) 9	(c)
122.	Lubricant used in EMU Traction Motor Gear Case :				
	a) Servo Coat 170 T	b) SS 68	c) RR3	d) SP-100	(a)
123.	Transformer Oil is cooled by				
	a) Rectifier Motor	b) Radiator	c) Oil Pump Motor	d) MCP	(b)
124.	Total battery voltage in EMU				

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	a) 90 V	b) 80 V	c) 100 V	d) 110 V	(d)
125	No. of bridges in EMU rectifier				
	a) 4	b) 2	c) 1	d) 3	(d)
126	Type of Brake Cylinder in EMU Coaches				
	a) JSL 203 mm	b) LD2	c) KBR VIII C1	d) ESBC III m	(a)
127	Parking brake cylinders are fitted on which wheel				
	a) 1-4-5-8	b) 2-3-6-7	c) 2-4-6-8	d) 1-3-5-7	(a)
128	ICF Type wiper servomotor wiping angle is				
	a) 45°	b) 60°	c) 75°	d) 90°	(b)
129	Additional limiting valve output pressure in TC				
	a) 1.6 Kg/cm ²	b) 3.5 Kg/cm ²	c) 1.2 Kg/cm ²	d) 2.5 Kg/cm ²	(c)
130	No. of Positions in brake controller				
	a) 5	b) 6	c) 7	d) 8	(a)
131	Which pressure is dropped while applying the guard emergency brake				
	a) MR pressure	b) BP Pressure	c) BC pressure	d) AR Pressure	(b)
132	BP created from which valve				
	a) EDV	b) BIV	c) PRV	d) LV	(c)
133	Brake cylinder maximum piston stroke (TC) in mm				
	a) 40	b) 50	c) 60	d) 90	(a)
134	The parking brake cylinders are available in which MMTS coach :				
	a) Coach 'B'	b) Coach 'C'	c) Coach 'D'	d) a or c	(d)
135	The number of brush holders in EMU traction motor are :				
	a) 1	b) 2	c) 3	d) 4	(d)
136	The number of teeth on bull gear of wheel set :				
	a) 20	b) 71	c) 91	d) 51	(c)
137	Cross sectional area of CHT cable used in EMU/MEMU is.				
	a) 90 sq.mm	b) 120 sq.mm	c) 100 sq.mm	d) 140 sq.mm	(b)
138	Number of interpoles used in TM 4601 BX is				

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	a) 4	b) 2	c) 6	d) 8	(a)
139	Number of pull rod holes in EMU is				
	a) 4	b) 5	c) 6	d) 3	(a)
140	Number of pull rod holes in MEMU is				
	a) 4	b) 5	c) 6	d) 3	(b)
141	HRC fuses for protecting the battery is rated at				
	a) 100 A	b) 120A	c) 70 A	d) 80A	(d)
142	MCB rating for oil pump is				
	a) 10 A	b) 15 A	c) 5 A	d) None of these	(b)
143	HRC fuse rating of static battery charger				
	a) 16 A	b) 5 A	c) 32 A	d) 10 A	(c)
144	MCB rating for radiator fan				
	a) 10 A	b) 5 A	c) 15 A	d) 10 A	(b)
145	MCB rating for rectifier fan				
	a) 10 A	b) 5 A	c) 15 A	d) 10 A	(a)
146	Oil pump has a capacity of				
	a) 1 H.P	b) 1.5 HP	c) 0.5 H.P	d) 2 H.P	(b)
147	Rectifier fan has a capacity of				
	a) 1 H.P	b) 1.5 HP	c) 0.5 H.P	d) 2 H.P	(a)
148	Radiator fan has a capacity of				
	a) 1 H.P	b) 1.5 HP	c) 0.5 H.P	d) 2 H.P	(c)
149	Displacement in LPM of auxiliary/baby compressor is				
	a) 100	b) 150	c) 200	d) 250	(b)
150	How many cylinders are there in Main compressor (LP and HP)?				
	a) 1	b) 2	c) 3	d) 4	(c)
151	MCB for protecting LTR is rated at				
	a) 15 A	b) 30 A	c) 5 A	d) 2.5 A	(d)
152	HRC fuse for the protection of Auxilliary rectifier is rated at				
	a) 120 A	b) 100 A	c) 80 A	d) 160 A	(b)

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153	MCB protection for baby compressor is rated at	a) 10 A	b) 15 A	c) 16 A	d) 32 A	(b)
154	HRC fuse for the protection of Main Compressor is rated at	a) 120 A	b) 100 A	c) 80 A	d) 160 A	(d)
155	Lubricating oil used for Kirloskar make main compressor 3HC-55	a) SS-68	b) SAE 120	c) SS-100	d) SAE 150	(a)
156	Pick Up voltage for LTR is	a) 55 V AC	b) 55 V DC	c) 70 V AC	d) 70 V DC	(c)
157	Pick Up voltage of SR is	a) 55 V AC	b) 55 V DC	c) 70 V AC	d) 70 V DC	(b)
158	CLR pick up current is	a) 500 A	b) 425 A	c) 600 A	d) 400 A	(a)
159	CLR drop out current value is	a) 500 A	b) 425 A	c) 600 A	d) 400 A	(b)
160	Pick Up voltage value of OVR is	a) 500 V	b) 425 V	c) 540 V	d) 400 V	(c)
161	TTR relay will pickup when interlock of TTS is	a) Opened	b) Closed	c) No I/L is used	d) None of these	(b)
162	RFAR relay will pick up if RFR Airflow interlock is	a) Opened	b) Closed	c) No I/L is used	d) None of these	(b)
163	Setting of Limiting valve in EP unit is	a) 1.2 kg/sq.cm	b) 1.6 kg/sq.cm	c) 1.8 kg/sq.cm	d) 3.5 kg/sq.cm	(d)
164	Working pressure of Parking Brake is	a) 5 kg/sq.cm	b) 1.6 kg/sq.cm	c) 1.8 kg/sq.cm	d) 3.5 kg/sq.cm	(a)
165	When the Parking brake is applied ,the pressure in PB cylinder is	a) 5 kg/sq.cm	b) 1.6 kg/sq.cm	c) 0 kg/sq.cm	d) 3.5 kg/sq.cm	(c)
166	Total length of brake hanger is	a) 400 mm	b) 190 mm	c) 590 mm	d) 500 mm	(c)

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167	The rating of HRC fuse used for the Main Rectifier is				
	a) 500 A	b) 250 A	c) 100 A	d) 300 A	(a)
168	The resistance used for providing weak field modification is				
	a) 0.027 Ohms	b) 0.564 Ohms	c) 0.891 Ohms	d) 0.091 Ohms	(a)
169	MCB rating for Master controller is				
	a) 10 A	b) 15 A	c) 16 A	d) 32 A	(b)
170	When MPT is moved into Shunt Position which wire No gets supply				
	a) 1	b) 2	c) 3	d) 4	(a)
171	When MPT is moved into Half Power Position which wire No gets supply				
	a) 1	b) 2	c) 3	d) 4	(b)
172	When MPT is moved into Full Power Position which wire No gets supply				
	a) 1	b) 2	c) 3	d) 4	(c)
173	When MPT is moved into Weak field which wire No gets supply				
	a) 1	b) 2	c) 3	d) 4	(d)
174	Safety valve of Main compressor is set at				
	a) 7 kg/sq.cm	b) 6 kg/sq.cm	c) 8 kg/sq.cm	d) 5 kg/sq.cm	(c)
175	Pressure build up time for auxiliary compressor is approx.				
	a) 6 mins	b) 7 mins	c) 12 mins	d) 8 mins	(c)
176	Capacity of Equalising reservoir is				
	a) 9 L	b) 10 L	c) 20 L	d) 15 L	(a)
177	Capacity of Air suspension reservoir is				
	a) 200 L	b) 150 L	c) 250 L	d) 100 L	(b)
178	In Puppet valve, A&B are called _____ ports				
	a) Equalising	b) Limiting	c) Charging	d) Discharging	(c)
179	In Puppet valve, C&D are called _____ ports				
	a) Equalising	b) Limiting	c) Charging	d) Discharging	(d)
180	Parking Brake reservoir capacity is				

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	a) 9 L	b) 10 L	c) 20 L	d) 15 L	(a)
181	Horn reservoir capacity is				
	a) 9 L	b) 10 L	c) 20 L	d) 15 L	(a)
182	Capacity of Air suspension supplementary reservoir is				
	a) 9 L	b) 10 L	c) 20 L	d) 15 L	(c)
183	EP Unit has how many ports				
	a) 4	b) 6	c) 5	d) 3	(c)
184	BC pressure in Trailer Coach of MEMU is				
	a) 1.2 kg/sq.cm	b) 1.6 kg/sq.cm	c) 3.2 kg/sq.cm	d) 1.8 kg/sq.cm	(d)
185	How many number of Brake Cylinders are available in MEMU TC Bogie				
	a) 4	b) 2	c) 8	d) 6	(b)
186	How many number of Brake Cylinders are available in EMU TC Bogie				
	a) 4	b) 6	c) 5	d) 3	(a)
187	What is the size of Brake Cylinder used in EMU?				
	a) 210 mm	b) 203 mm	c) 240 mm	d) 520 mm	(b)
188	In TC how many MR Reservoirs of 150L are available?				
	a) 1	b) 2	c) 3	d) 4	(b)
189	In DMH brake, entire BP is exhausted through which valve?				
	a) Pilot valve	b) Equalising discharge Valve	c) Triple valve	d) Emergency brake Valve	(d)
190	Application Magnet valve gets supply from which wire ?				
	a) 36	b) 37	c) 38	d) 39	(c)
191	Holding Magnet valve gets supply from which wire ?				
	a) 36	b) 37	c) 38	d) 39	(b)
192	In emergency brake, which ports are in open position in puppet valve?				
	a) A&B	b) A&C	c) B&D	d) C&D	(d)
193	In emergency brake, which ports are in closed position in puppet valve?				
	a) A&B	b) A&C	c) B&D	d) C&D	(a)
194	In EP position , which ports are in closed condition in puppet valve?				

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	a) A&B	b) A&C	c) B&D	d)C&D	(d)
195	In EP position , which ports are in open condition in puppet valve?				
	a) A&B	b) A&C	c) B&D	d)C&D	(a)
196	In Auto position which ports are in open condition in puppet valve?				
	a) A	b) B	c) C	d)D	(c)
197	In LAP position which ports are in open condition?				
	a) A	b) B	c) C	d)None of these	(d)
198	Capacity of pantograph reservoir is				
	a) 90 L	b) 100 L	c) 120 L	d) 150 L	(a)
199	Dropping reactor will be in power circuit upto which notch?				
	a) 9	b) 10	c) 11	d) 12	(b)
200	Forward and Reverse direction of TM is controlled through which wires?				
	a) 1&2	b) 1&3	c) 3&4	d) 5&6	(d)
201	Traction Ammeter is connected to which TMs?				
	a) 1&2	b) 1&3	c) 3&4	d) 5&6	(b)
202	Length of wearing strip of Pantograph is				
	a) 1000 mm	b) 1220 mm	c) 1026 mm	d) 1050 mm	(c)
203	Minimum pressure required for raising the pantograph is				
	a) 6 kg/sq.cm	b) 4.5 kg/sq.cm	c) 5 kg/sq.cm	d) 7 kg/sq.cm	(b)
204	New length of Panto graph strip is				
	a) 12 mm	b) 17 mm	c) 3.5 mm	d) 15 mm	(b)
205	Contact force of Pantograph to OHE is				
	a) 10 kg	b) 7 kg	c) 8 kg	d) 12 kg	(b)
206	Maximum rated voltage of VCB				
	a) 30 KV	b) 25 KV	c) 35 KV	d) 50 KV	(a)
207	Type of Insulation used in CHT Cable is				
	a) PE	b) XLPE	c) PVC	d) Vulcanised Rubber	(b)
208	Primary Current in Transformer				
	a) 10 A	b) 20 A	c) 30 A	d) 40 A	(d)
209	Total Voltage from Tapped winding is				
	a) 400 V	b) 358 V	c) 341 V	d) 391 V	(d)
210	Total Voltage from Untapped winding is				

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	a) 400 V	b) 358 V	c) 341 V	d) 391 V	(d)
211.	RTL and PFD is cooled using				
	a) Transformer oil	b) Rectifier fan	c) Natural air	d) None of these	(c)
212.	Minimum pressure required for working of Tapchanger is				
	a) 4 kg/sq.cm	b) 4.5 kg/sq.cm	c) 3.16 kg/sq.cm	d) 5 kg/sq.cm	(c)
213.	Rated Continuous Current of tapchanger is				
	a) 1300 A AC	b) 1000 A AC	c) 500 A AC	d) 750 A AC	(a)
214.	Rated Voltage of Motor Contactors is				
	a) 1300 V	b) 1500 V	c) 500 V	d) 1000 V	(b)
215.	Which of these relays acting cause VCB to trip?				
	a) TTR	b) CBAR	c) PRV	d) RFAR	(c)
216.	Which of these relays cause motor contactors to open?				
	a) EFRA - II	b) OLP	c) PRV	d) RFAR	(d)
217.	TSS is kept in TEST position during which instance?				
	a) HT Test	b) LT Test	c) Running	d) None of these	(b)
218.	The train is said to be running in half power between ____ & ____ notches				
	a) 1&13	b) 3&10	c) 3&12	d) 13&22	(c)
219.	TL is said to be in service during _____ notches				
	a) Even	b) Odd	c) All	d) None of these	(b)
220.	The order of closing of tapping contactors in 1 st Notch is				
	a) T9, T7, T1	b) T9, T8, T1	c) T2, T9, T7	d) T1, T8, T9	(a)
221.	Closing of EPIC cock would result in _____ brake not working				
	a) Auto	b) Emergency	c) DMH	d) EP	(d)
222.	Closing of AIC cock would result in _____ brake not working				
	a) Auto	b) Emergency	c) DMH	d) EP	(a)
223.	Pressure from baby compressor is used for which operation?				
	a) Brake Application	b) Horns	c) VCB closing	d) None of these	(c)
224.	Power Rating of Baby Compressor is				
	a) 1 HP	b) 1.5 HP	c) 0.5 HP	d) 2 HP	(a)

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	First Stage pressure of Main Compressor is				
	a) 4 kg/sq.cm	b) 3.2 kg/ sq.cm	c) 5 kg/sq.cm	d) 5.5 kg/sq.cm	(b)
226	The relative humidity of air at the outlet of Air drier should be approx.				
	a) <45%	b) <10%	c) <25%	d) <35%	(d)
227	Reducing valve in Brake controller reduces pressure from __ kg/sq.cm to __				
	a) 6,4	b) 5,3.5	c) 7,5	d) 6,3	(c)
228	Self lapping mechanism is used in ____ Brake				
	a) Auto	b) Emergency	c) DMH	d) EP	(d)
229	Pressure in top and bottom chambers of Triple Valve is				
	a) 4 kg/sq.cm	b) 3.2 kg/ sq.cm	c) 5 kg/sq.cm	d) 5.5 kg/sq.cm	(c)
230	MCB for EP unit is rated at ____				
	a) 4 A	b) 5 A	c) 10 A	d) 15 A	(b)
231	Which cock needs to be closed if we need to isolate braking in one bogie?				
	a) AIC	b) BIC	c) EPIC	d) CIC	(b)
232	Parking Brake is found in which coach for units from 21 to 32?				
	a) B Coach	b) C Coach	c) D Coach	d) None of these	(a)
233	How many supplementary air suspension cylinder is present in one bogie?				
	a) 1	b) 2	c) 3	d) 4	(b)
234	Control governor monitors which pressure?				
	a) MR	b) BP	c) PB	d) None of these	(b)
235	Ideal brake power applied on coach is approx ____% of tare weight				
	a) 10	b) 20	c) 30	d) 40	(d)
236	Auxiliary rectifier is used to feed				
	a) Baby Compressor	b) Traction Motor	c) Main Compressor	d) None of the above	(c)
237	Static battery Charger output is				
	a) 90 V DC	b) 266 V AC	c) 110 V DC	d) 266 V DC	(c)
238	Auxiliary Circuit 1 main fuse rating is				
	a) 100 A	b) 50 A	c) 16 A	d) 150 A	(b)

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	Malfunctioning of Oil pump would result in acting of which relay?				
	a) NVR	b) LTR	c) RFAR	d) TTR	(d)
240	MCB for protecting NVR is rated at				
	a) 5 A	b) 10 A	c) 15 A	d) 30 A	(a)
241	Malfunctioning of NVR would result in ____ relay not picking up.				
	a) LTR	b) RFAR	c) SR	d) ABR	(c)
242	Current rating of Oil Pump motor is				
	a) 10 A	b) 5 A	c) 7 A	d) 15 A	(c)
243	Capacitor rating of Oil Pump is rated at				
	a) 10 mFD	b) 40 mFD	c) 30 mFD	d) 50 mFD	(b)
244	Choke tank houses				
	a) RTL, PFD, TL	b) SL, PFD, DL	c) SL, TL, DL	d) RTL, DL, PFD	(c)
245	Choke tank is cooled by				
	a) Transformer Oil	b) Forced Air	c) Natural Air	d) None of these	(a)
246	Rectifier fan should work when ____ relay is energised				
	a) TTR	b) ABR	c) ARR	d) CR	(b)
247	Current rating of Rectifier fan motor is				
	a) 10 A	b) 4.5 A	c) 7 A	d) 15 A	(b)
248	Capacitor of Rectifier fan is rated at				
	a) 40 mFD	b) 10 mFD	c) 30 mFD	d) 50 mFD	(a)
249	Rectifier fan inlet is located at				
	a) LT room	b) Under truck	c) HT room	d) Driving Cab	(c)
250	Current rating of Radiator fan is				
	a) 10 A	b) 4.5 A	c) 7 A	d) 2.5 A	(d)
251	Radiator fans not working would result in acting of ____				
	a) RFAR	b) TTR	c) CBAR	d) SR	(b)
252	Capacitor used for Radiator fan is rated at				
	a) 20 mFD	b) 40 mFD	c) 30 mFD	d) 50 mFD	(a)
253	MCB rating of Battery charge is rated at				

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	a) 10 A	b) 25 A	c) 35 A	d) 50 A	(c)
254	Battery Charger is located at				
	a) HT room	b) LT room	c) Under truck	d) Driving cab	(b)
255	Brake Application relay in EMU is located at				
	a) HT room	b) LT room	c) Under truck	d) Driving cab	(b)
256	Fully Charged Battery will have specific gravity of				
	a) 1260	b) 1100	c) 1250	d) 1220	(c)
257	Fully discharged battery will have specific gravity of				
	a) 1260	b) 1100	c) 1280	d) 1220	(b)
258	Each cell in battery will produce __ volts				
	a) 1.2 V	b) 2 V	c) 1.5 V	d) 2.2 V	(d)
259	Contactor used for Auxiliary Compressor is				
	a) CC2	b) CC1	c) NL1	d) FC1	(a)
260	The switch for getting battery feed from other MC is				
	a) CC1	b) CCOS	c) CC2	d) None of these	(b)
261	MCB for protecting the battery voltmeter is rated at				
	a) 10 A	b) 5 A	c) 2.5 A	d) 15 A	(c)
262	Battery Charger failure will result in the glowing of _____ Lamp				
	a) MSTWL	b) PFD	c) VCB OFF	d) BCFR	(d)
263	ASR is located at				
	a) HT Room	b) LT room	c) Inside Compressor	d) Under truck near 2 to main rectifier	(d)
264	Controlling relay of Main Compressor is				
	a) ABR	b) LTR	c) CR	d) ARR	(c)
265	CR is _____ type relay				
	a) Latched type	b) Non Latched	c) Mechanically actuated	d) None of these	(a)
266	Main Contact gap of CC1 contactor is				
	a) 3.5 - 4.13 mm	b) 6.15 - 7.35 mm	c) 4.33 - 6.23 mm	d) 6.23 mm - 8 mm	(b)

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Synchronous MCB for Main compressor is rated at

- a) 5 A b) 10 A c) 2.5 A d) 15 A (c)

268 Main Compressor is controlled by wire number

- a) 10 b) 11 c) 12 d) 13 (d)

269 OHE line voltmeter is connected to _____ circuit

- a) Primary b) Auxiliary I c) Auxiliary II d) None of these (c)

270 OHE Line voltmeter is protected by MCB of

- a) 10 A b) 2.5 A c) 5 A d) 15 A (b)

271 Fans power circuit is protected by HRC fuse of

- a) 16 A b) 32 A c) 63 A d) 20 A (c)

272 Lights Power circuit is protected by HRC fuse of

- a) 16 A b) 32 A c) 63 A d) 20 A (c)

273 Main Contactor gap of light contactor is

- a) 4.13 mm b) 7.35 mm c) 6.23 mm d) 10.30 mm (d)

274 Which of the following is a current operated relay?

- a) RFAR b) OVR c) OLP d) NVR (c)

275 Which of the following is a voltage operated relay?

- a) LTR b) OL1 & OL2 c) OLP d) CLR (a)

276 Which of the following is neither current nor voltage operated relay?

- a) LTR b) TTR c) CR d) SR (b)

277 Earth fault in Auxiliary II circuit will result in

- a) EFRP b) EFRA - II c) CBAR d) SR (b)

278 EFRA - II acting would result in tripping of

- a) Main Compressor b) Motor contactor c) VCB d) SR (c)

279 OLP is connected across

- a) Primary winding b) Tapped winding c) Aux - 1 d) Aux 2 (a)

280 The location of OLP/EFRP is at

- a) HT room b) Relay panel bottom c) LT room d) Driving cab (b)

281 Coil resistance of OLP/EFRP at 20 degree Celsius is

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	a) 100 Ohms	b) 150 Ohms	c) 173 Ohms	d) 196 Ohms	(d)
282	OLP/EFRP, if acted should be reset only _____				
	a) Once	b) twice	c) Thrice	d) Should not be reset	(a)
283	OL 5 & OL 6 is located in				
	a) Tap Changer box	b) Switch Group -1	c) Switch group -2	d) HT room	(a)
284	Slow and fast buds for releasing gases in transformer is located at				
	a) LT room	b) Relay panel bottom	c) HT room	d) Driving cab	(c)
285	Which of these relays will cause VCB to trip?				
	a) OL 1&2	b) OL 3&4	c) OL 1& 3	d) OL5 & 6	(d)
286	EFRP pick up is set at				
	a) 160 V AC	b) 100 V DC	c) 50 V DC	d) 160 V DC	(c)
287	Wire which controls the raising the Pantograph is				
	a) 5	b) 6	c) 7	d) 8	(c)
288	Wire which controls the lowering of Pantograph is				
	a) 5	b) 6	c) 7	d) 8	(d)
289	Which of these should be in open condition in order for SR to pick up?				
	a) Tap Contactors	b) Motor Contactors	c) Negative Contactors	d) None of these	(a)
290	Pick Up voltage of SR is rated at				
	a) 110 V DC	b) 110 VAC	c) 55 V DC	d) 55 V AC	(c)
291	SR is located at				
	a) HT room	b) Relay panel	c) LT room	d) Driving Cab	(b)
292	RFR is located at				
	a) HT room	b) Relay panel	c) LT room	d) Rectifier cubicle	(d)
293	If any one of the rectifier branch fuse is blown, then				
	a) VCB will trip	b) Motor Contactors open	c) Indication to driver	d) None of these	(c)
294	Resetting of OLP is done through				
	a) Manual reset	b) OL reset switch	c) Cannot reset	d) None of these	(b)

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	Rating OL1-4 is set at				
	a) 500 A	b) 500 V	c) 900 V	d) 900 A	(d)
296	CLR 1 is located at				
	a) Switch Group 1	b) Relay panel	c) LT room	d) Rectifier cubicle	(a)
297	CLR 2 is connected in series to TM no				
	a) 1	b) 2	c) 3	d) 4	(c)
298	CLR energisation will result in				
	a) VCB tripping	b) Application of brake	c) Further notches not responding	d) Motor contactors open	(c)
299	OVR is located in				
	a) Switch Group 1	b) Relay panel	c) LT room	d) Switch Group 2	(d)
300	AOVR is located in				
	a) Switch Group 1	b) Relay panel	c) LT room	d) Switch Group 2	(a)
301	Which of the following is a latching type relay?				
	a) TTR	b) CBAR	c) ABR	d) ARR	(c)
302	Governor bypass switches are located in				
	a) HT Room	b) LT room	c) Cab	d) None of these	(b)
303	How many pilot lamps are provided in the driver desk indication lamp?				
	a) 16	b) 14	c) 15	d) 20	(a)
304	Which of the lamps will glow if TTR is energized?				
	a) UFL	b) PFD	c) VCB off	d) MSTL	(a)
305	UFL lamp is located at				
	a) Driver and Guard side outside the MC	b) Near the headlight	c) Near Flasher Light	d) None of these	(a)
306	SPM will NOT indicate the following value				
	a) OHE Voltage	b) Speed	c) Distance	d) MR Pressure	(d)
307	Pulse generator for speed measurement is attached in wheel no				
	a) 2	b) 1	c) 4	d) 5	(b)
308	The number of pulses for one wheel axle rotation is given by				
	a) 180	b) 360	c) 60	d) 120	(c)
309	The variation in speed shown in different MCs of one rake is due to incorrect value of				
	a) Wheel diameter	b) Time	c) Memory card issue	d) None of these	(a)

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	Air Pressure inside the Air suspension bellow is				
	a) 8 kg/sq.cm	b) 6 kg/sq.cm	c) 5 kg/sq.cm	d) 7 kg/sq.cm	(d)
311.	The minimum permissible flange thickness is given by				
	a) 29.4 mm	b) 22 mm	c) 18 mm	d) 20 mm	(b)
312.	Primary Suspension has ___ helical springs in One bogie				
	a) 2	b) 4	c) 6	d) 8	(d)
313.	Vertical load of Bogie is carried by				
	a) Side bearers	b) Centre Pivot	c) Helical springs	d) None of these	(a)
314.	Horizontal and braking force is carried by				
	a) Side bearers	b) Centre Pivot	c) Helical springs	d) None of these	(b)
315.	Signal bell is protected with MCB with rating of				
	a) 5 A	b) 10 A	c) 2.5 A	d) None of these	(c)
316.	Bolster to Bogie frame clearance in MEMU Motor coach is				
	a) 30+/- 6mm	b) 28+/- 6mm	c) 24+/- 5mm	d) None of these	(c)
317.	Bogie frame to body bolster clearance (min) in MEMU MC is				
	a) 143 mm	b) 100 mm	c) 110 mm	d) None of these	(a)
318.	Bolster to Bogie frame clearance in EMU Motor coach is				
	a) 40+/- 5mm	b) 28+/- 6mm	c) 24+/- 6mm	d) None of these	(a)
319.	Axle crown clearance for MEMU MC is				
	a) 30+/- 6mm	b) 28+/- 6mm	c) 24+/- 6mm	d) None of these	(b)
320.	Axle crown clearance in MEMU TC is				
	a) 30+/- 6mm	b) 33+/- 6mm	c) 42+/- 6mm	d) None of these	(b)
321.	Bolster to Bogie frame clearance in MEMU TC is				
	a) 40+/- 5mm	b) 48+/- 5mm	c) 31+/- 5mm	d) None of these	(c)
322.	Bogie frame to Body Bolster clearance in MEMU TC is				
	a) 143 mm	b) 100 mm	c) 131 mm	d) None of these	(c)
323.	Axle crown clearance for EMU TC is				
	a) 30+/- 6mm	b) 28+/- 6mm	c) 44+/- 6mm	d) None of these	(c)

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	Bolster to Bogie frame clearance of EMU TC is				
	a) 30+/- 5mm	b) 40+/- 5mm	c) 24+/- 5mm	d) None of these	(b)
325	Bogie frame to Body Bolster clearance in EMU TC is				
	a) 97 mm	b) 100 mm	c) 131 mm	d) None of these	(a)
326	5 th jumper of EMU is maintained for the purpose of				
	a) Fans and Lights	b) Motor Control	c) PAS	d) Control circuit	(c)
327	Type of motor used in Auxiliary compressor is				
	a) DC Shunt	b) Squirrel cage	c) Synchronous	d) DC series	(d)
328	EMU Motor coach tare weight is approx				
	a) 31.04 tonnes	b) 48.31 mm	c) 63.77 tonnes	d) 56.52 tonnes	(d)
329	EMU trailer coach tare weight is approx				
	a) 31.04 tonnes	b) 48.31 mm	c) 63.77 tonnes	d) 56.52 tonnes	(a)
330	Maximum Operating speed of EMU/MEMU is				
	a) 100 Km/h	b) 90 km/h	c) 120 km/h	d) 110 km/h	(a)
331	Gear Ratio used for speed reduction in EMU/MEMU is				
	a) 20:80	b) 25:100	c) 20:91	d) 23:91	(c)
332	Diameter of a new commutator for TM make 4601 BX is				
	a) 310 mm	b) 325.5 mm	c) 320 mm	d) 300 mm	(b)
333	Condemn diameter of commutator for TM make 4601 BX is				
	a) 310 mm	b) 325.5 mm	c) 320 mm	d) 305 mm	(d)
334	Diameter of a new commutator for TM make C1005 TM is				
	a) 315 mm	b) 335 mm	c) 320 mm	d) 300 mm	(a)
335	Condemn diameter of commutator for TM make C1005 TM is				
	a) 315 mm	b) 335 mm	c) 306 mm	d) 310 mm	(c)
336	Contact gap of master controller is				
	a) 4.32 - 5.3 mm	b) 2.54- 3.18 mm	c) 1.5mm - 3.34mm	d) 3.43 - 4.32 mm	(b)
337	Maximum voltage across that can be taken from the first notch is				

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	a) 90 V	b) 78.2 V	c) 81.5 V	d) 76.2 V	(b)
338	Minimum Closing voltage for LTR is				
	a) 110 V DC	b) 100 V DC	c) 85 V DC	d) 55 V DC	(d)
339	Working voltage for head light is				
	a) 50 V DC	b) 24 V DC	c) 110 V DC	d) 100 V DC	(b)
340	Opening time for AAL make VCB is approx				
	a) <60 ms	b) < 80 ms	c) < 100 ms	d) none of these	(a)
341	Closing time for AAL make VCB is approx.				
	a) <60 ms	b) < 80 ms	c) < 100 ms	d) none of these	(c)
342	Coach height from rail level for EMU is				
	a) 4120 mm	b) 3658 mm	c) 3894 mm	d) none of these	(b)
343	Height from centre line of coupler to floor level for MEMU/EMU is				
	a) 1590 mm	b) 1290 mm	c) 1030 mm	d) none of these	(c)
344	Coach vestibules can be found in				
	a) MEMU	b) EMU	c) MEMU&EMU	d) none of these	(a)
345	Maximum OHE voltage is				
	a) 25 KV	b) 27.5 KV	c) 30 kV	d) none of these	(b)
346	Minimum OHE voltage is				
	a) 25 KV	b) 10KV	c) 17.5 kV	d) none of these	(c)
347	Vendor coach in EMU can be found in coach type				
	a) B	b) C	c) D	d) none of these	(c)
348	First Class coach in EMU can be found in coach type				
	a) B	b) C	c) D	d) none of these	(b)
349	Instrument LED lights in various gauges and meters work with				
	a) 55 V DC	b) 55V AC	c) 110 V AC	d) 110 V DC	(d)
350	The number of relays present behind driver in relay panel is				
	a) 5	b) 10	c) 8	d) 6	(b)

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	MCBs for protection of wire No 1,2,3,5,6 is rated at				
	a) 5 A	b) 10 A	c) 15 A	d) 30 A	(a)
352	Which of the following is governor bypass switch for Equipment Governor?				
	a) GS-1	b) GS-2	c) GS-3	d) GS-4	(a)
353	Which of the following is governor bypass switch for Control Governor?				
	a) GS-1	b) GS-2	c) GS-3	d) GS-4	(b)
354	Which of the following is governor bypass switch for Main Compressor Governor?				
	a) GS-1	b) GS-2	c) GS-3	d) GS-4	(c)
355	Which of the following is governor bypass switch for Baby Compressor Governor?				
	a) GS-1	b) GS-2	c) GS-3	d) GS-4	(d)
356	NR1 & NR2 is located at				
	a) Tap Changer Box	b) Switch Group 1	c) Switch group2	d) LT room	(b)
357	PFD is located under truck at				
	a) LP side	b) Guard side	c) Rear of MC	d) Center	(a)
358	Transformer oil gauge could be found in				
	a) Under truck	b) LT room	c) HT room	d) Driving cab	(c)
359	Silica gel breather is found near to				
	a) Choke tank	b) Transformer tank	c) On roof	d) Conservator tank	(d)
360	Which of the following relays CANNOT be reset using control switch				
	a) OL1&2	b) OLP	c) OL5&6	d) EFRA 2	(d)
361	Which of the following is a transfer contactor				
	a) T1	b) T8	c) T6	d) T3	(b)
362	HRC fuse for protection of PFD is rated at				
	a) 160 A	b) 80 A	c) 100 A	d) 120 A	(b)
363	MCB for protection of CC2 coil is rated at				
	a) 2.5 A	b) 5 A	c) 10 A	d) None of these	(a)
364	MCB for protection of CC1 coil is rated at				
	a) 2.5 A	b) 5 A	c) 10 A	d) None of these	(a)

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	MCB which protects CR set and trip coil is rated at				
	a) 2.5 A	b) 5 A	c) 10 A	d) None of these	(b)
366	MCB for protection of VCB Closing/Holding coil is rated at				
	a) 2.5 A	b) 5 A	c) 10 A	d) None of these	(b)
367	BIS switch is located at				
	a) HT room	b) Driver desk	c) LT room	d) None of these	(c)
368	During LT test TSS is kept in				
	a) Run	b) Test	c) Position doesn't matter	d) None of these	(b)
369	If one battery is defective, battery voltmeter would show voltage of				
	a) 70-80 V	b) 60-70 V	c) 80-90V	d) 0 V	(d)
370	Which of the following relays should not be packed?				
	a) SR	b) LTR	c) CR	d) RFAR	(a)
371	MCB for protection of SSR relay is rated at				
	a) 2.5 A	b) 5 A	c) 10 A	d) None of these	(b)
372	Tap Changing Contactors are of _____ type				
	a) Electro Pneumatic	b) Electro magnetic	c) Hydraulic	d) None of these	(a)
373	Compressor Contactors are of				
	a) Electro Pneumatic	b) Electro magnetic	c) Hydraulic	d) None of these	(b)
374	BP pipe line passes through the _____ side				
	a) LP side	b) Guard Side	c) Centre	d) None of these	(a)
375	MR pipeline passes through the _____ side				
	a) LP side	b) Guard Side	c) Centre	d) None of these	(b)
376	MR pipeline is having a size of				
	a) 1 inch	b) ¾ inch	c) ½ inch	d) None of these	(b)
377	BP pipeline is having a size of				
	a) 1 inch	b) ¾ inch	c) ½ inch	d) None of these	(a)

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

In new coaches (21-32) , pneumatic pipelines are made of

a) SS	b) MS	c) CI	d) PVC	(a)
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Horns and Wipers are fed with an air pressure of

a) 8 kg/sq.cm b) 3.5 kg/sq.cm c) 5 kg/sq.cm d) 7 kg/sq.cm (d)

Which of the following is not a part of brake controller?

a) BIV	b) Puppet Valve	c) Triple valve	d) Equalising discharge valve	(c)
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Which of the following is not part of EP unit?

a) BIV	b) Triple Valve	c)Stabilising valve	d) None of these	(a)
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In which of the following positions of master controller DMH brake will NOT work?

a) OFF	b) Shunt	c) Half power	d) Full power	(a)
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Air drier works with a voltage of _____.

a) 55 VDC	b) 55 V AC	c) 110 V DC	d) 110 V AC	(c)
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The type of bogie used in EMU/MEMU is of _____ type

a) Bo-Bo-Bo	b) Co-Co	c) Bo-Bo	d) None of these	(c)
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Type of brake block used in EMU/MEMU is of

a) Cast Iron	b) Composite	c) Steel	d) None of these	(b)
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Which relay gets energized in the event of train parting on run?

a) RFAR	b) CBAR	c) AFL	d) TTR	(c)
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Oil grade used in main compressor (ELGI make) is

a) SS-68	b) SP-150	c) SAE 30	d) None of these	(b)
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One hour rating of TM make 4601 BX is

a) 227 kw	b) 187 kW	c)250 kW	d) 150 KW	(b)
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Which of the following TM is only used in EMU?

a) 4601 BX	b) 4303 BY	c) C1005 TM	d) None of these	(a)
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To raise the pantograph TSS switch to be kept in _____ position

a) ON	b) OFF	c) RUN	d) TEST	e) (c)
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ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	The current setting of OLP is				
	a) 0.6 A	b) 0.8A	c) 0.7 A	d) 0.75 A	(c)
392	Number of suction & delivery valves available in main compressor of EMU				
	a) 05	b) 07	c) 08	d) 06	(d)
393	The continuous rating of HHP traction motor fitted in MEMU Motor coach is				
	a) 210 KW	b) 220 KW	c) 230 KW	d) 200 KW	(a)
394	Maximum permissible axle load of EMU Motor coach is				
	a) 19 T	b) 21 T	c) 20 T	d) 22 T	(c)
395	Type of Bogies fitted in MEMU Tractor coaches				
	a) HCC	b) Non-HCC	c) DPC	d) Non-DPC	(b)
396	The following Make of VCB is fitted in EMU Motor coaches				
	a) Hind	b) Schneider	c) KPC	d) BHEL	(b)
397	Number of primary suspension Helical springs fitted in one EMU Motor coach				
	a) 08	b) 04	c) 16	d) 12	(c)
398	The capacity of Vertical dampers fitted in EMU Motor coach				
	a) 200 Kgs	b) 300 Kgs	c) 400 Kgs	d) 500 Kgs	(b)
399	The location of battery charger in EMU is				
	a) HT Room	b) LT Room	c) Under frame	d) Drivers cab	(b)
400	Number of brake cylinders available in MEMU Tractor coach				
	a) 08	b) 04	c) 16	d) 12	(b)
401	Which of the following is NOT a feature of 3phase technology?				
	a) Smooth Acceleration	b) Regenerative Brake	c) Wear resistant drives	d) Increased weight	(d)
402	In a 3 Phase EMU rake the leading coach is				
	a) MC	b) TC	c) DTC	d) NDTC	(c)
403	The motor coach in a 3 phase EMU unit is found in				
	a) Both end coaches	b) Middle coach	c) All coaches	d) End Coach	(b)
404	The conversion method from single phase (25KV) to 3 phase is using				
	a) Rotary Converter	b) Phase converters	c) Digital phase converters	d) Rectifier - Inverter	(d)
405	Brake chopper can be found in a 3 phase EMU unit				
	a) Motor Coach	b) Non Driving trailer coach	c) Trailer Coach	d) Driving trailer coach	(a)
406	Which of the following equipments is NOT found in motor coach of a 3 phase EMU unit?				

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	a) Line voltage transformer	b) Auxilliary Converter	c) Main Compressor	d) Line Filter	(c)
407	Type of Pantograph used in 3 Phase EMU is				
	a) AM 12	b) AM - 2881	c) AM 54	d) WBL-22.03	(d)
408	During regenerative braking approx ____ % of energy is fed back into the system in a 3 phase EMU unit				
	a) 35	b) 45	c) 55	d) 75	(a)
409	Wipers in 3phase coaches are _____ operated				
	a) Mechanically	b) Pneumatically	c) Electrically	d) Hydraulic	(c)
410	The auxiliary converter is found in a 3 phase EMU unit				
	a) Driving cab	b) HT Room	c) On roof	d) None of these	(b)
411	Traction converter cubicle is found in which coach in a 3 phase EMU unit?				
	a) Motor Coach	b) Non Driving trailer coach	c) Trailer Coach	d) Driving trailer coach	(a)
412	The cooling of converters is done through in a 3 phase EMU unit				
	a) Water cooled	b) Air cooled	c) Oil cooled	d) None of these	(b)
413	The winding material used in Transformer in a 3 phase EMU unit				
	a) Aluminium	b) Copper Alloy	c) Aluminium alloy	d) Copper	(d)
414	Which of the following factors is used in the design of nose cone in a 3 phase EMU unit?				
	a) Coefficient of Friction	b) Coefficient of Drag	c) Tare weight	d) Wheel Diameter	(b)
415	Maximum system efficiency is designed at a speed of ____ km/hr for 3Phase EMU				
	a) 40 km/hr	b) 90 km/hr	c) 50 km/hr	d) 70 km/hr	(d)
416	DC link voltage in a 3 phase EMU unit is approximately				
	a) 1800 V	b) 800V	c) 2000 V	d) 1000V	(a)
417	In a 3 phase EMU unit Switching frequency for line converter is				
	a) 1000 MHz	b) 800 MHz	c) 500 MHz	d) 300 MHz	(d)
418	Voltage rating of VCB is rated at				
	a) 80 Kv	b) 20 Kv	c) 25 Kv	d) 30 Kv	(d)
419	In a 3 phase EMU unit Switching frequency for motor converter is				
	a) 1000 MHz	b) 800 MHz	c) 500 MHz	d) 300 MHz	(a)
420	Lights in 3 phase coaches are working using _____ supply				
	a) 3 phase	b) single phase	c) DC	d) Battery feed	(b)
421	in a 3 phase EMU unit , BECU stands for				
	a) Brake Emission Control Unit	b) Battery Emission Control unit	c) Brake electronic	d) Battery explosion	(c)

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			control unit	control unit	
422	in a 3 phase EMU unit , TCMS stands for				
	a) Traction Control Management System	b) Traction cable management System	c) Train cable management System	d) Train Control Management System	(d)
423	In a 3 phase EMU unit ,How many GDUs does Line Converter has?				
	a) 4	b) 6	c) 3	d) 8	(a)
424	In a 3 phase EMU unit , GDU Stands for				
	a) Gear Drive Unit	b) Gate drive Unit	c) Gear Detection Unit	d) Gate Division Unit	(b)
425	in a 3 phase EMU unit , How many GDUs does Motor Contactors have?				
	a) 4	b) 3	c) 6	d) 8	(c)
426	System diagnostics is the function of which equipment?				
	a) GDU	b) IGBT	c) BECU	d) TCMS	(d)
427	Initial shocks from track is absorbed by				
	a) Bolster	b) Primary Suspension	c) Secondary Suspension	d) Bogie	(b)
428	Communication between different components in train is facilitated by				
	a) TCMS	b) GDU	c) BECU	d) IGBT	(a)
429	MVB stands for				
	a) Multi Variable Braking	b) Multifunction Vehicle Bus	c) Multiple valued bus	d) None of these	(b)
430	The signaling speed of MVB is				
	a) 4 Mbps	b) 3.5 Mbps	c) 1.5 Mbps	d) 2 Mbps	(c)
431	Data intensive services are carried out through				
	a) MVB	b) BECU	c) IP	d) None of these	(c)
432	The signaling speed of IP is				
	a) 400 Mbps	b) 250 Mbps	c) 100 Mbps	d) 200 Mbps	(c)
433	All diagnostic data passes through				
	a) MVB	b) BECU	c) IP	d) None of these	(c)
434	All control and Operational data passes through				
	a) IP	b) BECU	c) MVB	d) None of these	(a)
435	Which of these is NOT a component of TCMS?				
	a) HMI	b) VCU	c) MVB Coupler	d) None of these	(d)
436	HMI and MCG have _____ Operating System				

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	a) Windows	b) Linux	c) VxWorks	d) Android	(b)
	VCU runs on _____ Operating System				
437	a) Windows	b) Linux	c) VxWorks	d) Android	(c)
438	Which one is having have more priority MVB or IP?				
	a) Depends on situation	b) MVB	c) IP	d) Equal priority	(b)
439	Which of the following doesn't influence the design of bogie				
	a) Max Speed	b) Tare Weight	c) Seat Layout	d) Track guage	(c)
440	Bull gear is fitted on to axle using				
	a) Shrink fitting	b) Oil fitting	c) pin and cotter	d) Single cast	(a)
441	Rating of transformer used in 3 phase EMU is				
	a) 1000 kVA	b) 1250 kVA	c) 1500 kVA	d) None of these	(b)
442	_____ braking is the method of giving back energy to the system during				
	braking				
	a) Auto	b) Economic	c) Electronic	d) Regenerative	(d)
443	Length of earthing should not exceed				
	a) 300 mm	b) 100 mm	c) 500 mm	d) 1000 mm	(c)
444	Cables carrying different phased voltage should always be crossed at an angle of				
	a) 180 degrees	b) 45 degrees	c) 120 degrees	d) 90 degrees	(d)
445	Ventilation system in 3 phase coaches is				
	a) Natural	b) Forced	c) Ventilation is not required	d) None of these	(b)
446	Theoretical braking force as a % of tare weight of coach is approx _____ for 3 phase MC				
	a) 30	b) 40	c) 50	d) 60	(b)
447	Which of the following is not the function of inverter?				
	a) Minimise harmonics to line	b) minimize motor harmonics	c) deliver vvvf to traction motor	d) None of these	(d)
448	Rated Voltage of 3 Phase motor used is				
	a) 535 V	b) 1500 V	c) 940 V	d) 745 V	(c)
449	Rated power of 3 phase motor used in 3 phase EMU is				
	a) 535 kW	b) 150 kW	c) 268 kW	d) 745 kW	(c)
450	How many outputs are there from auxiliary control unit?				

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	a) 1	b) 2	c) 3	d) 4	(c)
	Which of the following is NOT an output from ACU?				
451	a) 3 phase 415 V	b) Single Phase 266 V	c) Single Phase 110 V	d) 110 V DC	(b)
452	ACU is located in				
	a) HT room	b) Drivers Cab	c) On roof	d) Near Traction Motor	(a)
453	Power for Main Compressor in 3 phase EMU is supplied by				
	a) TCMS	b) TCU	c) ACU	d) None of these	(c)
454	Main Compressor in 3 phase EMU works under				
	a) 3 phase 415 V	b) Single Phase 266 V	c) Single Phase 110 V	d) 110 V DC	(a)
455	Proportional reduction of electronic brake when air brake is increased is termed as				
	a) Brake Rigging	b) Brake mixing	c) Brake blending	d) None of these	(c)
456	In 3- Phase EMU the battery box is located in				
	a) MC	b) DTC	c) TC	d) None	(b)
457	CCU in a 3- Phase EMU is located in				
	a) DTC	b) MC	c) NDTC	d) TC	(a)
458	RDM in a 3- Phase EMU stands for				
	a) Random drive mode	b) Roller drive mode	c) Rescue drive mode	d) Rapid drive mode	(c)
459	ADD in a 3- Phase EMU stands for				
	a) Auto drive device	b) Auto door device	c) Auto drop device	d) Auto dent device	(c)
460	ORD in a 3- Phase EMU stands for				
	a) Over rail detection	b) Over road detection	c) Over ring detection	d) Over reach detection	(d)
461	The Official Language Act was passed in the year				
	a) 1964	b) 1963	c) 1965	d) 1962	(b)
462	The Constituent Assembly of India had adopted in Devanagari Script as the Official Language of the Union on				
	a) 14 th Sept 1949	b) 14 th Sept 1950	c) 15 th Sept 1949	d) 15 th Sept 1950	(a)
463	Non-Hindi speaking states comes under which region				
	a) A	b) C	c) B	d) D	(b)

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

	Who is responsible for implementing Hindi in government offices			
	a) Head of the office	b) Employees	c) Clerks	d) Stenos
465	How many members are in parliamentary Committee of Official Language			
	a) 25	b) 20	c) 30	d) 35
466	The state of Madhya pradesh comes under which region			
	a) B	b) A	c) C	d) A&B
467	The state of Andhra pradesh comes under which region			
	a) A	b) C	c) C&D	d) D
468	Govt. servant write notes etc. in Hindi as per which rule of OL Rules 1976			
	a) Rule No.8	b) Rule No. 7	c) Rule No. 6	d) Rule No. 5
469	How many rules are there in OL Rules 1976			
	a) 11	b) 13	c) 12	d) 10
470	What are provision of OL Act, 1963 that are not applicable to Jammu and Kashmir			
	a) 6&7	b) 7&8	c) 6&8	d) 7&9

ESTABLISHMENT, STORES & GENERAL QUESTIONS

A) Objective :

- 1) Chief Electrical Engineer.
- 2) The full form of CESE.
- 3) In computer terminology, LAN stands for
- 4) I.R.S stands for
- 5) On passing of which examination conducted by the Hindi Training Scheme, Personal pay will be given
- 6) Metal Token pass issued to
- 7) Maternity leave can be granted for a maximum
- 8) Maximum LHAP that can be granted at one time
- 9) RDSO stands for
- 10) RDSO located at
- 11) An employee can be deemed suspended, if he is detained in custody for more than
- 12) Railway Board located at
- 13) two minor children may be granted child care leave for a maximum period of
- 14) Rejected saleable scrap should be sent to
- 15) Dismissal is a
- 16) PHOD stands
- 17) PHOD of the Electrical Department .
- 18) During Hospital leave full salary is granted for a period

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

- 19) During Special Disability leave full salary is granted for a period
- 20) Decode COFMOW
- 21) Compulsory retirement is a
- 22) ISO stands for
- 23) EMS stands for
- 24) Paternity leave can be granted for a maximum period
- 25) Periodicity for checking the fire extinguisher
- 26) The term CCA stands for
- 27) may refuse or revoke of any kind of leave.
- 28) LAP can be accumulated up to
- 29) In computer terminology, ID address
- 30) In computer terminology, IP stands for
- 31) In computer terminology, ORACLE is a
- 32) Hospital leave can be granted for a maximum period of
- 33) In computer terminology, LAN stands for .
- 34) I.R.S stands for
- 35) How many languages are recognized by the eighth schedule
- 36) In computer terminology, .ISP is a
- 37) In computer terminology, MB stands for
- 38) In computer terminology, NTFS is a
- 39) In computer terminology, One kilo byte is equal to
- 40) In computer terminology, AGP stands for
- 41) An of a series of words is called acronym.
- 42) In computer is a communication device.
- 43) Censure is a
- 44) House rent allowance for 'X' classified cities is
- 45) House rent allowance for 'Y' classified cities is
- 46) House rent allowance for 'Z' classified cities is
- 47) CAMTECH located at.
- 48) With holding of the Privilege Passes or Privilege ticket order or both is a... ..
- 49) In Computer terminology, RED HAT is related to LINUX
- 50) Reduction to lower stage in time scale of pay by one stage for a period exceeding three year is a

B) QUESTIONS :

- Q.1 What is Honorarium?
- Q.2 What is LDCE?
- Q.3 What is Dearness Allowance?
- Q.4 Which are the allowances are exempted from the income tax?
- Q.5 What are the objectives of PREM?
- Q.6 What is Trade Union Act 1926?

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

1. In 3 phase MEMU, One basic unit consists of
a) MC,TC,TC b) DMC,TC,TC,TC c) DTC,NDTC,MC d) DTC/NDTC,MC,TC
2. In 3 phase MEMU, to maintain constant speed method will be used.
a) RDM mode. b) CRUISE control. c) Special RDM. d) Failure mode.
3. In 3 phase MEMU, holding brake pressure is kg/cm²
a) 1.2 kg/cm² b) 1.6 kg/cm² c) 0.8 kg/cm² d) 1.8 kg/cm²
4. In 3 phase MEMU, horsepower a traction motor is _____ hp.
a) 360 b) 458 c) 460 d) 338
5. In 3 phase MEMU, TM output current is _____ amps. and TM voltage max. _____.
a) 175A,1171V b) 1171A,175V c) 1100A,750V d) 1300A,750V.
6. In 3 phase MEMU, auxiliary motors will get volts supply.
a) 266 single phase AC b) 141 single phase AC c) 415 three phase AC d) DC.
7. In 3 phase MEMU, if any one coach EP brake isolated, the V max will reduce to kmph.
a) 96 kmph b) 15 kmph c) 92 kmph d) 84 kmph.
8. In 3 phase MEMU, if ADD(auto dropping device) acts happens.
a) All MC VCBs will open. b) All pantos will lower. c) Emergency brakes will apply d) Only concern MC panto lower.
9. In 3 phase MEMU, the DC link voltage volts.
a) 1800V b) 1200V c) 800V d) 415V
10. In 3 phase MEMU, parking brakes are provided in coach.
a) DMC. b) LAST TC c) TC-1 d) In all coaches
11. In 3 phase MEMU, maximum no 3 phase auxiliary motors provided in one basic unit are
a) 19 or 21 b) 07 or 09 c) 17 or 19 d) 05 or 07
12. In 3 phase MEMU, if any one coach air suspension failure speed will reduce to kmph.
a) 101 b) 60 c) 105 d) 15
13. In 3 phase MEMU, air suspension Sensors available in .
a) DTC/NDTC,MC b) In all coaches. c) In MC only. d) In DTC/NDTC only.

3 PHASE -EMU BIT BANK

1. In 3 phase EMU, One basic unit consists of _____
a) MC,TC,TC b) MC,TC,TC,TC c) DTC,NDTC,MC d) DTC/NDTC,MC,TC
2. In 3 phase EMU, holding brake pressure is _____ kg/cm²
a) 1.2 kg/cm² b) 1.6 kg/cm² c) 0.8 kg/cm² d) 1.8 kg/cm²

ELECTRICAL MULTIPLE UNIT QUESTION BANK for JE EXAM

3. In 3 phase EMU, TM output current _____ Amps, voltage is _____ volts.
a) 175A,1171V b) 1171A,175V c) 1100A,750V d) 1300A,750V
4. In 3 phase EMU, flasher light, tail lamp, cab emergency lights will get supply from _____
a) BN (battery normal) b) BD (battery direct) c) CHBA d) 1 phase AC
5. In 3 phase EMU, if any one bogie EP brake isolated, the V max will reduce to _____ kmph.
a) 60 kmph b) 15 kmph c) 101 kmph d) 105 kmph.
6. In 3 phase EMU, if ORD (over reaching detector) acts _____ happens.
a) All pantos will lower b) All MC VCBs will open. c) Emergency brakes will apply d) Only concern MC panto lower.
7. In 3 phase EMU, parking brakes are provided in _____ coach.
a) DTC/NDTC. b) MC c) TC. d) In all coaches.
8. In 3 phase EMU, if any one coach air suspension failure speed will reduce to _____ kmph.
a) 101 b) 60 c) 105 d) 15
9. In 3 phase EMU, cross connection of BP and MR pipes lines provided between _____
a) DTC and MC b) MC and TC. c) Two TCs d) TC and NTDC.
10. In 3 phase EMU; individual basic unit can be isolated by _____ and _____
a) DDU, Battery supply switch. b) DDU, BASIC UNIT switch in DTC c) CCU, BASIC UNIT switch in DTC d) CCU, Battery supply switch.
11. In 3 phase EMU, location of auxiliary compressor (APC) _____
a) In DTC under truck. b) In MC under shunting desk. c) In MC in HT compartment. d) In DTC under guard desk.
12. In 3 phase EMU, location of battery box under _____
a) Under DTC/NDTC b) Under MC c) Under TC. d) In HT compartment in MC.
13. In 3 phase EMU, location of transformer oil pump _____
a) Under DTC/NDTC b) Under MC near TFP tank. c) Under TC. d) In HT compartment in MC.
14. In 3 phase EMU, air suspension Sensors available in _____
a) DTC/NDTC,MC b) In all coaches. c) In MC only. d) In DTC/NDTC only

Official Language (Rajbhasha)

Question Bank on Official Language Policy of the union for Departmental Examination

1. What is the official language of the India?
a) Telugu b) Hindi c) Marathi d) Hindi in Devnagari Script
2. In which article of the constitution of India Hindi has been declared as Official Language?
a) Article 120 b) Article 210 c) Article 343 d) 3Article 351
3. As per the provisions of the Constitution of India Official Language Hindi shall be written in which script?
a) Brahmi Script b) Sanskrit Script c) Roman Script d) Devnagari Script
4. Hindi Day is celebrated in India on every year.
a) 10th January b) 26th January c) 15th August d) 14th September
5. Why Hindi Day is celebrated in India on 14th September?
a) Constituent Assembly of India had adopted Hindi as Official Language of India on that day.
b) Ministry of Home Affairs, Department of Official Language had ordered to do so.
c) Railway Board had ordered to do so d) None of the above
6. In which article of the Constitution of India envisages setting up of Official Language Commissions?
a) Article 343 b) Article 344 c) Article 345 d) Article 346
7. If a state does not choose Official Language for itself from the languages spoken in the state what language will be its Official Language?
a) All the languages spoken in the state b) Hindi Language
c) English Language d) None of the above
8. In which article of the constitution of India the duty to promote the spread of the Hindi language assigned to the Union of India?
a) Article 120 b) Article 210 c) Article 343 d) Article 351
9. Which of the following languages not included in the VIII Schedule of the Constitution of India?
a) Chhattisgarhi b) Maithili c) Dogri d) Bodo

10. Who was the Chairman of the 2nd Official Language Commission?
a) Lal Bahadur Shastri b) Guljarilal Nanda c) Smt. Indira Gandhi d) None of the above

11. Union of India is classified into ----- Regions under Official Language Rules
a) A & B Regions a) C & D Regions c) A, B & C Regions d) None of these

12. According to official language rules, under which region Andaman and Nicobar islands come?
a) Region 'A' b) Region 'B' c) Region 'C' d) None of these

13. According to official language rules, which is the only Union territory classified under region 'B'
a) Union territory of Chandigarh b) Union territory of Daman & Diu
c) Pondichery d) None of these

14. What is the official language of Arunachal Pradesh
a) Mizo b) English c) Hindi d) None of these

15. At present how many languages are enlisted in the Eighth schedule of the constitution
a) 20 b) 21 c) 22 d) 23

16. The state of Jarkhand comes under which Region?
a) Region 'A' b) Region 'B' c) Region 'C' d) None of these

17. What is the scheme implemented by Railway Board for doing work in Hindi
a) Rajbhasha individual cash award scheme b) Rajbhasha group cash award scheme
c) Rajbhasha Samman award scheme d) None of these

18. How many Hindi courses are prescribed for central government employees?
a) One b) Two c) Three d) Four

19. Which is the elementary Hindi course prescribed for central government employees?
a) Praveen b) Pragma c) Parangat d) Prabodh

20. What are the Hindi courses prescribed for central government employees

- a) Prabodh & Praveen
- b) Praveen & Pragya
- c) Praveen, Pragya & Parangat
- d) Prabodh, Praveen, Pragya and Parangat

21. Which is the final Hindi course prescribed for Clerical Cadre Employees Of Central Government

- a) Praveen
- b) Pragya
- c) Parangat
- d) Prabodh

22. How many times the regular Hindi exams are conducted in a year?

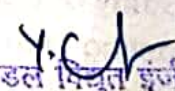
- a) One Time
- b) Two Times
- c) Three Times
- d) Four Times

Syllabus for Promotion as JE in TRS organisation against 20% Promotional Quota.

1. Study of Electricity Ohms law magnetism Flemings R.H Rule, L.H Rule, Lenz's Law, BM Induction Parameters of D.C Circuits, working principles of D.C Machines, Characteristics, Speed Control.
2. Study of Characteristics, Armature, Reaction, Commutation Improvements for commutation and suitability of D.C Series Motor for Traction Duty – Study of Traction Motor used in A.C Locomotives WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU Maintenance, repairs overhaul.
3. A.C Circuits, Parameters of A.C Circuits, Simple calculations, study of power supply arrangements of A.C Traction.
4. Study of current collection in Locos & EMU/MEMU, study of roof equipment's of Locos & EMU/MEMU.
5. Study of Transformer principle, overhaul and maintenance of Transformers, Auto transformers, condition for parallel operation of transformer, study of transformer used in A.C Loco WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU maintenance and overhauling tests to be conducted on the transformer, study of tap changer, operation method for voltage control, Testing of transformer.
6. Study of fuse protectors, switches and isolators, construction and working detail of circuit breaker of WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU
7. Study of various types of contactors and relays, study of relays and contactors used in WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU . Function of blow out coil and arc chutes.
8. Study of Batteries, commissioning (initial charging) maintenance and reclamation and battery charging procedures.
9. Study of Rectification methods, filters, silicon rectifier, smoothening reactor in the Loco & EMU/MEMU. Study of semi-conductor devices, battery charger.
10. Safe working on the Loco & EMU/MEMU precautions to be taken, Fire preventive measures and study of fire-fighting.
11. Study of transmission lines and distribution lines and underground cables. Study of erecting the lines determination of conductor size and re-cabing of Locos & EMU/MEMU.
12. Study of 3-Phase induction motors principle, maintenance and overhauling, study of induction generator, working principles, study of Arno, Aux machines of A.C Loco. Maintenance of 3- Phase traction motors and its cooling arrangement. Speed sensor and temperature sensor of traction motor and their importance in 3- Phase Locos & EMU/MEMU.
13. Study of Earth testing procedure, insulation test for various equipment's and testing of insulators.
14. Study of Power factor and the improvement methods demand and economy in installation of Electrical Energy.

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15. Study of circuit analysis of WAP4/5/7 & WAG5/7/9, Conventional & 3- Phase EMU/MEMU i.e., study of circuits, cabling index and other drawings.
16. Three phase locomotives: Battery charging arrangement in 3-Phase locomotives, Auxiliary power supply and load sharing between BURs during normal condition and during isolation of one BUR. Understanding the working of various contactors associated with Harmonic filter. Understanding of various MCBs provided in HB and SB panels and their importance in trouble shooting various faults.
17. Three phase Locos & EMU/MEMU Pneumatic brake system arrangement.
18. Three phase Locos – protective functions, working of VCD, Failure mode operation, Inching mode operation, constant speed control, Traction Interlock, SR Interlock and Indication of Faults using BPFA & LSFL.
19. Measurements of Resistance, Current voltage, Power study of various types of meters and equipment used, megger, diode tester, ammeter, voltmeter etc. uses of shunts, multipliers.
20. Study of Bogie, wheel arrangements, suspension arrangements and all mechanical features like elements of vibration, oscillation, damping devices, elasticity etc. in Locos & EMU/MEMU
21. Study of sander gear and brake rigging, various types of brake systems in Locos & EMU/MEMU
22. Study of pneumatic circuitry of Locos & EMU/MEMU, Study of various pneumatic valves, braking system.
23. Study of stores and accountal correspondence.
24. Study of maintenance schedules for various equipment's in Locos & EMU/MEMU, its periodicity.
25. Study of Locos & EMU/MEMU testing, engine fitness and trouble-shooting procedures.
26. RDSO modification and SMIs implementation and maintenance of various records.
27. New equipment's in Loco such as MPCS, SIV, VCD and WMUCS and understanding basic features of M/s BHEL Make IGBT locomotives , medha Make EMUs
28. Railway service conduct rules, Pass rules, D&A Rules , Hours of Employment regulations , Payment of wages Act, WC Act
29. Procurement of stores – stocked items and non-stock items-imprest stores, Disposal of unserviceable stores – stock verification.
30. Rules, Regulations & implementation of official language (HINDI).


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