



No. E/ELT/1025/7/1 (INSTRUCTOR-TRO) 376571

मंडल रेल प्रबंधक का कार्यालय
मुंबई सेंट्रल
दिनांक : 02-09-2026

NOTIFICATION/अधिसूचना

Sub: Filling up the Ex-cadre posts of Sr. Instructor-TRO in Level-7 at the Electrical Training Centre(ETC-VR), Electrical Traction Department.

**Ref: 1 Railway Board's Letter No.E(MPP)/2018/3/5 dtd. 19-06-2018(RBE No. 93/2018).
2. Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-05-2019(RBE 79/2019).
3. Railway Board's Letter No. E(MPP)2023/3/6 dtd. 04-09-2023(RBE 104/2023).
4. Railway Board's Letter No.E(NG)1/2018/PM-1/4 dtd 14/11/19 (RBE No.194/2019)**

It is proposed to fill up the following Ex-cadre posts of Sr. Instructor-TRO in Level-7 at the Electrical Training Centre(ETC-VR), Electrical Traction Department through a process of Selection by inviting the applications from the employees working in the category of Chief Loco Inspector(CLI)/Electrical in Level-7 fulfilling the following eligibility criteria:-

1. No of Posts proposed to be filled:

SN	TRAINING CENTRE	NAME OF THE POST	PAY SCALE/LEVEL	NO OF POSTS
1	ETC-VR	Sr. Instructor(TRO)	Rs. 9300-34800+4600 GP, Level-7	2 (Two)

2. Eligibility Condition:

- (a) The applicants should not have crossed the age of 58 years as on the date of Notification.
[Authority : Railway Board's Letter No. E(MPP)2023/3/6 dtd. 04-09-2023 (RBE 104/2023)]
- (b) For the post of Sr.Instructor-TRO in Level-7, CLI/Electrical in Level-7 working on regular basis are Eligible to apply. However, if no CLI in Level-7 applies or qualifies in the written test of Sr.Instructor, then the post will be operated in GP 4200/Level-6 and Loco Pilot(EMU/Passenger) having five years of driving experience and working on regular basis are eligible.
MACPs granted in Level-7/GP Rs. 4600/- will not be allowed to determine the eligibility.

3. Selection Process:

- (a) Selection consists of CBT test (75 marks) and Classroom Lecture trial(25 marks).
- (b) Selection Committee Constitution to be in terms of Railway Board's Letter No. E(MPP)/2018/3/5 dtd. 19-06-2018 (RBE No. 93/2018). Principal/Head of the Training Institute shall be associated in the class room trial. Thus, the above selection process will evaluate the knowledge as well as communication skill of the candidates as both are required for the post of Instructor.
- (c) Maximum Marks-100, Qualifying Marks-60%.
[Authority : Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-05-2019(RBE 79/2019)]
- (d) In terms of Railway Board's Letter No. E(NG)I2018/PM14 dtd. 14-12-2018(RBE No. 196/2018), the Question paper will be 100% Objective type.
- (e) In terms of Railway Board's letter No. E(NG) 1/2018/PM-1/4 dtd. 14.11.19 (RBE No. 194/2019) there will be negative marking @ 1/3 mark for a wrong answer.

(f) The above examination will be held through CBT (Computer Bases Test) as per Railway Bd's letter No.2025/E(RRB)/25/14 dtd-21.08.2025.

4. Tenure will be of 5 years in the Training Institute.

[Authority : Railway Board's Letter No. E(NG/2017/PM 1/11 dtd. 13-01-2021(RBE 04/2021)]

5. Teaching Allowance:

Selected candidates for the post of Sr.Instructor-TRO are entitled to draw Teaching Allowance as admissible from time to time and the allowance will not form part of pay, but will count for the purpose of leave salary. Present rate of Teaching allowance is 12% Basic Pay.

[Authority : Railway Board's Letter No. E(MPP)2012/3/28 dtd. 06-10-2017(RBE 145/2017)]

6. Since the post of Instructor is an Ex-cadre post and filled on volunteer basis, no relaxation/reservation for SC/ST employees.

7. The post of Instructor is Ex-cadre post, tenure of which will not exceed more than 5 years. As such selected candidates will be posted for maximum of 5 years. On completion of their tenure they will be repatriated back to their original stream/post where their seniority and lien is maintained.

8. Lien of the selected employees will be maintained in their parent cadre/department.

9. There will be no Supplementary written examination and Classroom lecture trial.

10. Those Instructors who have already repatriated may apply again only after a reasonable gap of at least one year. Once the candidate is selected and posted as Instructor on the basis of his empanelment, his refusal for the same will not be entertained as well as is liable for being dealt with under DAR. This should be got noted carefully by the staff applying for the posts.

11. The employees posted as Instructor will be repatriated to the parent cadre at least six months prior to the date of his superannuation.

This may be notified to all concerned immediately and staff desirous for the above post should apply ONLINE only on our official website [http://203.153.40.19/bct\(e-karmik\)](http://203.153.40.19/bct(e-karmik)) as well as through mobile app on E-karmik BCT (download through play store) on or before 22-09-2026 till 17:00 hrs. No direct application after due date will be entertained.

Syllabus of written test for filling up of above post is enclosed herewith as Annexure-I.

This issues with the approval of competent authority.

Encl: Annexure-I

Digitally Signed by
Raghuveer Singh Shekhawat
Date: 02-09-2026 19:28:42
Reason: Approved
(R.S. SHEKHAWAT)
सहायक कार्मिक अधिकारी (बिजली)
कृते मंडल रेल प्रबंधक(स्थापना)

C/- GM(E)CCG, Sr. DEE/RS/MMCT/VR, Sr. DFM/MMCT, DEE/RS/MMCT, PRINCIPAL ETC/VR,
AEE/RS/MMCT/KILE/VR, SSE/HR-MMCT,KILE,VR

C/-Divl.Secy.WREU-GTR, WRMS-BCT, Zonal SECY: SC-ST Association BCT, OBC Association PDGR

“ इस आर्डर की कॉपी इंटरनेट पर 203.153.40.19 address पर अथवा E/Karmik/BCT मोबाइल application के Memo/Notification के अंतर्गत देखी व डाऊनलोड की जा सकती है . भविष्य में कार्मिक विभाग द्वारा पब्लिश की जाने वाली सभी सूचनाएं के लिए उपरोक्त एप /पोर्टल देखें”।

MCQ Bank on EMU and TRD 2023

EMU - TRO and TRS

QN	QUESTION	ANS
1	One Kg force is equal _____ newton A) 100 B) 10 C) 100 D) None of These	B
2	Max permissible speed of Siemens AC DC EMU rake is _____ kmph A) 105 B) 110 C) 100 D) 90	C
3	Max speed permitted in non interlock yard is _____ kmph A) 8 B) 15 C) 10 D) 20	A
4	EIG on Western Railway is _____ A) PCEE B) CEDE C) CESE D) CLE	A
5	EMU operating Expenses are booked under Demand _____ A) 10 B) 7 C) 8 D) 9	C
6	Approx. SEC of three phase EMU rake is _____ A) 27 B) 33 C) 37 D) 45	B
7	AC-DC rakes are provided with _____ braking A) Dynamic B) Regenerative C) Electro-pneumatic D) All	D
8	Type 1 interlocking speed _____ Kmph A) 100 B) 50 C) 80 D) 75	B
9	Adequate distance in Auto Block System is _____ m A) 100 B) 120 C) 80 D) 180	B
10	ON EMUs _____ type fire extinguishers are used A) Class A B) Class B C) Class C D) DCP	D
11	In Medha rake MAC isolation switch provided in _____ A) luggage compartment B) Motor coach C) DTC D) CRW panel	A
12	In MRVC-II rakes Emergency off is active in _____ A) Active DTC B) Guard DTC C) In both DTC D) Motor coach	C
13	Continuous rating Siemens rake TM is _____ KW A) 247 B) 240 C) 285 D) 250	B
14	Synchronous speed of a six pole, 50hz, AC motor is _____ RPM A) 1200 B) 1300 C) 1000 D) 1100	C
15	Combined capacitance of three 1 mfd parallel capacitor is _____ m A) 3 B) 1/3 C) 1 D) 4	A
16	75 kmph train with 20% speed reduction will have speed of _____ kmph A) 60 B) 62 C) 64 D) 68	A
17	Maharashtra comes under _____ areas as per Rajbhasha Rules A) A B) B C) C D) D	B
18	Length of conventional 25KV OHE overlap type neutral section is _____ m A) 3.2m B) 4.2m C) 41.0 m D) 40m	C
19	Integral Coach Factory is located in _____ city A) Bangalore B) Perambur C) Agartala D) Banaras	B
20	Voltage rating of Main compressor of Medha rake AC/DC EMU rake is _____ A) 141 AC, 3phase B) 415V AC, 3phase C) 110V DC, 3phase D) 415 V	B
21	In Auto transformer, primary and secondary windings are in _____ A) Series B) Parallel C) Combination D) None of These	A
22	Broad gauge means a gauge of _____ metres A) 1676 B) 1.676 C) 1000 D) 1.000	B
23	On PCE, Gr A/B track (speed >100kmph) _____ mm cant deficiency allowed. A) 110 B) 120 C) 100 D) 130	C
24	Maximum permissible speed in case of brake loss 7 kmph is _____ Kmph in Medha EMU. A) Normal B) 65 C) 80 D) Reduce	A

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25	Pilot valve does not function if _____ cock is closed under driving cab in service A) MRCC B) EP C) Auto D) Deadman	D
26	Type 2 interlocking speed _____ Kmph A) 110 B) 140 C) 100 D) 160	A
27	_____ MCB is to be tripped while isolating AWS in SIEMENS. A) 44-F-02 B) 44-F-01 C) 44-F-03 D) None of these	B
28	Work the train at _____ Kmph & cancel at first PF in case of hot axle. A) 5 B) 8 C) 10 D) 15	B
29	Frequency F7, in AWS is 7600(+/-) _____ Hz A) 80 B) 89 C) 87 D) 71	B
30	In Siemens EMU EP unit magnet valve control signal is obtained through _____ A) MVB B) MIO DX C) CCU D) SKS	D
31	In Medha rake Cab occupation fails when _____ gets off A) ICS B) DCS C) Cab occupy MCB D) Any one of three	D
32	Calling On signal is _____ signal A) Automatic B) Semiautomatic C) Subsidiary D) Manual	C
33	In SIEMENS, if _____ MCB trips in DTC, brakes of 1.2Kg./cm ² applied and pilot valve does not blow. A) EBL 2 B) EBL 1 C) EBL 3 D) Cab Occupied	C
34	Siemens EMU has gear ratio of _____ A) 97/17 B) 87/17 C) 97/19 D) 97/20	A
35	In Siemens rake OFT of inverter control is _____ A) Optimal Flux Transducer B) Optimal Flux Tracking C) Over Flux Tracking D) Optimal Feature Transformer	B
36	Colour code of Bogie cock is _____ and EP Cock is _____ A) Yellow, Red B) Yellow, White C) Yellow, Green D) Red, Yellow	A
37	Work the train at _____ speed when brake loss is 13 kmph in SIEMENS EMU. A) 75 B) 65 C) 55 D) Normal	B
38	If _____ MCB is tripped in DTC of Siemens, then Full train EP Brake binding takes place. A) EBL2 B) EBL1 C) CCU D) EBL3	D
39	The engine magnet (AWS) has 2 tuned coils at _____ and _____ KHzs A) 50, 100 B) 100, 120 C) 150, 100 D) 50, 200	A
40	Auxiliary Compressor in Bombardier rake works on _____ V _____ AC/DC A) 110 V AC B) 110 V DC C) 141 V D) 141 V DC	B
41	Power rating of twin beam head light bulb in AC/DC rake is _____ watts A) 100Watts B) 50Watts C) 60Watts D) 120Wat	A
42	In EMU trains _____ works on 110 V DC BD supply. A) Head Light B) Tail Light C) HMI/DDU D) Cab light normal	B
43	In Siemens rake Isolate _____ if BPCC on both sides of motor coach are closed to arrest BP leakage. A) EBL 1 B) EBL 2 C) EBL 3 D) EBL	C
44	A railway employee can accumulate LAP max upto _____ days A) 300 B) 290 C) 320 D) 280	A
45	As per HOER, Loco Inspector falls in _____ category A) Continuous B) Intensive C) Excluded D) Intermittent	C
46	Permanent speed restriction of _____ kmph exists on DN local line bet BA-KHAR A) 30 B) 50 C) 40 D) 60	B
47	Permanent speed restriction of _____ kmph exists on DN local line bet BCL-MX A) 30 B) 50 C) 40 D) 60	C
48	Permanent speed restriction of _____ kmph exists on UP TH line bet -STC-KHAR A) 30 B) 50 C) 40 D) 60	B
49	Work the train at _____ speed when brake loss is 16 kmph in Medha EMU. A) Reduced B) Normal C) 65 D) 55	A

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50	When EMU speed is exceeding permissible speed bet 5 to 10 kmph, AWS applies_____	A
	A) EP Brake B) Emergency Brake C) EP & Emergency Brake D) None of these	
51	Official language Act was formulated in year _____	B
	A) 1976 B) 1963 C) 1953 D) 1968	
52	In Siemens Rake, EBL3 triggers when BP pressure drops below _____ Kg/sq.cm.	C
	A) 4.2 B) 3.2 C) 3.4 D) 3.8	
53	ARME scale 1 is located in Mumbai suburban area at _____	B
	A) BDTs B) BCT C) PL D) DDR	
54	In Siemens, when Brake Control BCU & Brake Control TCU MCB's are tripped in any of the motor coaches then train cannot be worked with speed more than _____ kmph.	C
	A) 90 B) 100 C) 75 D) 50	
55	When Motorman over speeds then guard warns by giving _____	A
	A) 000-000 B) 000 C) 00-00 D) 0000	
56	A total no of _____ suburban trains run on week days in BCT division	A
	A) 1383 B) 1323 C) 1411 D) 1348	
57	The ruling gradient of CCG-VR section is _____	C
	A) 1:400 B) 1:180 C) 1:150 D) 1:120	
58	The max sectional speed of CCG-BCT section is _____ kmph	C
	A) 100 B) 90 C) 75 D) 105	
59	The maximum speed of Medha EMU during flooding when water level reaches up to 75mm above rail level is _____ kmph	A
	A) 40 B) 25 C) 10 D) 50	
60	Section running time bet DIC- MIRA is _____ minutes	B
	A) 6 B) 4 C) 8 D) 10	
61	The PSR on DN through line bet CCG-MEL is from 0/0 to 1/5 and the speed is _____ kmph	C
	A) 30 B) 50 C) 40 D) 20	
62	The track bet CCG-BVI Local line is classified as _____ route	D
	A) D B) A C) B D) C	
63	Press _____ button on AWS panel while passing yellow signal.	D
	A) SFBB B) SFBC C) Reset D) Vigilance	
64	Auxiliary motors in Medha EMU work on _____ volts .	C
	A) 230 V AC B) 266 V DC C) 415 V AC D) 110 AC	
65	Colour of bypass cocks of FCMV & EMV are _____ & _____ respectively.	C
	A) Red, Green B) Red, Blue C) Green, Red D) Green, Blue	
66	_____ no. of bogie brakes can be isolated manually from carshed to work train normal.	D
	A) 2 B) 4 C) 3 D) 1	
67	In EMU Trains Wheel counting is done from _____ corner of the coach.	B
	A) South-West B) North-West C) North-East D) South-East	
68	_____ type panto is provided in AC/DC rake	C
	A) AM18B1 B) AM18B4 C) AM18B2 D) AM18B3	
69	Between CCG -BCL section flood gauge is provided at _____	D
	A) CYR B) BCT C) CCG D) GTR	
70	Normal life of detonators issued to M/M is _____ years	A
	A) 5 B) 6 C) 7 D) 8	
71	Type 3 interlocking speed _____ Kmph	A
	A) 140 B) 100 C) 75 D) 120	
72	_____ Percent brakes are applied during brake power test on run in SIEMENS EMU.	C
	A) 80 B) 90 C) 100 D) 60	
73	Condemning size of wheel is _____ mm	A
	A) 877 B) 868 C) 881 D) 870	
74	Raising time of panto is _____ sec	B
	A) 6 to 12 B) 6 to 10 C) 6 to 8 D) 6 to 12	

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75	Max permissible difference in diameter of wheels under same coach is _____ mm. A) 8 B) 13 C) 5 D) 15	B
76	Max permissible difference in diameter of wheels under same bogie is _____ mm. A) 8 B) 13 C) 5 D) 15	C
77	Max permissible difference in diameter of wheels under same axle is _____ mm. A) 0.5 B) 13 C) 8 D) 15	A
78	Press Vigilance button for min. _____ sec. to conduct functional test of AWS. A) 8 B) 9 C) 6 D) 10	A
79	Regenerative brakes are applied in _____ Coach only. A) Trailor B) Motor C) Motor and both Trailor D) Both Trailor	B
80	In Siemens rake MMI remains ON for _____ minutes when cab occupied MCB is tripped. A) 5 B) 10 C) 12 D) 15	B
81	While clearing section from motorcoach _____ before switching DCS On A) Twist PBC B) Switch On ICS C) Turn Single unit operation switch D) A and B	D
82	Rating of Siemens traction motor is _____ KW _____ volts. A) 246, 932 B) 240, 932 C) 247,1080 D) 240, 1800	B
83	Work the train at _____ Kmph. & cancel at first PF in case of wheel lock is noticed. A) 10 B) 8 C) 15 D) 20	B
84	Background colour of Manually isolated equipment on MMI is _____. A) Red B) Blue C) Black D) White	C
85	Bell code when Motorman seeks Guard's assistance to apply emergency brakes is _____. A) 00-00 B) 00-00-00 C) 000-000 D) 0-0	B
86	_____ number of bogie brakes can be isolated manually on line to work the train normal. A) 1 B) 2 C) 3 D) 4	D
87	Work the train at _____ Kmph & cancel at first PF in case of flat wheel more than 50mm. A) 20 B) 30 C) 25 D) 15	C
88	Give _____ command to de-activate (cancel) wrongly given ENS command. A) CB Close B) CB Open C) ENS D) Cruise Control	B
89	In EMU Trains Bell code to be given by Motorman to end stationary brake test is _____ A) 00000 B) 0000 C) 000 D) 00	A
90	Isolate _____ if BPCC on both sides of motor coach are closed to arrest BP leakage. A) Brake Binding B) Parking Brake C) Motor Coach D) EBL 1	A
91	Work the train at _____ Kmph & cancel at first PF in case of hot axle. A) 10 B) 8 C) 15 D) 20	B
92	When colour of both background and main compressor are white on MMI and MR pressure is less than 6Kg./sq.mm it means, _____. A) MAC Management Fail B) MAC Isolated C) MAC Switched Off D) MAC Defective	A
93	In EMU Trains Bell code to be given by Guard to start stationary brake test is _____. A) 00000 B) 0000 C) 000 D) 00	A
94	Contact pressure of Pantograph type WBL 22.03 is ____ Bar. A) 7.0 B) 7.5 C) 6.5 D) 6.0	B
95	Colour code of isolation cock for Air suspension is _____. A) White B) Red C) Blue D) Green	C
96	Buffer height is _____ mm above rail top level. A) 1030 B) 1035 C) 1040 D) 1088	B
97	Whistle code before passing Automatic signal at ON is, _____. A) One Short B) Two Short C) One Long D) Two Long	C
98	Maximum permissible speed in case of brake loss 11 kmph is _____ Kmph in EMU. A) 50 B) 55 C) 65 D) Normal	C
99	Whistle code after Alarm chain pulling is, _____. A) 00_ B) 0_0 C) 00_00 D) _00	A

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100	Bell code is given by motorman when he requires train manager. A) 00 B) 000 C) 0000 D) 00000	B
101	Maximum brake force in SIEMENS EMU is _____ KN. A) 195 B) 185 C) 180 D) 200	B
102	Whistle code to call EXR is, _____. A) 00-00 B) 0-0 C) 000-000 D) 00-0	A
103	Colour code of MR main cock is _____. A) Red B) Green C) White D) Blue	B
104	In Siemens rake, first CB closes after _____ m from the point ENS was pressed A) 200 B) 300 C) 400 D) 500	C
105	_____ Bell code is given by Motormat to guard to protect the train in rear. A) 0_0 B) 0000 C) 000 D) 000-000	B
106	In Medha and MRVC-II rakes _____ can be isolated from DDU/HMI. A) AAC B) Air Spring C) MAC D) Parking brake	C
107	In Suburban Section stop the train on auto brakes at _____ station in UPTH direction. A) BA B) DDR C) ADH D) BYR	C
108	In case of _____ brake controller, BP back feeds MR if MR pressure is less than BP. A) Escort B) Escort Knorr C) Faivelyly D) WSF	D
109	In Mumbai Suburban section Colour code of 12 car stop mark is _____. A) White B) Red C) Yellow D) White and Yellow	C
110	In MRVC –II Rake, when any _____ Hose pipe burst, Close _____ cocks on both ends of it and work the train Normal A) MR, MRCC B) MR, BPCC C) BP, BPCC D) BP, MRCC	A
111	Max permissible speed in case of complete brake isolation under DTC is _____ Kmph. A) 20 B) 25 C) Reduced D) 15	D
112	In Medha rake if one coach brake isolated Vmax is _____. A) 102 B) 101 C) 105 D) 110	B
113	The train lighting system used on EMUs is known as _____. A) EOG B) MOG C) SG D) HOG	D
114	In Siemens and Medha EMUs, EP & Regeneration brakes collectively termed as _____. A) Electro-dynamic Brake B) Dynamic Brake C) Brake Blending D) All correct	C
115	Air leakage on Auxiliary reservoir can be isolated by closing _____ cock A) Bogie Cock B) Auto Cock C) EP Cock D) EP and Auto both	B
116	In case of failure in Air suspension system, work train at _____ Kmph. A) 50 B) 101 C) 60 D) 100	C
117	In Medha rake, DDU becomes blank when _____ is switched off. A) DCS B) ICS C) Battery D) OHE fail	C
118	In BT rake, MCM takes input from _____ and converts it into 3PhVVVF A) DC Chopper B) DC Link C) LCM D) ACM	B
119	In MRVC-II and Medha, in maintenance mode train speed restricted to _____ Kmph A) 60 B) 30 C) 15 D) 101	C
120	In MRVC –II rakes, when train communication fails and train not working in normal mode then work train at _____ Kmph. A) 10 B) 50 C) 60 D) 30	C
121	Max. permissible speed in case of brake loss 17 kmph is _____ Kmph in DC/AC EMU. A) 65 B) Normal C) Reduced D) Restricted	C
122	Max permissible speed of Siemens rake is _____ kmph and BT rake is _____. A) 110, 100 B) 100, 110 C) 120, 110 D) 110, 120	B
123	The Max permissible speed of Siemens EMU during flooding when water level reaches to 75mm to 100mm above rail top level is _____ kmph A) 40 B) Normal C) 25 D) 50	C

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124	In Siemens rake TM symbol 'M' will turn _____ background in the unit where wheel lock is suspected. A) Red B) Yellow C) White D) Grey	B
125	Main compressor isolation switch in _____ Rake is located in Luggage Compartment. A) MRVC-II B) Medha C) MRVC-I D) B and C both	D
126	In EMU trains CCU is located in _____. A) DTC B) NDTC C) Motor coach D) HT Compartment	A
127	In SIEMENS, if _____ MCB trips in DTC, brakes of 1.2Kg./cm ² applied and pilot valve blows. A) EBL1 B) EBL2 C) EBL3 D) EBL4	A
128	Minimum working clearance for 25 KV AC is _____. A) 1m B) 3m C) 2m D) 5m	C
129	Every new driver should be given -----trips of LRD for familiarizing with the section A) 6 B) 4 C) 5 D) 2	A
130	The terminal voltage of a lead acid cell should not fall below (A) 1.6 V (B) 1.8 V (C) 2.0 V (D) 2.2 V	B
131	The capacity of storage battery is expressed as (A) No. of recharges it can take (B) No. of cells it contain (C) Time for which it can be used (D) Ampere hour it can deliver.	D
132	HMI stands for _____ A) Humming Machine Interface B) Human Machine Interface C) Human Machine Interference D) Higher Machine interface	B
133	Specific Gravity Measuring Instrument A) Pyrometer B) Gyrometer C) Hydrometer D) Tungmeter	C
134	What is the ratio of electrolyte H ₂ SO ₄ Acid & Distilled water in LMLA Battery? A) 1:2 B) 1:3 C) 1:4 D) 2:5	B
135	Type of Coupler used in EMU rake A) Semi-Permanent Scaku Coupler. B) Scaku Full coupler C) Scaku Permenent coupler D) Scaku Design coupler	A
136	Types of Wheels used in EMU Coaches A) Solid alloyed and Cast Wheel B) Solid Tempered and Cast Wheel C) Solid Forged Wheel and Cast Wheel D) Solid toughened and Cast Wheel	C
137	Permissive Range of Buffer Height in EMU Coaches A) 1020mm to 1035mm B) 1010mm to 1035mm C) 1025mm to 1035mm D) 1000mm to 1035mm	A
138	EMU Coaches Primary Suspension consists of A) Axle box and seat B) Axle Guide Spring and DashPot C) Axle box and bearing D) All of these	D
139	EMU Coaches Secondary Suspension Consists of A) Bolster & Air Bellow. B) Bolster and bolster plank C) Bolster and hanger D) All of these	D
140	Permitted Variation of Wheel Diameter permitted in Same Axle/same Bogie/Both Bogie of Same Coach. A) 1mm/6mm/15mm B) 2mm/6mm/14mm C) 0.5mm/5mm/13mm D) 05mm/10mm/15mm	C
141	ADD means A) Auto Device Drive B) Auto Direct Device C) Auto Drop Device D) Auto Direct Drive	C
142	ORD means A) Over Reach Detector Device B) Over Reach Damper C) Over Ream Device D) Over Reach Device	A
143	Panto graph Pan's Current Collection Material A) Graphite Carbon B) Metallised Carbon C) Copper carbon D) Carbon	B

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144	Pantograph Pan carbon strip new and condemning size Limit _____mm A) 39/26 B) 39/30 C) 39/20 D) 39/22	A
145	Air Pressure Required for raising of Pantograph Minimum A) 7.5 bar B) 5.5bar C) 8.5 bar D) 6.0bar	B
146	Air Pressure Required for Continuous operation of Pantograph A) 6.0bar B) 7.0bar C) 8.0bar D) 8.5bar	A
147	Material of Flexible Earthing in EMU trains A) Shunt Copper wire B) Shunt Braided Copper Wire C) Shunt D) Solid Copper wire	B
148	Setting of Aux Air Compressor Governor and Main Air Compressor Governor A) 5.3bar - 6.3bar and 6bar-7bar B) 5.6bar - 6.3bar and 6bar-8bar. C) 5.3bar - 6.6bar and 6.5bar - 7bar. D) 5.0bar - 6.0bar and 6bar-7bar.	A
149	Valve Assembly provided in between two Air Bellow Auxiliary Reservoir is called as A) Check Valve B) Duplex Limiting Valve C) Duplex Check Valve D) Duplex Return Valve	C
150	Full Form of VRLA Battery A) Valve Reverse Lead Acid Battery B) Valve Return Lead Acid Battery C) Valve Reacting Lead Acid Battery D) Valve Regulated Lead Acid Battery	D
151	EP Brakes are applied by the pressure of A) Main Reservoir B) Auxiliary Reservoir C) Equilizing Reservoir D) EP Reservoir	A
152	In Siemens, in case signal bell does not work, check MCB.....may be tripped. A) Master control or cab occupied B) MVB line A or MVB line B C) SKS 12 or SKS 13 D) None of these	C
153	How many Brake blocks provided in 12Car EMU rake A) 96 Nos B) 192Nos C) 120 Nos D) 180Nos	B
154	Allowable Axle Box Temperature difference between same Axle of EMU train A) 8°C B) 6°C C) 10°C D) 12°C	A
155	In Medha EMU BC pressure ____bar in Motor Coaches and ____bar in trailor Coaches. A) 1.4/1.2 B) 1.6/1.2 C) 1.2/1.6 D) 1.2/1.4	B
156	Which pressure is dropped by applying auto brake A) Equilizing Reservoir B) Auxiliary Reservoir C) Control Reservoir D) Main Reservoir	A
157	In EMU, Parking Brake Provided on which Coach and Wheel number of _____ A) DTC/NDTC/1,3,5,7 B) DTC/MC/1,3,5,7 C) DTC/NDTC/2,4,6,8 D) DTC/NDTC/1,4,6,8	A
158	Control Supply voltage in EMU trains _____ A) 141V AC B) 141V DC C) 110V AC D) 110V DC	D
159	With Cobalt Material Silica-Gel colour after saturation in Breather of Traction Transformer A) Blue to Pink B) Blue to Yellow C) Blue to grey D) Blue to Green	A
160	Without Cobalt Material Silica-Gel colour after saturation in Breather of Traction Transformer A) Orange to Green B) Orange to Grey C) Orange to Pink D) Orange to Colourless	D
161	Type of Oil and capacity of side Bearer A) Servo 68, 2.5L B) Servo100, 2.5L C) Servo150, 2.5L D) Servo250, 2.5L	A
162	Which type of drain valve installed in Auxiliary Reservoir of Air Spring A) Automatic type B) Spring loaded type C) Drain type D) Split type	B
163	Holding/Unmanned Brake _____ kg/cm2 visible in Driving Cab Brake Cylinder Gauge of EMU train, A) 0.8 /1.2bar B) 1.2/0.8 C) 0.8/1.4 D) 1.4/0.8	A
164	In EMU trains EP Brake Application & Release Timing A) 4 to 8 seconds B) 6 to 8 seconds C) 4 to 6 Second D) 4 to 10 seconds	C
165	Auto Brake Application Time ____ Second and Auto Brake Release Time ____ Seconds A) 6 to 10 & < 20 B) 2 to 4 & <10 C) 6 to 10 & <12 D) 6 to 10 & <12	A

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166	Emergency Brake Application Time _____ seconds & Release Time _____ Seconds Through Master Controller A) 4 to 6, <20 B) 6 to 10, <20 C) 8 to 10, <20 D) 5 to 10, <20	A
167	Emergency Brake through Auto Brake controller application time _____ second and Release time _____ seconds A) 4 to 6 and <20 B) 6 to 10 and <20 C) 4 to 6 and <10 D) 6 to 10 and <10	B
168	Range of Brake Pipe Charging Timing from Driving Cab of EMU train _____ seconds. A) 90 to 120 Second. B) 70 to 90 C) 90 to 100 D) 70 to 110	A
169	Colour of Alarm Chain Pulling flasher light provided in Ladies Coaches A) Red B) Yellow C) White D) Blue	C
170	Location of Ladies Coaches in the 12 Car EMU rake from Churchgate Side A) 1st, 6th, 12th B) 1st, 5th, 11th C) 1st, 6th, 10th D) 1st, 4th and 10th	D
171	Quantity of Wooden Wedges provided in each Driving Cab A) 4 B) 3 C) 2 D) 1	C
172	No. of Fire Extinguisher _____ No. In each Driving Cab and _____ No. in each Motorcoaches A) 1/2 B) 2/2 C) 2/1 D) 1/1	D
173	SB-I push button lamp's colour _____ and SB-II push button lamp's colour _____. A) Yellow and Red B) Red and Yellow C) Yellow and White D) Yellow and Green	A
174	Live circuit's Current measuring suitable instrument A) Ammeter B) Flux meter C) Clampmeter D) Multimeter	C
175	Isolation cock when in parallel is _____ and Drain cock in parallel is _____ A) Open, Close B) Close, Open C) Close, Close D) Open, Open	A
176	In BHEL AC EMU for rectification of major fault.....can be given in Maintenance Mode. A) Test Reset B) Critical Reset C) Fault Reset D) Maintenance Reset	D
177	Permissible Limit of Gap between Bogie Frame & Bogie Bolster of EMU rake. A) 40+/-5mm B) 40+/- 8mm C) 40+/-7mm D) 40+/- 10mm	A
178	DGA means A) Digital Gate Arrow B) Deep Gear Assembly C) Dissolved Gas Analysis D) Digital Group Analysis	C
179	BDV means A) Brake Down Voltage B) Bearing Danger Voltage C) Braking Distance Valve D) Brake Down Valve	A
180	_____ Bearing Bolt is provided with Schaku Coupler in each Coach of EMU train. A) Artificial B) Articulation C) Pivot D) Center	B
181	Which grease is used in axle Box ? A) RR4/LL4 B) RR2/LL2 C. RR3/LL3 D) RR5/LL5	C
182	In three phase EMU what is the capacity of vertical damper ? A) 300Kg B) 200 kg C) 100 Kg D) 400 Kg	A
183	Gear pinion ratio of BHEL A/C EMU rake..... A) 72/16 B) 97/17 C) 103/23 D) 111/25	A
184	What is the capacity of TVSV bulb of Escort and W.S.F. brake unit ? A) 1 L B) 3L C) 1.5L D) 2L	D
185	During RBT _____ is opened and _____ % brake is applied in all EMUs. A) Panto, 100 B) VCB, 60 C) VCB, 100 D) VCB, 80	C
186	In EMU rake ADD governor setting _____ Kg/cm ² A) 2.4 to 3.8 B) 2.0 to 3.0 C) 3.0 to 3.5 D) 2.5 to 3.5	A
187	What is working height of EMU pantograph ? A) 2250mm B) 2290mm C) 2200mm D) 2280mm	B
188	What is coach weight on center casting on EMU rake ? A) Half weight B) Nil C) 1/4 coach weight D) Full coach weight	B
189	What is no. the MCB provided for TCMS Primary ? A) JE-F20 B) JE-F22 C) JE-F18 D) JE-F13	D

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190	What is the height of APC receiver from rail level ? A) 160+5mm B) 150+5mm C) 140+5mm D) 170+5mm	A
191	What is the type of bogie cock provided in three phase EMU ? A) S type B) K type C) P type D) Vent type	D
192	What is dash pot oil level in three phase EMU ? A) 97mm B) 197mm C) 150mm D) 120mm	A
193	In BT EMU Axle ERB (Earth return brush) is provided on which axle ? A) 1, 4 B) 2, 6 C) 2, 3 D) 1, 6	B
194	What is setting of EP limiting valve of brake unit in EMU train ? A) 3.9 Kg/cm ² B) 2.9 Kg/cm ² C) 3.8 Kg/cm ² D) 3.5 Kg/cm ²	D
195	What is the gap between brake block and wheel tyre ? A) 18mm B) 22mm C) 10mm D) 15mm	A
196	Sandwich packing of EMU train is changed in which schedule ? A) HR1/5years B) HR2/6years C) HR4/8years D) HR3/7years	C
197	At what interval Air dryer changes its tower ? A) 1-2 min B) 2-3min C) 2-4min D) 3-4 min	B
198	In Siemens EMU under normal condition what is the voltage of negative to ground earth fault ? A) 55 V B) 65V C) 45 V D) 40V	A
199	Auto Drain Valve is placed under which Tank ? A) Auxiliary Tank B) Equilizing Tank C) MR tank D) Control Tank	C
200	In Siemens rake how many CTs are provided in primary of main Transformer ? A) 2 B) 1 C) Nil D) 3	A
201	In BHEL EMU what is the value of braking resistor ? A) 1x3 ohm B) 2x2.75 ohm C) 1x2.75 ohm D) 2x3 ohm	B
202	How many total auxiliaries in Siemens EMU ? A) 19+1 B) 48+1 C) 26+1 D) 22+1	A
203	How many total auxiliaries in Medha EMU ? A) 19+1 B) 48+1 C) 26+1 D) 22+1	A
204	How many total auxiliaries in BT EMU ? A) 19+1 B) 48+1 C) 26+1 D) 22+1	C
205	How many total auxiliaries in BHEL EMU ? A) 19+1 B) 48+1 C) 26+1 D) 22+1	B
206	What is the capacity of Lateral dampers used in Motor coach of three phase EMU ? A) 100Kg B) 200Kg C) 150Kg D) 250Kg	A
207	What is Battery Capacity (AH) of Siemens EMU ? A) 90AH B) 120AH C) 150AH D) 300AH	A
208	What is Battery Capacity (AH) of BT EMU ? A) 90AH B) 120AH C) 150AH D) 300AH	B
209	What is Battery Capacity (AH) of Medha EMU ? A) 90AH B) 120AH C) 150AH D) 300AH	B
210	What is Battery Capacity (AH) of BHEL A/C EMU ? A) 90AH B) 120AH C) 150AH D) 300AH	D
211	What is Battery Capacity (AH) of Medha US A/C EMU ? A) 90AH B) 120AH C) 150AH D) 300AH	D
212	In BHEL A/C EMU how many Fire extinguisher are provided ? A) 6 B) 20 C) 28 D) 32	D
213	In EMU, RDK Pressure reducing Valve changes MR pressure to _____ Kg/cm ² A) 4.7+/-0.5 B) 4.7+/-0.2 C) 4.5+/-0.2 D) 4.5+/-0.5	B
214	In EMU Train What is root radius of new wheel ? A) 16mm B) 10mm C) 20mm D) 18mm	A
215	Master controller of Siemens/BT/Medha EMU is _____ A) Notch type B) Free type C) Stepless type D) Fixed type	C

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216	Pressure sensor is made of which metal ? A) Co Ni Steel Membrane B) Co Al Membrane C) Co Cu Membrane D) Co Fe Membrane	A
217	In EMU Train what is setting of ADLV of Motorcoach ? A) 1.4 Kg/cm ² B) 1.6 Kg/cm ² C) 1.2 Kg/cm ² D) 1.8 Kg/cm ²	B
218	Continuous / one hour rating Siemens rake TM is----- KW A) 247/270 B) 240 /270 C) 285/290 D)250/280	B
219	Synchronous speed of a four pole, 50hz, Induction motor is ----- RPM A) 1200 B) 1500 C) 1000 D)1100	B
220	The track/engine magnets (AWS) has 2 tuned coils af-----and-----KHzs A) 50,100 B) 100,120 C) 150, 100 D) 50,200	A
221	In EMUs wattage of twin beam Head Light in dim and full are watts respectively. A) 90 & 100 B) 100 & 120 C) 100 & 110 D) 110 & 120	A
222	In EMU Trains air spring counting is done from _____corner of the coach. A) South-West B) North-West C) North-East D) South-East	B
223	In EMU 15car rake _____ Powered Axles and _____ non powered Axles are provided. A) 20/40 B) 20/60 C) 16/40 D) 16/60	A
224	In Mumbai Suburban section Colour code of 15 car EMU stop mark is _____. A) White B) Red C) Yellow D) White and Yellow	B
225	In Medha rake when train communication fails train automatically goes in _____ mode and speed will be _____ Kpmh. A) RDM/60 B) Sp. RDM/110 C) Sp. RDM/60 D) Sp. RDM/100	B
226	Work the train at _____Kmph & cancel at first PF in case of flat wheel more than _____ A) 20,50 B) 30, 50 C) 25,50 D)25,25	C
227	In Siemens EMU, EBL monitors the A) Deadman safety device & MR pressure B) Deadman safety device & BP pressure C) Control governor & MR pressure D) Parking Brake & BP pressure	B
228	In Siemens EMU EP unit magnet valves gets control signal through----- A) SIBAS B) MCM C) BECU D) BECU and TCU Both	D
229	In Medha rake Cab occupation fails when _____gets off A) Cab Occupy control1 B) Cab Occupy control2 C) ICS D) A and C	D
230	PT 100 sensor is used to measure A) Speed B) Temperature C) Air flow D) None of these	B
231	Gear pinion ratio of MEDHA EMU rake..... A) 69/16 B) 97/17 C) 103/23 D) 111/25	C
232	Gear pinion ratio of Siemens EMU rake..... A) 69/16 B) 97/17 C) 103/23 D) 111/25	B
233	Gear pinion ratio of BT EMU rake..... A) 69/16 B) 97/17 C) 103/23 D) 111/25	D
234	Gear pinion ratio of BHEL A/C EMU rake..... A) 69/16 B) 72/16 C) 97/17 D) 111/25	B
235	Gear pinion ratio of Medha Onboard A/C EMU rake..... A) 69/16 B) 97/17 C) 103/23 D) 111/25	C
236	Frequency F1 to F5, in AWS is 7600(+/-) -----Hz A) 71 B) 79 C) 75 D) 60	A
237	Frequency F6, in AWS is 7600(+/-) -----Hz A) 71 B) 80 C) 79 D) None of this	B
238	When train passes Yellow signal and next signal is at distance less than 700m, yellow indication on AWS flashes in _____ ratio after 290m. A) 7:1 B) 1:1 C) 4:1 D) 5:1	B
239	When train passes Yellow signal and next signal is at distance 700m or more, yellow indication on AWS flashes in _____ratio. A) 1:1 B) 7:1 C) 2:1 D) 1:2	B

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240	Press ____ button on AWS panel before passing manual signal at ON after receiving paper authority. A) Vigilance B) SFBC C) SFBB D) Reset	C
241	AWS works on audio frequencies from ____ Hz to ____ Hz. A) 2800,7600 B) 3800,8600 C) 1800,6600 D) 2900,7700	A
242	AWS provided on EMU, Pass yellow signal w/o ATM not more than ____ Kmph speed. A) 50 B) 65 C) 60 D) 45	C
243	AWS provided on EMU, Whenever AWS malfunctions, work the train at ____ speed upto next signal. A) restricted B) Cautious C) Max D) Normal	B
244	AWS/Deadman Integrated panel is not provided ____ EMU rake. A) Siemens B) Medha C) BHEL D) Bombardier	A
245	Motorman informs Guard about isolation of AWS by ____. A) Signal Bell B) Sounding Audio Visual twice C) Emergency Bell D) on Mobile	B
246	AWS Track Magnet has ____ audio frequency oscillators. A) 8 B) 7 C) 5 D) 6	B
247	AWS Track Magnet is connected to signal aspect through ____ A) Opto coupler card B) Oscillator card C) Resonance circuit D) None of these	A
248	AWS CPU is provided in ____ A) Driving Cab B) Shunting cab C) Guard Cab D) A and C	D
249	AWS provided on EMUs is suitable for speed upto ____ Kmph A) 250 B) 100 C) 160 D) 180	A
250	AWS provided on EMU has seven audio frequency oscillators F1 to F7 ranging from ____ Hz to ____ Hz A) 2800 to 7600 B) 1200 to 2800 C) 1600 to 2800 D) 2800 to 5600	A
251	AWS provided on EMU, applies ____ brake in case speed exceeds to < 5 A) EP B) Emergency brake C) Only warning D) None of these	C
252	AWS provided on EMU, applies ____ brake in case speed exceeds upto ≥ 10 A) EP B) Emergency brake C) Auto brake D) None of these	B
253	AWS provided on EMU, whenever applies EP brake in case of excess speed, Red light on indication panel lit ____ A) Steady B) flashes C) Extinguishes D) None of these	B
254	AWS provided on EMU, whenever applies emergency brake in case of excess speed, Red light on indication panel lit ____ A) Steady B) flashes C) Extinguishes D) None of these	A
255	AWS provided on EMU, when motorman passes Automatic Red signal as per rule, Red light on indication panel lit ____ A) Steady B) Flashes C) Extinguishes D) None of these	A
256	AWS provided on EMU, when motorman passes Absolute Red signal as per rule, Red light on indication panel lit ____ A) Steady B) flashes C) Extinguishes D) None of these	B
257	AWS provided on EMU, applies ____ brake when train is rolled back > 5m A) EP B) Emergency brake B) auto brake D) None of these	B
258	AWS provided on EMU, if the distance between two signal is > 700m, an ATM is provided ____ m before next signal. A) 500m B) 600m C) 400m D) 1000m	C
259	AWS provided on EMU, if the distance between two signal is < 400m, ____ is provided before a signal in advance. A) ATM B) TM C) RBDTM D) TTM	C

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260	AWS provided on EMU, _____ is provided at the exit of carshed to check AWS applies emergency brake on Red signal. A) ATM B) PATM C) RBDTM D) TTM	D
261	AWS provided on EMU, _____ white and blue light on indication panel indicates AWS is in working order. A) Fast flashing B) Steady C) Blinking D) None of these	B
262	AWS provided on EMU, _____ magnet detects track magnet. A) PATM B) Engine C) ATM D) TTM	B
263	AWS provided on EMU, applies _____ brake in case speed exceeds to 5 to 9 A) EP B) Emergency brake C) Auto brake D) None of these	A
264	In EMU trains, whenever brake binding takes place motorman is advised to apply _____ brake 2/3 times, which may release brake binding. A) EP B) Emergency brake C) Auto brake D) None of these	A
265	In Three phase EMU, regenerative brake saves about _____ of power. A) 20% B) 30% C) 50% D) No power save	B
266	In Three phase EMU, when Emergency Off push button is pressed _____ A) All VCB open, All Panto dropped B) All VCB open, All Panto dropped & BP drop C) Only All VCB open D) Only All VCB open & BP drop	A
267	In Siemens and Medha EMU power circuit, DC link voltage is _____ V DC A) 2300 B) 1800 C) 2000 D) 1650	B
268	In Bombardier EMU power circuit, DC link voltage is _____ V DC A) 2300 B) 1800 C) 2000 D) 1650	D
269	In BHEL A/C EMU total _____ no. RMPU in each coach and each RMPU has _____ tonnes A/C units A) 4, 2x7.5 B) 1, 2x7.5 C) 3, 2x7.5 D) 2, 2x7.5	D
270	In Three phase EMU, to open High Tension Compartment _____ key interlocking system is given. A) Kaba B) Turn C) DCS D) Panel	A
271	In Three phase EMU, in each coach total _____ no. roof ventilation units are provided. A) 2 B) 3 C) 4 D) 54	A
272	In Siemens EMU _____ is the only MCB should be set in both driving cab otherwise all VCB open and Panto drop. A) EBL 1 B) EBL3 C) Emergency Off D. AWS	C
273	In three phase EMU, the speed of train in maintenance mode _____ kmph and in RDM _____ Kmph. A) 30/60 B) 15/30 C) 15/45 D) 15/60	D
274	In three phase EMU, ESMON has _____ memory cards. A) 2 B) 3 C) 4 D) 1	A
275	In three phase EMU, ESMON can record _____ to _____ days of data A) 30/60 B) 60/120 C) 45/60 D) 60/90	D
276	In Bombardier EMU, auto drain valve is provided on _____ Reservoir of _____ coach. A) Main, MC B) Main, DTC C) Panto, MC D) Main, TC	B
277	In three phase EMU, weight of train transferred on _____ suspension first and then on _____ suspension. A) Primary/Secondary B) Only Primary C) Secondary/Primary D) Only Secondary	C
278	In three phase EMU, Deadman device activate at speed more than _____ Kmph A) 5 B) 3 C) 4 D) 10	A
279	In EMU trains, whenever brake binding of _____ is isolated, train is cancel from passenger service. A) Driving Cab B) Shunting cab C) Guard Cab D) Both A and C	D
280	Motorman of EMU train is advised to isolate _____ in case of any TSD/TSP A) Deadman Device B) PIS C) AWS D) Parking brake	C

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281	In EMU trains, Parking brake automatically apply when MR pressure < _____ kg/cm ² and releases when MR pressure > _____ kg/cm ² . A) 5.0/5.0 B) 5.0/2.0 C) 2.0/3.0 D) 0.0/5.0	C
282	In three phase EMU, while braking, if OHE becomes non receptive, ED brakes fail, energy is dissipated in _____ for _____ seconds. A) DBR/2 B) Dropper/2 C) DBR/3 D) DBR/4	A
283	In Mumbai suburban section under worst flooded track condition train can be worked at _____ Kmph, if water level is upto _____ mm from rail level. A) 10/200 B) 10/150 C) 15/150 D) 15/120	B
284	In Mumbai suburban section when train cannot be driven from driving cab, section can be cleared from shunting cab at speed not exceeding _____ Kmph. A) 15 B) 20 C) 10 D) 30	A
285	In three phase EMU, ECC means _____ A) Electrical Control Cabinet B) Electrical Control Cab C) Earth Current Control D) None of these	A
286	In three phase EMU, EDC means _____ A) Electrical Drive Cabinet B) Electrical Distribution Cabinet C) Earth Distribution Control D) None of these	B
287	In three phase EMU, TCC mean _____ A) Total Current Control B) Traction Current Control C) Traction Control Cabinet D) None of these	C
288	In three phase EMU, LCM means _____ A) Line Control Module B) Live Control Module C) Line Converter Module D) None of these	C
289	In three phase EMU, MCM means _____ A) Motor Control Management B) Motor Converter Module C) Main Control Module D) None of these	B
290	In three phase EMU, ACM means _____ A) Auxiliary Control Module B) Auxiliary Converter Module C) Auxiliary Control Management D) None of these	B
291	In Mumbai Suburban section AWS was commissioned in _____ by M/s _____ A) 1987/Siemens B) 1987/Medha C) 1995/Siemens D) 1995/Medha	A
292	In case of leakage on Auxiliary reservoir under intermediate coach close _____ cock & work _____. A) BPCC , Cancel B) MRCC , Normal C) Auto cock , Cancel D) Auto cock, Normal	D
293	In BT rake, Vmax is _____ kmph when one coach brake isolated and _____ kmph when one Air spring failed. A) 101 , 65 B) 92 , 60 C) 101 , 60 D) 92 , 65	C
294	In Siemens, when traction not available check MCB _____ may be tripped. A) Master control B) EBL 2 C) SKS 12 or SKS 13 D) MVB line A or MVB line B	A
295	In BT if all MACs not working & MAC symbol RED give _____ & when WHITE give _____. A) Start all MAC , Fault reset B) Fault reset , Start all MAC C) Critical reset , start all MAC D) Test reset , Start all MAC	B
296	If Master Controller MCB trips in SIEMENS rake, _____ Kg./sq.cm brakes do not release. A) 1.2 B) 1.6 C) 0.8 D) 1.4	C
297	In Siemens if EBL1 MCB tripped then close _____ cocks in both cabs & Switch OFF _____ Toggle switch one by one in both cabs & try to reset MCB. A) BPCC , Pilot valve toggle SW. B) Auto Cock , Pilot valve toggle SW. C) DMC , Pilot valve toggle SW. D) EMV , Pilot valve toggle SW	C
298	If EBL 3 MCB trips in SIEMENS rake, _____ Kg./sq.cm brakes do not release. A) 0.8 B) 1.2 C) 1.6 D) 1.4	B

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299	In MEDHA rake Max. Electrical brake force /unit is A) 200 KN B) 185 KN C) 127.5 KN D) 192 KN	C
300	In MEDHA rake Max. total Brake force / unit is A) 200 KN B) 185 KN C) 193.3 KN D) 210 KN	C
301	Rating of MEDHA rake transformer is A) 1300 KVA B) 1300 KV C) 1250 KV D) 1216 KVA	A
302	MCG means A) Mobile control Gateway B) Mobile Communication Gateway C) Motor control Gateway D) None of these.	B
303	If Cab Occupied MCB trips in SIEMENS rake, Kg./sq.cm brakes do not release. A) 0.8 B) 1.2 C) 1.4 D) 1.6	B
304	MEDHA Traction motor insulation material is of A) A-CLASS B) F-CLASS C) E-CLASS D) C-CLASS	D
305	VVVF is produced with the help of A) SIBAS B) SIBCOS C) LCM D) PWMI	D
306	Transformer rating of BT rake is A) 1250 KVA B) 1275 KVA C) 1216 KVA D) 1300 KVA	C
307	In case of emergency OFF Push button pressed in DTC of Bombardier rake following indication will come. A) CB Open , Panto lower with Black Back Ground and EBL Black B) CB Open Black , Panto lower Black , EOL Orange C) CB Open Black , Panto lower Black , EOL Black D) None of these	B
308	EBL-3by pass switch is pertaining to A) Siemens rake B) BT rake C) MEDHA rake D) AC BHEL rake	A
309	In BT and MEDHA EBL can be isolated in A. Normal mode B. RDM C. Single unit operation mode D. Any of these	B
310	In BT, rake ICS & DCS is ON and Cab not getting occupied, then Switch ON First- A) Cab Occupied selector Switch B) Isolate EBL C) ICS Bypass switch D) BRL Bypass Switch	C
311	Total there are _____ brake cylinders in Siemens ,BT and MEDHA in DTC including Parking Brake Cylinder A) 4 B) 6 C) 8 D) 12	D
312	Capacity of main spring air reservoir is A) 40 ltr. B) 100 ltr. C) 125 ltr. D) 150 ltr.	D
313	Bell code to be given by Guard to motorman after TSR over is A) 00-00-00 B) 000 C) 0-0 D) 000-000	C
314	Motorman will press Vigilance push button for _____ sec. to conduct functional test of AWS. A) 4 Seconds B) 2 Seconds C) 6 Seconds D) 8 Seconds.	D
315	Whistle code while passing Auto signal at On is A) Two long B) One pause one C) One long D) Two pause two	C
316	In case of MR leakage on hose pipe in BT, close _____ cocks on both ends of it and work the train normal. A) BPCC B) Main MR Cock C) MRCC D) EP Cock	C
317	Following switch not available in BHEL rake A) Cruise control B) Fault reset C) Train off operation D) Single unit operation	D
318	In BHEL rake Driver login screen will appear with what speed when DCS key made on and Parking Brake not released A) 20 KMPH B) 110 KMPH C) 112 KMPH D) 10 KMPH	A
319	Colour code Bogie Cock is A. Red B. Yellow C. Blue D. Green.	B
320	VCB opening time is less than A) 100 ms B) 60 ms C) 180 ms D) 300 ms	B

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321	VCB closing time is less than _____. A) 100 ms B) 60 ms C) 180 ms D) 145 ms	D
322	In SIEMENS rake CB opens and symbol will turn _____ background when power trips. A) Red B) Black C) Grey D) Orange	C
323	MCU is located in _____. A) Motor Coach B) HT Compartment C) DTC D) None of these.	A
324	Total no. of electric jumper between B & C Coaches in SIEMENS rake is _____. A) 4 B) 6 C) 8 D) None of these.	C
325	Air leakage on MR Hose pipe can be isolated by closing _____ Cock. A) Any MRCC B) Both BPCC C) BPCC and MRCC D) Both MRCC	D
326	Whistle code for Alarm chain pulling is _____. A) Two short one long B) One pause one C) One long D) Two pause two	A
327	Holding Brakes are released from _____ menu of BT rake. A) Brake B) Brake Test C) Drive/Brake D) None of these.	B
328	Maintenance login not required for EP Brake isolation in _____ rake. A) Medha B) SIEMENS C) BT D) None of these.	C
329	Fault reset command given in which rake when ODD operated. A) BT B) BHEL C) SIEMENS D) Medha	D
330	Log IN code for Maintenance mode in AC BHEL rake is _____. A) 654321 B) 8888 C) 888888 D) 123456	A
331	In Siemens EMU _____ Jumper will drop between 5th and 6th Coach when master control MCB tripping in ON Position of Master Controller. A) B B) C C) D D) F	D
332	Maximum speed of the Train in Special RDM in Medha rake is _____ kmph. A) 30 B) 60 C) 75 D) Normal	D
333	Log IN code for Maintenance mode in Medha rake is _____. A) 654321 B) 8888 C) 888888 D) 123456	C
334	When DCS Switch to operate in RDM in BT rake, what happens _____. A) All CBs will open B. All Pantos will drop C. A & B both D. None of these.	A
335	Maintenance login required for EP Brake isolation in _____ rake. A) Medha B) SIEMENS C) BT D) None of these.	A
336	Log in code for Guard mode in BHEL rake is _____. A) 123456 B) 654321 C) 987654 D) 456789	C
337	Speed restriction override of air spring in Bombardier rake is given in _____. A) Driver mode B) Maintenance mode C) A and B both D) None of these	B
338	In which rake, when DCS key turn in RDM mode and all CB open ? A) MEDHA B) SIEMENS C) BT D) BHEL	C
339	New wheel diameter of EMU rakes is _____. A) 952 mm B) 855 mm C) 915 mm D) 877 mm	A
340	Condemning diameter of wheel for motor coach is _____. A) 867 mm B) 877 mm C) 865 mm D) 857 mm	B
341	Condemning diameter of wheel fitted in HDTC is _____. A) 857 mm B) 865 mm C) 877 mm D) 885 mm	C
342	Condemning diameter of wheel in TC of conventional rake _____. A) 857 mm B) 865 mm C) 877 mm D) 912 mm	C
343	Condemning diameter of solid wheel (casting type) fitted in HDTC is _____. A) 877 mm B) 865 mm C) 857 mm D) 885 mm	A
344	Sharp flange for new wheel is _____. A) 22 mm B) 29 mm C) 28.5 mm D) 16 mm	A
345	Limit for sharp flange is _____. A) 16 mm B) 15 mm C) 18 mm D) 14 mm	A
346	Thin flange for new wheel is _____. A) 29 mm B) 22 mm C) 19 mm D) 28.5 mm	A

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347	Limit for Thin flange for wheel is _____ A) 29 mm B) 22 mm C) 19 mm D) 28.5 mm	B
348	Sharp flange is measured from top tip to below _____ A) 5 mm B) 13 mm C) 9 mm D) 16 mm	A
349	Thin flange is measured from top tip to below _____ A) 5 mm B) 13 mm C) 16 mm D) 22 mm	B
350	EMU rake wheel distance is _____ A) 1600 mm B) 1500 mm C) 1676 mm D) 1650 mm	A
351	EMU wheel disk diameter is _____ A) 877 mm B) 952 mm C) 807 mm D) 915 mm	C
352	Buffer height of EMU rake is _____ A) 1035 mm B) 1015 mm C) 952 mm D) 1050 mm	A
353	Deep flange for new wheel is _____ A) 28.5 mm B) 30.5 mm C) 22 mm D) 29 mm	A
354	Permissible limit for deep flange is _____ A) 30 mm B) 35 mm C) 22 mm D) 29 mm	A
355	Max. limit for flat wheel as per RDSO instruction _____ A) 50 mm B) 60 mm C) 55 mm D) 52 mm	B
356	Acceleration of 3-phase Bombardier EMU rake is _____ A) 0.54 m/s ² B) 0.38 m/s ² C) 0.84 m/s ² D) 0.76 m/s ²	A
357	Acceleration of 3-phase Medha Underslung EMU rake is _____ A) 0.54 m/s ² B) 0.46 m/s ² C) 0.84 m/s ² D) 0.751 m/s ²	D
358	Deceleration rate of three phase EMU rake is _____ A) 0.60 m/s ² B) 0.9 m/s ² C) 0.76 m/s ² D) 0.38 m/s ²	C
359	Max. hollow tyre limit is _____ A) 5 mm B) 15 mm C) 10 mm D) 16 mm	A
360	Max. groove tyre limit is _____ A) 5 mm B) 15 mm C) 10 m D) 16 mm	A
361	Colour of EP Cock is _____ A) Green B) YellowC) White D) Red	D
362	Colour of Auto cock is _____ A) Green B) Yellow C) White D) Red	C
363	Colour of bogie cock is _____ A) Green B) Yellow C) White D) Red	B
364	Colour of Air spring isolating cock is _____ A) Green B) Yellow C) Blue D) Red	C
365	ABC Axle box clearance in EMU rake of Trailor coach _____ A) 43 mm B) 31 mm C) 40 mm D) 95 mm	A
366	In AC BHEL rake (7000 series) parking brake is fitted in _____ A) Every DMC B) Every NDMC C) DMC & NDMC D) TC	C
367	In BT rake (5000 series) parking brake is fitted in _____ A) Every coach C) Every B coach C) Every C coach D) DTC only	C
368	ABC Axle box clearance in EMU rake of Motor coach HT side _____ A. 43 mm B) 31 mm C) 40 mm D) 95 mm	B
369	ABC Axle box clearance in EMU rake of Motor coach non-HT side _____ A. 43 mm B) 31 mm C) 40 mm D) 95 mm	B
370	BB- Bogie to Bolster clearance in EMU rake is _____ A) 43 mm B) 31 mm C) 40 mm D) 95 mm	C
371	BC- Bogie to Coach clearance in EMU rake is _____ A) 43 mm B) 31 mm C) 40 mm D) 95 mm	D
372	Free height of dashpot spring is _____ A) 250 mm B) 255 mm C) 200 mm D) 225 mm	A

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373	Minimum cattle guard height in EMU rake is _____ A) 152 mm B) 180 mm C) 212 mm D) 215 mm	A
374	What will be the Panto contact pressure, if panto pan of copper strip is provided A) 8.5 kg/cm ² B) 7.5 kg/cm ² C) 10.0 kg/cm ² D) 9.0 kg/cm ²	A
375	What will be the Panto contact pressure, if panto pan of carbon strip is provided A) 8.5 kg/cm ² B) 7.5 kg/cm ² C) 10.0 kg/cm ² D) 9.0 kg/cm ²	B
376	Max. gradient limit for holding EMU rake on parking brake is _____ A) 1:100 B) 1:150 C) 1:180 D) 1:200	A
377	Green test in lifting shed for DC traction motor supply is given to _____ A) 80-100 vdc B) 200-300 vdc C) 500-750 vdc D) 300-500 vdc	A
378	Green test in lifting shed for AC traction motor supply is given to _____ A) 200-250 v 3-phase AC B) 3-phase VVVF C) 200-300 v 3-phase AC D) 500-700 v 3-phase AC	A
379	RDSO located at _____ A) Kolkata B) Lucknow C) Chennai D) Allahabad	B
380	COFMOW located at _____ A) New Delhi B) Mumbai C) Chennai D) Lucknow	A
381	CORE (Railway Organisation for Railway Electrification) located at _____ A) Kolkata B) Lucknow C) Allahabad D) Bangaluru	C
382	Rail Wheel Factory located at _____ A) Bangalore B) Chennai C) Hyderabad D) Vishakhapatnam	A
383	CAMTECH(Centre for Advanced Maintenance Technology) located at _____ A) Bangalore B) Indore C) Bhopal D) Gwalior	D
384	RCF(Rail Coach Factory) located at _____ A) Chittaranjan B) Chennai C) Kapurthala D) Patiala	D
385	MCF(Modern Coach Factory) located at _____ A) Gaya B) Rae Bareli C) Madhepura D) Patiala	B
386	Diesel Loco Modernisation Works located at _____ A) Patiala B) Kapurthala C) Varanasi D) Chittaranjan	A
387	DLW- Diesel Locomotive Works located at _____ A) Varanasi B) Chennai C) Kapurthala D) Patiala	A
388	ICF- Integral Coach Factory located at _____ A) Chennai B) Rae Bareli C) Kapurthala D) Patiala	A
389	During weight test, height is found between _____ mm, then Blue paint shall provided on helical spring A) 211-214 mm B) 206-210 mm C) 215-218 mm D) 221-224 mm	A
390	During weight test, height is found between _____ mm, then Green paint shall provided on helical spring. A) 211-214 mm B) 206-210 mm C) 215-218 mm D) 221-224 mm	C
391	During weight test, height is found between _____ mm, then Yellow paint shall provided on helical spring. A) 211-214 mm B) 206-210 mm C) 215-218 mm D) 221-224 mm	B
392	Newly adopted schedule for EMU rake for Trip inspection is _____ A) 15 days B) 10 days C) 21 days D) 20 days	A
393	Ultrasonic test (UST) for EMU schedule is _____ A) 150 days B) 180 days C) 90 days D) 45 days	B
394	POH schedule for EMU rake is _____ A) 18 months B) 12 months C) 24 months D) 36 months	A
395	Washing schedule of EMU rake is _____ A) 10 days B) 20 days C) 21 days D) 15 days	A
396	Rehabilitation schedule of EMU rake is _____ A) 10 year B) 12/15 year C) 15/20 year D) 20-25 year	B

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397	Inspection schedule _____ IA for EMU rake is A) 45 days B) 60 days C) 21 days D) 30 days	A
398	First POH for new EMU rake is scheduled on _____ A) 18 months B) 24 months C) 12 months D) 30 months	B
399	Parking brake gauge shows _____ pressure in release position. A) 1.2 kg/cm ² B) 1.6 kg/cm ² C) 5.0 kg/cm ² D) zero	C
400	Parking brake gauge shows _____ pressure in applied position. A) 1.2 kg/cm ² B) 1.6 kg/cm ² C) 5.0 kg/cm ² D) zero	D
401	Parking brake main reservoir capacity _____ A) 6L B) 10L C) 9L D) 8L	C
402	The length of Neutral section provided in suburban section is _____ A) 7.8 mtr B) 41.4 mtr C) 6.6 mtr D) 5.5 mtr	C
403	Specific gravity of battery in fully charged condition is _____ A) 1.00 B) 1.700 C) 1.220 D) 1.160	C
404	Specific gravity of battery in fully discharged condition is _____ A) 1.00 B) 1.700 C) 1.220 D) 1.160	D
405	Battery set in BHEL AC EMU rake is fitted under frame of _____ A) B-Coach B) C-Coach C) A-Coach D) All coaches	B
406	Battery capacity fitted in BT rake is _____ A) 300 AH B) 90 AH C) 120 AH D) 250 AH	C
407	Battery capacity fitted in BHEL AC EMU rake is _____ A) 300 AH B) 90 AH C) 200 AH D) 250 AH	A
408	Which make battery is installed in BHEL AC EMU rake _____ A) Amar Raja B) L&T C) Crompton Greaves D) Nelco	A
409	Specific gravity of battery is measured by _____ A) Ammeter B) Voltmeter C) Hydrometer D) Anemometer	C
410	Positive plate of Battery is made of _____ A) Lead dioxide B) Spongy lead C) Magnesium D) Carbon	A
411	Negative plate of Battery is made of _____ A) Lead dioxide B) Spongy lead C) Magnesium D) Carbon	B
412	Acid filled in flooded battery is _____ A) H ₂ SO ₄ B) KOH C) NaOH D) HCl	A
413	Container of flooded battery is made up of _____ A) Rubber/plastic B) Metallic C) Wooden D) Asbestos	A
414	Seperator in flooded battery is made up of _____ A) Rubber B) Glass/plastic C) Wooded D) Carbon	B
415	To increase battery voltage batteries to be connected in _____ A) Series B) Parallel C) Series & Parallel D) Series or Parallel	A
416	The power to weight ratio of Induction motor is _____ than DC motor. A) Less B) More C) Same D) None of these	B
417	In Mumbai Suburban section AAWS was commissioned in _____ by M/s _____ A) 1987/Siemens B) 2014/Medha C) 1995/Siemens D) 1995/Medha	B
418	Rating of MEDHA rake transformer is _____ A) 1300 KVA B) 1300 KV C) 1250 KV D) 1216 KVA	A
419	Rating of Siemens rake transformer is _____ A) 1300 KVA B) 1300 KV C) 1250 KV D) 1216 KVA	C
420	Rating of Bombardier rake transformer is _____ A) 1300 KVA B) 1300 KV C) 1250 KV D) 1216 KVA	D
421	Rating of MEDHA Underslung rake transformer is _____ A) 1300 KVA B) 1300 KV C) 2880 KV D) 1216 KVA	C
422	Rating of MEDHA Onboard A/C rake transformer is _____ A) 1300 KVA B) 1300 KV C) 1250 KV D) 1552 KVA	D

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423	Rating of BHEL rake transformer is _____ A) 1578 KVA B) 1300 KV C) 1250 KV D) 1216 KVA	A
424	Rating of MEDHA rake Traction motor is _____ A) 932V, 240kW B) 1171V, 268kW C) 945V, 247kW D) 1140V, 285kW	B
425	Rating of Bombardier rake Traction motor is _____ A) 1171V, 268kW B) 945V, 247kW C) 1140V, 285kW D) 932V, 240kW	B
426	Rating of Siemens rake Traction motor is _____ A) 1171V, 268kW B) 1140V, 285kW C) 945V, 247kW D) 932V, 240kW	D
427	Rating of MEDHA under slung rake Traction motor is _____ A) 945V, 247kW B) 1171V, 268kW C) 932V, 240kW D) 1375V, 248kW	D
428	Rating of MEDHA Onboard A/C rake Traction motor is _____ A) 932V, 240kW B) 1171V, 268kW C) 945V, 247kW D) 1140V, 285kW	B
429	Rating of BHEL A/C rake Traction motor is _____ A) 945V, 247kW B) 932V, 240kW C) 1140V, 285kW D) 1171V, 268kW	C
430	Unmanned/Holding brake in Bombardier rake _____ A) 1.2/0.8 Kg/cm ² B) 0.8/1.2 Kg/cm ² C) 1.6/1.2 Kg/cm ² D) 1.2/1.2 Kg/cm ²	A
431	Unmanned/Holding brake in BHEL rake _____ A) 1.2/0.8 Kg/cm ² B) 0.8/1.2 Kg/cm ² C) 1.6/0.8 Kg/cm ² D) 1.2/1.2 Kg/cm ²	C
432	Unmanned/Holding brake in Medha Underslung A/C rake _____ A) 1.2/0.8 Kg/cm ² B) 0.8/1.2 Kg/cm ² C) 1.6/1.2 Kg/cm ² D) 3.5/2.0 Kg/cm ²	D
433	Unmanned/Holding brake in Medha Onboard A/C rake _____ A) 1.2/0.8 Kg/cm ² B) 1.6/1.2 Kg/cm ² C) 1.6/0.8 Kg/cm ² D) 1.2/1.2 Kg/cm ²	B
434	Parking brake in Medha EMU rake are provided on _____ wheels of _____ coach A) 1,3,5,6/DTC/NDTC B) 1,3,6,7/MC/DTC C) 1,3,5,7/DTC/NDTC D) 2,3,5,6/both DTC	C
435	Parking brake in BHEL EMU rake are provided on _____ wheels of _____ coach A) 1,3,5,7/DMC/NDMC B) 1,3,6,7/all MC C) 1,3,5,8/all C coaches D) 2,3,5,6/all DTC	A
436	Parking brake in Medha underslung EMU rake are provided on _____ wheels of _____ coach A) 1,3,5,7/all C coaches B) 1,3,5,7/all MC C) 1,3,5,8/all MC D) 2,3,5,6/all MC	B
437	Operating system in Siemens EMU rake _____ A) MITRAC B) MAE675E C) GERSYS D) SIBAS	D
438	Operating system in Bombardier EMU rake _____ A) MITRAC B) MAE675E C) GERSYS D) SIBAS	A
439	Operating system in BHEL A/C EMU rake _____ A) MITRAC B) MAE675E C) GERSYS D) SIBAS	C
440	Operating system in Medha under slung A/C EMU rake _____ A) MITRAC B) MAE675UE C) GERSYS D) SIBAS	B
441	Operating system in Medha Onboard A/C EMU rake _____ A) MITRAC B) SIBAS C) GERSYS D) MAE675 OA	D
442	Rake Formation of siemens/BT/Medha EMU rake from VR end _____ A) CBA, CBA, CBA, ABC B) CBA, ABC, ABC, ABC C) BCA, ACB, BCA, ACB D) BCBA, BCBA, ABCB	B
443	Rake Formation of BHEL/Medha Onboard A/C EMU rake from VR end _____ A) CBA, CBA, CBA, ABC B) CBA, ABC, ABC, ABC C) BCA, ACB, BCA, ACB D) BCBA, BCBA, ABCB	C
444	Rake Formation of Medha underslung A/C EMU from CCG end _____ A) CBA, CBA, CBA, ABC B) CBA, ABC, ABC, ABC C) BCA, ACB, BCA, ACB D) BCBA, BCBA, ABCB	D
445	Maximum speed/Test speed of Siemens EMU _____ Kmph A) 100/110 B) 100/120 C) 110/120 D) 110/130	A
446	Maximum speed/Test speed of BHEL A/C EMU _____ Kmph A) 100/110 B) 100/120 C) 110/120 D) 110/130	A

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447	Maximum speed/Test speed of Medha underslung A/C EMU _____ Kmph A) 100/110 B) 100/120 C) 110/120 D) 110/130	C
448	Acceleration/deceleration of Siemens/BT/ Medha EMU _____ m/s ² A) 0.54/0.76 B) 0.8/0.84 C) 0.75/0.76 D) 0.76/0.54	A
449	Acceleration/deceleration of BHEL EMU _____ m/s ² A) 0.54/0.76 B) 0.8/0.84 C) 0.75/0.76 D) 0.76/0.54	A
450	Acceleration/deceleration of Medha underslung EMU _____ m/s ² A) 0.54/0.76 B) 0.8/0.84 C) 0.75/0.76 D) 0.76/0.54	C
451	ICS interlock is used for Cab Occupation in _____ EMU rake A) Siemens B) Bombardier C) MEDHA D) A and C	D
452	ICS interlock is used for Cab Occupation in _____ EMU rake A) Siemens B) Both A and C C) BHEL D) None of these	D
453	ICS interlock is not used for Cab Occupation but for traction in _____ EMU rake A) Siemens B) Medha C) BHEL D) Bombardier	C
454	ICS interlock is not used for Cab Occupation in _____ EMU rake A) Siemens B) Both A and C C) Medha D) Bombardier	A
455	High speed bolterless bogie is used in _____ EMU rake A) Siemens, Bombardier B) Medha underslung C) BHEL D) None of these	B
456	Disc brake system is used in _____ EMU rake A) Siemens, Bombardier B) Medha C) BHEL D) Medha underslung	D
457	No. of transformer Secondary winding for traction and auxiliary in Siemens EMU rake _____ A) 2, 2 B) 2, 0 C) 4, 2 D) 4,0	B
458	No. of transformer Secondary winding for traction and auxiliary in Bombardier EMU rake is _____ A) 2, 2 B) 2, 0 C) 3, 2 D) 3,0	B
459	No. of transformer Secondary winding for traction and auxiliary in Medha underslung A/C EMU rake _____ A) 2, 2 B) 2, 0 C) 4, 2 D) 4,0	C
460	No. of transformer Secondary winding for traction and auxiliary in BHEL A/C EMU rake _____ A) 2, 1 B) 2, 0 C) 4, 1 D) 4,0	A
461	Light and Fans work on _____ supply in Medha underslung A/C EMU. A) 110V AC B) 141V AC C) 141 V DC D) 110 V DC	D
462	Regeneration percentage in Siemens/Bombardier/ Medha underslung EMU rakes is more than _____ A) 30/30/36 B) 30/30/30 C) 30/36/36 D) 36/36/36	A
463	Light and Fans work on _____ supply in EMU rakes. A) 415 V AC B) 110V AC C) 141 V DC D) 230 V AC	B
464	Separate auxiliary Converter is used in _____ EMU rake for Compressor. A) Siemens, Bombardier B) Medha C) BHEL D) Medha underslung	C
465	RDM and Reverse Direction speed in all EMU rakes is _____ Kmph. A) 30/15 B) 60/15 C) 60/30 D) 60/60	B
466	In Medha EMU rake Data can be downloaded through _____ system A) MCG B) ERMS C) MVB D) WTB	B
467	In Bombardier EMU rake Data can be downloaded through _____ system A) MCG B) ERMS C) MVB D) WTB	A
468	Converters IGBT cooling system in Bombardier EMU rake is _____ A) Self cooling B) Forced blower colling C) Oil cooling D) Water cooling	D
469	Converters IGBT cooling system in Medha EMU rake is _____ A) Self cooling B) Forced air colling C) Oil cooling D) Water cooling	B
470	Air spring Failure indication is not provided _____ EMU rake. A) BHEL B) Medha C) Siemens D) Medha underslung	C

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471	Single unit operation facility is not provided _____ EMU rake. A) BHEL B) Medha C) Siemens D) A and C	D
472	Single unit operation facility is provided _____ EMU rake. A) BHEL B) Medha C) Bombardier D) B and C	D
473	ADD and ODD both devices are provided in Pantograph of _____ EMU rake. A) BHEL B) Medha C) Bombardier D) B and C	D
474	ADD and ODD devices are provided in Pantograph of _____ EMU rake. A) Siemens B) Medha C) Bombardier D) B and C	D
475	Only ADD device is provided in Pantograph of _____ EMU rake. A) Siemens B) Medha C) Bombardier D) BHEL	D
476	In case of ACM failure changeover contactors are provided in _____ EMU rake. A) Siemens B) Medha C) BHEL D) All of these	D
477	In case of ACM failure changeover is taken through train line supply in _____ EMU rake. A) Medha B) Bombardier C) BHEL D) Siemens	B
478	In Siemens rake if Emergency Off pushbutton is pressed and is defective then bypass emergency Off in _____ Cab. A) Same B) Guard C) Both D) Motorcoach	C
479	In Medha underslung EMU DBR is provided in _____. A) Roof B) HTC C) MC D) Undertruck	D
480	DBR rating of Siemens rake is _____. A) 2x3 Ohm B) 3x2 Ohm C) 2x1.73 Ohm D) 3x1.73 Ohm	A
481	Function of DBR in 3 phase EMU rake is _____. A) Dynamic brake B) DC link Overvoltage protection C) Regeneration brake D) A and B	D
482	Revised Periodicity of IC schedule for 3 Phase EMUs is _____ days. A) 10 B) 45 C) 180 D) 240	D
483	Revised Periodicity of TI schedule for 3 Phase EMUs is _____ days. A) 10 B) 45 C) 15 D) 20	C
484	Revised Periodicity of IA schedule for 3 Phase EMUs is _____ days. A) 60 B) 45 C) 15 D) 20	A
485	Revised Periodicity of UI (UST) schedule for 3 Phase EMUs is _____ days. A) 180 B) 210 C) 45 D) 120	B
486	Revised Periodicity of POH schedule for 3 Phase EMUs is _____ months. A) 18 B) 21 C) 24 D) 12	C
487	In Medha underslung EMU Pantograph is provided in _____ Coach. A) DMC B) TC C) MC D) TC1	B
488	In Medha underslung EMU Compressor is provided in _____ Coach. A) DMC B) TC C) MC D) TC1	C
489	In BHEL A/C EMU Compressor is provided in _____ Coach. A) DMC B) TC2 C) MC D) TC1	D
490	In Medha underslung EMU Parking brakes are provided in _____ Coach. A) All MC B) All TC2 C) Both DMC D) TC1	A
491	In 3 phase EMU Parking brakes are provided in _____ Coach. A) All B B) All C C) All A D) Both DTC	B
492	In BHEL A/C EMU Parking brakes are provided in _____ Coach. A) All DMC/NDMC B) All TC2 C) All TC1 D) Both DMC	A
493	In 12 Car 3 phase EMU Total no. of Fire extinguisher _____. A) 4 B) 8 C) 6 D) 2	C
494	In BHEL A/C and Medha underslung EMU Total no. of Fire extinguisher _____. A) 36 B) 8 C) 6 D) 32	D
495	In BHEL A/C and Medha underslung EMU each RMPU capacity _____. A) 1x7.5t B) 2x7.5t C) 3x7.5t D) 4x7.5t	B

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496	In 12 Car 3 phase EMU each RMVU/AHU has _____ blowers A) 4 B) 8 C) 6 D) 2	D
497	In 12 Car 3 phase EMU capacity of Auxiliary Compressor is _____. A) 1 HP B) 3HP C) 1kW D) 2kW	A
498	In Medha underslung EMU auxiliary Compressor is provided in _____ coach. A) undertruck f MC B) HTC of TC C) undertruck of TC D) HTC of MC	C
499	In 12 Car 3 phase EMU capacity of Auxiliary Reservoir is _____. A) 40L B) 125L C) 150L D) 75L	B
500	In 12 Car 3 phase EMU capacity of Supplementary Reservoir is _____. A) 60L B) 125L C) 150L D) 80L	B
501	In 12 Car 3 phase EMU capacity of Air Spring auxiliary Reservoir is _____. A) 20L B) 30 L C) 9L D) 150L	A
502	In 12 Car 3 phase EMU capacity of Parking brake Reservoir is _____. A) 20L B) 30 L C) 9L D) 150L	C
503	In 12 Car 3 phase EMU capacity of Equilising Reservoir is _____. A) 20L B) 30 L C) 6L D) 9L	D
504	In Medha EMU Holding brake can be released from _____ menu of DDU. A) Brake B) Brake Test C) EP brake D) Drive/Brake	A
505	In Bombardier EMU Holding brake can be released from _____ menu of HMI. A) Brake B) Brake Test C) EP brake D) Drive/Brake	B
506	In BHEL A/C EMU Holding brake can be released from _____ menu of DDU. A) Brake B) Brake Test C) EP brake D) Drive/Brake	B
507	In BHEL A/C EMU EP brake binding can be isolated from _____ menu of DDU. A) Brake B) Brake Test C) EP brake D) Drive/Brake	C
508	In Medha Onboard EMU EP brake binding can be isolated from _____ menu of DDU. A) EP brake isolation B) Brake Test C) Brake D) Drive/Brake	A
509	In Bombardier EMU EP brake binding can be isolated from _____ menu of DDU. A) Brake B) Brake Test C) EP brake D) Drive/Brake	A
510	In Bombardier EMU both DTC BP can seen from _____ menu of HMI. A) Brake B) Brake Test C) EP brake D) Emergency brake	D
511	In Medha EMU both DTC BP can seen from _____ menu of DDU. A) Brake B) A and D C) EP brake D) Air spring	B
512	In Medha EMU _____ MCB should be set for High Priority mode A) Cab Occupy control 1 B) Cab Occupy control 2 C) Cab Occupy control 1 and 2 both D) Master Controller	B
513	In Bombardier EMU _____ MCB should be set for High Priority mode A) GC-F1 B) GC-F2 C) GC-F1 and GC-F2 both D) Master Controller	B
514	In Siemens EMU if Master controller MCB is tripped after taking traction _____ Kg/cm2 brake does not release A) 0.8 B) 1.2 C) 1.6 D) 1.8	A
515	In Medha underslung EMU total no. of Parking brake cylinders are _____. A) 16 B) 8 C) 24 D) 20	C
516	In 3 phase EMU power circuit fuction is to convert 25kV OHE supply to _____. A) 3 phase 415V B) 3 phase 950V C) A and D D) 3 ph VVVF	D
517	In 3 phase EMU Line Conveter converts transformer AC supply to _____. A) Variable DC B) Fixed DC C) 1800V AC D) 3 ph VVVF	B
518	In 3 phase EMU traction Conveter converts DC link voltage to _____. A) 415V AC B) Fixed DC C) 1800V AC D) 3 ph VVVF	D
519	In 3 phase EMU auxiliary Conveter converts DC link voltage to _____. A) 415V AC B) 110V AC C) 110V DC AC D) All	D
520	In Bombardier EMU when Unit brake binding is isolated from HMI, Vmax is _____. A) 82 B) 83 C) 101 D) 75	A

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521	In Siemens EMU when Unit brake binding is isolated by tripping barke control BCU and brake control TCU, speed of train limited to _____. A) 82 B) 75 C) 101 D) 83	B
522	During Dynamic braking : A) Kinetic energy of loco is converted to Electrical Energy B) Electrical energy is converted to mechanical energy, C) Mechanical brakes are applied in loco D) None of them.	A
523	During Regenerative braking: A) Electrical energy produced is converted to heat energy, B) Electrical energy produce is fed to traction motor, C) Electrical energy produced is fed back to OHE D) None of above.	C
524	When OHE > 25 KV and Regeneration brake fails, OHE becomes non receptive, energy is dissipated in _____. A) MCM B) DBR C) LCM D) Chopper	B
525	SIEMENS EMU does not pick up speed more than 10kmph, Energy overview screen displays and no other screen can be selected without giving _____ in case of speed sensor failure. A) Test Reset B) Critical Fault Reset C) Fault Reset D) Speed Reset	D
526	TM symbol 'M' will turn _____ background in the unit where wheel lock is suspected. A) Yellow B) Red C) Grey D) Blue	A
527	Total number of electric couplers (jumpers) between B & C coaches in SIEMENS are _____. A) 4 B) 10 C) 8 D) 6	C
528	In Siemens EMU Ensure ____ & ____ MCBs are SET when No communication message comes on MMI. A) SKS 11 and SKS 12 B) MVB line A & MVB line B C) Cab Occupied D) A and B	B
529	In Siemens EMU Pilot valve isolation switches are normally in _____ position. A) ON B) OFF C) Zero D) None of these	A
530	In Siemens rake Select _____ screen on MMI before conducting brake power test on run. A) Brake B) Top Level C) Brake Test D) Drive/ Brake	D
531	In Siemens rake EBL1 and EBL3 relay circuits are normally _____. A) De-energised B) Energised C) Active D) Charged	B
532	In Siemens rake EBL 2 relay circuit is normally _____. A) De-energised B) Energised C) Active D) Charged	A
533	EMU train cab be worked with maximum _____ bogie isolated from Carshed A) Two B) One C) Three D) Four	B
534	EMU train cab be worked with maximum _____ bogie isolated from Yard A) Two B) One C) Three D) Four	A
535	EMU train cab be worked with maximum _____ bogie isolated while working Online A) Two B) One C) Three D) Four	D

TRD

1	In the vicinity of the 25 KV ac OHE , the heavy induction is developed on -----, which parallel to the 25 KV ac OHE. A) metallic roof of the platform B) fencing near the track C) any other conductor D) all of the above.	D
2	OHE & other railway staff should avoid contact with the rail , when electrical hauled train is within :- A) 50 m B) 200 m C) 250 m D) 500 m	C
3	Distance between two consecutive OHE structures is called :- A) tension length B) span length C) encumbrance D) stagger	B
4	Maximum span length in AC traction is : A) 67.5 meter B) 72 meter C) 63 meter D) 22 meter	B
5	Distance between one anchoring end to other anchoring end of OHE's conductors is called:- A) tension length B) span length C) implantation D) encumbrance	A
6	Maximum tension length in ac traction is:- A) 1500 m B) 1600 m C) 1000 m D) 750 m	A
7	In ac traction, maximum tension length may be permissible in yard :- A) 1500 m B) 1600 m C) 1800 m D) 2000 m	D
8	Which type of overlap is formed at the end of every tension length:- A) insulated overlap B) un-insulated overlap C) either Insulated overlap or un-insulated overlap. D) none of the above.	C
9	Axial distance between catenary & contact wire at the OHE support, in vertical plane is called A) implantation B) gradient of OHE C) encumbrance D) stagger	C
10	In AC traction ,normal encumbrance at support is:- A) 1.9 m B) 1.4 m C) 0.9 m D) 2.0 m	B
11	In AC traction , the axial distance between catenary & contact wire in vertical plane at mid span should not be less then:- A) 150mm B) 170mm C) 180mm D) 270mm	A
12	Change in contact wire height with respect to per unit meter length of contact wire is called : A) gradient of contact wire B) either Gradient of contact wire or track C) gradient of track D) neither gradient of contact wire nor track	A
13	Maximum permissible gradient of contact wire, when max. permissible train speed is more than 100kmph. :- A) 2 mm/m B) 3 mm/m C) 4 mm/m D) 5 mm/m	B
14	Maximum permissible gradient of contact wire, when max. permissible train speed is shunting speed in yard :- A) 3 mm/m B) 4 mm/m C) 5mm/m D) 10 mm/m	D
15	Droppers are used for:- A) leveling the contact wire B) to maintain stagger C) reduced the sag in catenary wire D) none of the above	A
16	Diameter of in-span dropper in ac traction is:- A) 7 mm B) 6.75 mm C) 6 mm D) 5 mm	D

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17	Cross section area of AC catenary wire is :- A) 107 sq. mm B) 98 sq. mm C) 65 sq. mm D) 61 sq. mm	C
18	Diameter of new AC contact wire (107) is:- A) 16.36 mm B) 12.24 mm C) 10.55 mm D) 8.25 mm	B
19	Condemning size of AC contact wire :- A) 8.93 mm B) 8.34 mm C) 8.25 mm D) 8.89 mm	C
20	Condemning size of AC contact wire (107) may be permissible in yard :- A) 8.00 mm B) 8.34 mm C) 8.25 mm D) 8.89 mm	A
21	Cross section area of AC contact wire is :- A) 193 sq. mm B) 158 sq. mm C) 107 sq. mm D) 97 sq. M	C
22	The displacement of contact wire with respect to the pantograph axis is called:- A) implantation B) stagger of contact wire C) gradient of contact wire D) sag	B
23	In AC traction, maximum stagger of contact wire on curved track is:- A) 380 mm B) 300 mm C) 229 mm D) 200 mm	B
24	In AC traction, maximum stagger of contact wire on tangent track is :- A) 380 mm B) 300 mm C) 229 mm D) 200 mm	D
25	Maximum stagger is allowed at mid span is:- A) 229 mm B) 200 mm C) 152 mm D) 100 mm	D
26	Contact wire is placed in zig- zag manner in entire span length , why ? A) to avoid formation of groove on pantopan strip. B) uniform rubbing of pantopan strip within current collection zone. C) to avoid breakdown due to formation of groove in pantopan strip D) all of the above	D
27	OHE conductors are terminated on auto tensioning device (ATD) at both end of tension length on anchoring structures . This type of OHE is called:- A) regulated OHE B) unregulated OHE C) tram way OHE D) compound OHE	A
28	In regulated OHE, Where anticreep point is provided ? A) starting of tension length B) finishing of tension length C) midway of tension length D) all of the above	C
29	Regulated OHE is suitable for the speed: A) above 105 KMPH B) less than 100 KMPH C) upto 80 KMPH D) upto 90 KMPH	A
30	Unregulated OHE is suitable for the speed:- A) above 100 KMPH B) less than 60 KMPH C) upto 80 KMPH D) upto 105 KMPH	D
31	What do mean by the “regulating ratio” of Auto Tensioning Device (ATD) ? A) counter weight : pulleys weight B) weight of OHE in one span length C) tension in OHE : counter weight D) tension in contact wire : counter weight	C
32	What will be the “regulating ratio” of modified 3 pulley block system ATD ? A) 1:1 B) 2:1 C) 3:1 D) 5:1	C
33	What will be the “regulating ratio” of 5- pulley block system ATD ? A) 1:1 B) 2:1 C) 3:1 D) 5:1	D
34	An arrangement of OHE over a track , where two sets of OHE conductors are run parallel to each other for a short distance & provide smooth passage for pantograph, is called:- A) turnout B) crossover C) overlap D) neutral section	C
35	Insulated overlap is required for:- A) OHE sectioning purpose B) to kept OHE in current collection zone at curve C) to maintain height of OHE conductors D) all of the above	A
36	In AC traction , distance between two OHE’s conductor in insulated overlap is kept: A) 500 mm. B) 380 mm. C) 300 mm. D) 200 mm.	A

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37	In AC traction , distance between two OHE's conductor in un-insulated overlap is kept:- A) 375 mm. B) 300 mm. C) 150 mm. D) 200 mm.	D
38	Normally, insulated overlap are employed at the location:- A) SSP B) FP C) switch overlap D) all of the above	D
39	A short dead section of OHE, which separates two adjoining elementary section & provide smooth passage for pantograph is called :- A) insulated overlap B) un-insulated overlap C) neutral section D) all of the above	C
40	Which type of neutral section, you prefer for main line in heavily graded/ suburban section? A) overlap type B) PTFE. Type short neutral section (SNS) C) short neutral section comprising section insulator assembly D) none of the above	B
41	The effective dead length of PTFE. type neutral section (make Arthur flurry) is :- A) 6.5 m B) 5.64 m C) 5.92 m D) 6.21 m	A
42	The Overall length of PTFE type short neutral section assembly (make Arthur flurry) is :- A) 6.5 m B) 5.64 m C) 9.5 m D) 6.21 m	C
43	PTFE stands for :- A) Plastic Tetra Floro Ethane B) Poly Thermo Finials Ethane C) Poly Tetra Floro Ethane D) Poly Tetra Floro Ethylene	D
44	P.T.F.E. type short Neutral section (Arthur flurry) s suitable upto the speed:- A) 70 KMPH B) 100 KMPH C) 200 KMPH D) 140 KMPH	C
45	Which caution boards are provided on OHE masts to vigil the driver of train about the neutral section ahead ? A) 100 m.& 500 m. B) 2000 m. & 1000 m. C) 500 m. & 250 m. D) 250 m. & 150 m.	C
46	A device, which installed in contact wire to separate two elementary section & provide smooth passage for pantograph is called :- A) insulated overlap B) section insulator C) bracket Assembly D) cut-in insulator	B
47	In AC traction, which jumper distribute the current between catenary wire & contact wire ? A) "C" Jumper B) "F" jumper C) "G" jumper D) "S" jumper	A
48	"F" jumpers are provided at :- A) insulated overlap B) un-insulated overlap C) turnout D) anticreep point	A
49	"G" jumper is used at :- A) insulated overlap B) turnout C) both Un- insulated overlap & Turnout D) insulated overlap	C
50	Minimum electrical clearance [long duration] between live & earth for 25 KV AC is :- A) 250 mm B) 320 mm C) 270 mm D) 220 mm	A
51	Minimum electrical clearance [short duration] between live & earth for 25 KV AC is :- A) 390 mm B) 270 mm C) 220 mm D) 200 mm	D
52	Minimum working clearance for 25 KV AC is : A) 500 mm B) 1 m C) 2 m D) 3 m	C
53	Earth resistance when not specified should not be more than :- A) 9 ohm B) 10 ohm C) 5 ohm D) 2.5 ohm	B
54	In 25 KV AC traction , Stay tube insulator is used in cantilever assembly in between :- A) mast fitting & stay tube B) mast fitting & bracket tube C) bracket tube & register arm D) register arm & stay tube.	A
55	In 25 KV AC traction , Bracket tube insulator is used in cantilever assembly in between :- A) mast fitting & stay tube B) mast fitting & bracket tube C) bracket tube & register arm D) register arm & stay tube.	B

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56	9-Ton insulator is used mainly :- A) to support catenary & contact on structure B) anchoring of OHE conductors C) support cross span wire D) support in section insulator assembly	B
57	Normally, two adjacent 25 KV AC traction sub stations works as in :- A) parallel B) series C) independent D) can not say	C
58	Sub- Sectioning & parallel Post (SSP) are employed in OHE due to ? A) to minimise voltage drop B) OHE sectioning purpose C) restrict tension length D) all of the above	B
59	The distance of OHE section between FP & SSP or SSP & SSP or SSP & SP is called :- A) feeding length B) feeding zone C) sector D) sub sector	D
60	The distance of OHE section between FP & SP is called: A) feeding length B) feeding zone C) sector D) sub sector	C
61	The distance of OHE section, for which "a traction transformer will feed power in emergent condition: A) feeding length B) feeding zone C) sector D) sub secto	A
62	The distance of OHE section, for which "a traction transformer will feed power in normal condition : A) feeding length B) feeding zone C) sector D) sub sector	B
63	The shortest section of OHE, which can be isolated through remote control by TPC is called :- A) elementary section B) feeding zone C) sector D) sub sector	D
64	The shortest section of OHE, which can be isolated manually is called :- A) elementary section B) feeding zone C) sector D) sub sector	A
65	Interrupter is a :- A) non automatic type circuit breakers B) automatic type circuit breakers C) both 'a' and 'b' D) neither 'a' nor 'b'	A
66	As a standard practice, the no. plate of OHE structures for UP line will be such as :- A) 75/12, 75/13, 75/14, -----etc. B) 75/12A, 75/13A, 75/14A, -----etc. C) 75/13, 75/15, 75/17, -----etc.. D) 75/13A, 75/15A, 75/17A, -----etc..	C
67	As a standard practice, the no. plate of OHE structures for DN line will be such as :- A) 75/12, 75/13, 75/14, -----etc. B) 75/12, 75/14, 75/16, -----etc. C) 75/13, 75/15, 75/17, -----etc.. D) 75/13A, 75/15A, 75/17A, -----etc..	B
68	The no. plate of OHE structures for loops & sidings line will be such as :- A) 75/101, 75/102, 75/103, -----etc. B) 75/100, 75/102, 75/104, -----etc. C) 75/101, 75/103, 75/105, -----etc.. D) 75/1001, 75/1003, 75/1005, ----etc..	D
69	Magger is used to measure :- A) voltage B) current C) insulation resistance D) all of the above	C
70	A weather is treated as thick, foggy weather , when visibility of the signal can not be seen from the minimum distance :- A) 400 m B) 270 m C) 200 m D) 180 m	D
71	From any live part of the OHE , tree branches should not be nearer than :- A) 0.5 m B) 1 m C) 2 m D) 4 m	D
72	Traffic block is granted to the OHE supervisors for heavy maintenance work by :- A) section controller in consultation with the TPC B) TPC in consultation with the section controller C) section controller with the permission of TPC D) TPC with the permission of section controller	A
73	Power block is granted to the OHE supervisors for heavy maintenance work by :- A) section controller in consultation with the TPC B) TPC in consultation with the section controller C) section controller with the permission of TPC D) TPC with the permission of section controller	D

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74	Which type of power block is required for daily routine maintenance work of OHE on main line ? A) pre-arranged power block B) local power block C) emergency power block D) all of the above	A
75	Which type of power block is required for daily routine maintenance work of OHE in secondary line? A) pre-arranged power block B) local power block C) emergency power block D) all of the above	B
76	A switch gear is device for A) Interrupting an electrical Circuit. B) Switching an electrical circuit. C) Switching and controlling an Electrical circuit D) Swishing controlling and protecting the electrical circuit and equipment.	D
77	A circuit breaker an Equipment which can open or close a circuit under. A) No load condition B) Fault condition C) full load condition D) all above condition.	D
78	An isolator switch to A) An automatic device for breaking circuit. B) A relay operated device for breaking circuit. C) Opens a circuit under no load. D) Opens a circuit under load.	C
79	The insulation of the cable is related with A) Current B) Voltage C) Resistance D) Magnetic flux	B
80	The current capacity of the cable is related with A) Insulation of conductor B) Cross section of conductor C) Armature of the cable D) Length of the cable	B
81	A circuit can be operated A) Manually B) Automatically C) By remote control D) Any of above	D
82	The circuit breakers preferred for extra high tension applications A) Air blast circuit breaker B) SF6 circuit breaker C) Minimum oil circuit breaker D) None of the above	B
83	Under the fault condition the information to the circuit breaker is provided by A) Rewirable fuse B) HRC Fuse C) Relay D) All of the above	C
84	In the event of a fault on connected circuit , A circuit breaker will operate A) Manually B) Manually through control switch C) Automatically D) Depends upon the design	C
85	In a transformer which of the following does not change A) Voltage B) Current C) Frequency D) All of the above	C