

Question Bank on PSI

1. Unit of Current is -----.
2. Unit of Voltage is -----.
3. Unit of Resistance is -----.
4. Ampere is the unit of -----.
5. A volt is the Unit of -----.
6. Ohm is the unit of -----.
7. Ammeter is used for measurement of -----.
8. Voltmeter is used for measurement of -----.
9. Ohmmeter is used for measurement of -----.
10. Multimeter is used for measurement of -----.
11. Unit of Insulation Resistance is -----.
12. The Meter used for measurement of Insulation Resistance is -----.
13. Megger is used for measurement of -----.
14. Mega-Ohms is the unit of -----.
15. $1\text{M}\Omega =$ ----- ohms.
16. In a circuit, the Ammeter shall be connected in -----.
17. In a circuit, the Voltmeter shall be connected in -----.
18. 1 Kilometer = ----- meter.
19. 1 Meter = ----- centimeter.
20. 1 Centimeter = ----- millimeter.
21. 1 Foot = -----inches.
22. 1 Inch = -----centimeters.
23. Unit of electrical energy consumption is -----.
24. Unit of Electrical Power is -----.
25. Horse –Power is the unit of -----.
26. Kilogram-Meter per Second is the unit of -----.
27. 1HP = ----- watts.
28. ----- Circuit converts AC supply into DC supply.
29. ----- Circuit converts DC supply into AC supply.
30. The ideal value of Power Factor is -----.
31. In case of Power Factor, out of 8.0 and 0.88, which one shall be better than 0.80?
32. Maximum voltage for 25 KV AC OHE is -----.
33. Minimum voltage for 25 KV AC OHE is -----.
34. The ideal value of Insulation Resistance is -----.
35. Working Clearance for 25 KV AC OHE is -----.
36. A drawing made by viewing the object right from its top is called as -----.
37. A drawing made by viewing the object right from its front is called as -----.

38. To have complete information of the object from drawing –
- a) Plan is sufficient.
 - b) Plan & Elevation is sufficient.
 - c) Plan, Elevation & End view shall be required.
 - d) Non of these.

39. According to Ohm's law which relation is incorrect?

$$\text{a) } I = \frac{V}{R} \quad \text{b) } R = \frac{V}{I} \quad \text{c) } V = I \times R \quad \text{d) } V = \frac{I}{R}$$

40. Which type of material is classified as per temperature?

- a) Conductor
- b) Insulating
- c) Semi conducting
- d) Magnetic.

41. For a series connected circuit which statement shall be incorrect?

- a) Current shall be equal through all loads.
- b) Current through all loads shall be equal but voltage drops shall be different.
- c) Current shall different at different points of circuit.
- d) Circuit current shall depend on total resistance of the circuit.

42. What is incorrect in connection with Ohm's law?

- a) It states the relation among the voltage, current & resistance in a closed circuit.
- b) Circuit current is proportional to the voltage imposed.
- c) Circuit current is inversely proportional to the circuit resistance.
- d) Temperature has no effect on this relation.

43. A freely suspended magnet will always rest in ----- direction.

44. Magnetic poles are generally known as -----.

- a) North- South
- b) East- West
- c) EMF- MMF
- d) UP-DOWN

45. Which one is incorrect to natural magnet?

- a) Loss of magnetic properties on heating.
- b) Similar poles repel and opposite attract each other.
- c) A magnet attracts all metals.
- d) Small pieces of a magnet shall also be a magnet.

46. When current is flown through the wire, wound on a iron piece, the iron piece becomes-

- a) Natural Magnet
- b) Electro-Magnet
- c) Steel
- d) Mild Steel.

47. How a Electromagnet differs from a Natural Magnet?

- a) Number of poles may be arbitrarily chosen.
- b) Magnetic line of force is reversed.
- c) Strength of poles depends on size of magnet
- d) Temporary Magnetism.

48. Electromagnetism is not used in -----

- a) Compressor motor contactor.
- b) Battery charger.
- c) 42 KV LA
- d) Taret CT

49. ----- Works on principle of electromagnetism.

- a) LA
- b) Capacitor
- c) CB
- d) AT

50. The lowest category of insulating materials as per thermal classification is -----.

51. According to thermal classification of insulating materials category Y materials are suitable for temperature limit -----.
- a) 0°C b) 180°C c) 90°C d) 270°C
52. The highest category of insulating materials as per thermal classification is -----.
53. According to thermal classification of insulating materials category Y materials are suitable for temperature limit -----.
- a) Above 0°C, up to 80°C b) Above 0°C, up to 90°C
c) Up to 150°C d) Above 180°C
54. The vital component of a rectifier circuit is?
- a) Resistor b) Diode c) Capacitor d) Chock Coil
55. Normally generation of electrical energy is done in ----- phases.
- a) 1 b) 2 c) 3 d) 4
56. ACTM has relation with?
- a) Maintenance of TRD installations.
b) Directives for different departments in electrified section.
c) Working of TPC d) All of the above.
57. Direction of electric current flow is –
- a) From high voltage to low voltage. b) Low voltage to high voltage.
c) Between two points that's voltage is same. d) There is no such rule.
58. Whenever OHE voltage goes down to ----- KV or less, the TPC gets catenary indication.
59. Tests that can be done by the same measuring equipment –
- a) PI / IR b) BDV / DGA c) THRC / IR d) PPM / DGA
60. What do you mean by unit consumed in connection with Electric Meter Reading?
- a) KVA b) KVAR c) KWH d) KA
61. What do you mean by Range in context with Megger ?
- a) Max value of MΩ on scale. b) Voltage.
c) RPM of rotating handle. d) Initial value of MΩ on scale.
62. Identify the symbol of Infinity.
- a) MΩ b) & c) ∞ d) °C
63. TR-1 is given to -----.
64. Competency Certificate given to OHE Lines Man is -----.
65. TR-5 Competency Certificate is given to –
- a) OHE Lines Man b) PSI fitter
c) RC artisan d) PSI Supervisor.
66. According to TR-2 a Lines Man is not authorized for-
- a) Work on OHE. b) 25KV isolator operation.
c) Switching operation in Switching Station despite of permission granted by TPC.
d) Commissioning of new installations.

67. TR-5 permits a PSI artisan for –

- a) Issuing PTW.
- b) Receiving PTW of EHV lines
- c) Commissioning of new installations.
- d) Shutting down 25KV installations according to instructions of TPC.

68. Which method of safety is generally not adopted during power block on a Sub- Sector?

- a) PTW
- b) Prohibition of AC engines to enter in power block section.
- c) To tripe Feeder CB.
- d) Application of Discharge Rods.

69. Skilled Artisan of Remote Control is given the Competency Certificate TR-----.

70. Maximum Permissible distance between two discharge rods is?

- a) 1 meter
- b) 10 meter
- c) 100 meter
- d) 1000 meter.

71. What care should be considered while clamping a discharge rod on a mast?

1. Cable and lug connection.
 2. Availability of discharge rod on both sides of the spot.
 3. Availability of Structure bond.
 4. Distance between consecutive discharges rods.
- a) 1, 2
 - b) 2, 3
 - c) 2, 4
 - d) all of the above.

72. Ohm's law states the relation among Voltage, Current & Resistance. (True/False)

73. Resistance of a wire increases with increase in its length. (True/False)

74. Resistance of a wire decreases with increase in its length. (True/False)

75. The resistance of a wire decrease with increase of its thickness. (True/False)

76. The resistance of a wire increases with increase of its thickness. (True/False)

77. Resistance of conductors increase with temperature. (True/False)

78. Resistance of conductors decreases with increase in temperature. (True/False)

79. Resistance of insulating materials increases with temperature. (True/False)

80. Resistance of insulating materials decreases with increase in temperature. (True/False)

81. Resistance of conducting materials varies according to temperature. (True/False)

82. Conversion of AC supply into DC is possible, but the reverse is not. (True/False)

83. Value of Insulation Resistance is independent of temperature. (True/False)

84. Insulation Resistance decreases with increase of temperature. (True/False)

85. Electrical Clearance and Working clearance are the two different name of the same vary fact.
(True/False)

86. The drawing called as Plan, depicts all the three dimensions (Length, Width, Height) of the object. (True/False)

87. The poles of a magnet can simply be made separated by cutting the magnet into pieces.
(True/False)

88. A magnet shall always have two poles. (True/False)

89. Insulating properties of insulating materials get affected by temperature; therefore, these have

- been classified into temperature groups. (True/False)
90. Selection of megger shall be done according to rated voltage of the winding under IR test.
(True/False)
91. Winding Resistance and insulation resistance are two different names of the same vary fact.
(True/False)
92. For safety considerations the distance between two discharge rods should not be more than ---
KM.
93. Discharge Rod should be clamped on that mast only which is having structure bond connected.
(True/False)
94. A combination of cells shall be called as -----.
95. Cell voltage of a lead –acid cell is -----.
96. Electric cell converts ----- energy into electrical energy.
97. Supply available from a electric cell is ----- (AC or DC)
98. Basically a battery charger is a ----- circuit.
99. The cell voltage of a fully charged Leas-Acid cell is -----.
100. A Lead-Acid cell shall be said fully discharged when its voltage drops down to -----
101. Electrolyte of a Lead –Acid Cell is prepared from Sulfuric Acid and -----.
102. Electrolyte of a Lead –Acid Cell is prepared from Distilled Water and -----.
103. The SPG of electrolyte of fully charged lead-acid cell is -----.
104. A Lead-Acid cell shall be said as fully discharged when SPG of its electrolyte drops down to --
-----.
105. Unit to indicate battery capacity is -----.
106. The battery----- increases if the cells are connected in series. (Voltage, Capacity)
107. The Battery ----- increase if the cells are connected in parallel.(Voltage, Capacity)
108. The battery ----- depends upon its size.(Voltage, Capacity)
109. General maintenance of a battery set is done at an interval of ----- days.
110. As a temperature correction ----- shall be added or deducted from the SPG readings of
electrolyte taken from hydrometer for per degree temperature variations.
111. The reference temperature for Temperature Corrections in SPG readings of electrolyte is -----.
112. What shall generally be added to maintain the level of electrolyte in a cell? (electrolyte,
distilled water, acid)
113. To keep a battery set at very low charging rate is called as?
(Boost Charging, Trickle Charging)
114. To charge a battery set at very high rate for a short period is called as?
(Boost Charging, Trickle Charging)
115. To prepare electrolyte which type of pot is suitable?
(Stain less Steel, Glass or Porcelain, Cupper)
116. The white aggregate appearing on the terminals of a battery is called as -----.
117. Sulfation is a indicator of ----- health of the battery. (Good, Bad)
118. The SPG of electrolyte ----- when the battery gets charge. (Increase, Decrease)

119. The SPG of electrolyte ----- when the battery gets discharge. (Increase, Decrease)
120. Battery rating for a TSS is -----AH.
121. Battery rating for a SSP is -----AH.
122. Battery rating for a SP is -----AH.
123. ----- is used for measurement of SPG of electrolyte.
124. SPG of distilled water is ?
 a) 1.000 b) 1.180 c) 1.220 d) 2.2
125. What is true for DC supply and distilled water?
 a) DC current can not flow through distilled water.
 b) DC current can flow through distilled water,
 c) DC current gets stored in distilled water.
 d) DC gets converted into AC.
126. What you expect from a battery kept on high charging rates for a long time?
 a) Nothing special. b) Plates may be damaged by getting very hot.
 c) Change of polarity d) Increased capacity.
127. Electrolyte bubbling heavily, it is a indication of?
 a) Over charging b) Under charging c) No load d) Discharged
128. What are the conditions for better performance of a battery set?
 1. Equal cell voltages. 2. Equal AH
 3. Equal SPG of Electrolyte. 4. Correct connection.
 a) 1, 4 b) 3, 4 c) 1, 2, 3 d) all of the above.
129. What is incorrect for a 40AH capacity battery?
 a) 1 ampere for 40 hours b) 40 ampere for 1 hours
 c) 4 ampere for 10 hours d) A rate of current supply as 40 ampere per hour.
130. All types of cells can be used repeatedly by repeated charging.(True/False)
131. Primary cells can not be recharged after getting discharged. (True/False)
132. Secondary cells can not be recharged after getting discharged. .(True/False)
133. DC supply source is required for charging a cell. .(True/False)
134. A cell can be charged through AC supply. .(True/False)
135. Electrolyte is an example of insulating material. .(True/False)
136. Electrolyte is an example of conducting material. .(True/False)
137. The Electrolyte of Lead-Acid battery is of acidic nature. .(True/False)
138. The Electrolyte of Lead –Acid Battery is of basic nature. .(True/False)
139. Distilled water is of Neutral Nature. .(True/False)
140. To prepare the electrolyte one part sulfuric acid is mixed with three or four part of distilled water. .(True/False)
141. To prepare the electrolyte one part sulfuric acid is mixed with three or four part of ordinary water. .(True/False)
142. Battery capacity may be stated as KW. (True/ False)

143. The voltage increases and the capacity remain constant, if the cells are connected in series. (True/ False)
144. The voltage increases and the capacity remain constant, if the cells are connected in parallel. (True/ False)
145. The capacity of cell increases with increase of its size. (True/ False)
146. The Voltage increases with increase of the size of cell. (True/ False)
147. To connect positive terminal with the positive one, shall be a parallel connection. (True/ False)
148. To connect positive terminal with a negative one, shall be a parallel connection. (True/ False)
149. To prepare the electrolyte, acid shall be poured into distilled water. (True/ False)
150. To prepare the electrolyte, distilled water shall be poured into acid. (True/ False)
151. For each degree rise of temperature above 27°C, the hydrometer reading should be added with 0.0007. (True/ False)
152. The hydrometer reading should be deducted with 0.0007 for each degree rise of temperature above 27°C (True/ False)
153. The hydrometer reading should be added with 0.0007 for each degree fall of temperature below 27°C. (True/ False)
154. The hydrometer reading should be deducted with 0.0007 for each degree fall of temperature below 27°C. (True/ False)
155. The gas emerging from a battery may cause explosion. (True/ False)
156. The orifice at the top of vent plug should normally be open, but should be closed during boost charging. (True/False)
157. The orifice at the top of vent plug should normally be closed. (True/False)
158. The orifice at the top of vent plug should normally be open. (True/False)
159. Unit of specific gravity is gram per cubic centimeter. (True/False)
160. Specific gravity has no unit. (True/False)
161. Battery rating for TSS is 200AH. (True/False)
162. Battery rating for SP, SSP is 40AH. (True/False)
163. Battery rating for all switching stations has been standardized as 200AH. (True/False)
164. Normally battery with higher AH capacity sizes bigger. (True/False)
165. Cell voltage of lead-acid cell does not depend on its size. (True/False)
166. Hydrometer is used for measurement of SPG. (True/False)
- 167.374. The unit of Transformer capacity is -----.
168. How many numbers of winding are there in a single phase transformer? (Two, One)
169. Healthy silica gels colors is ----- (Pink / Blue)
170. Silica Gel turns ----- (colour) absorbing moisture.
171. BDV of Transformer oil should be ----- KV.
172. Colour of New transformer oil is -----.
173. ----- is fixed between Bell Tank and Conservator tank. (Buchholtz relay/ Breather)

174. The transformer oil should be replaced if it turns------(colour)
175. What is the use of transformer oil?
 a) Insulation b) Cooling c) Both the above.
176. Transformer Oil is categorized as?
 a) Edible oil b) Fuel c) Insulating oil
177. Which device is used to protect the transformer from excessive internal pressure?
 a. PRD b) Buchholtz Relay c) MOLG d) Drain Cork.
- 178.----- is used for low oil level protection.
179. What is used for cooling of a transformer?
 a. Conservator tank b) Radiator c) Breather d) Core
180. The power loss that occurs in transformer winding is called as-----.
181. The power loss that occurs in transformer core is called as-----.
182. The ratio of rated voltage of primary and secondary winding of a transformer is called as -----.
183. For a transformer, the product of primary side voltage and current is equal to product of secondary side voltage and -----.
- 184.----- is the unit to express moisture content in transformer oil.
185. POH of Power Transformer is done after ----- years.
186. Insulation Resistance between LV and E at 30°C for a 132KV / 25KV transformer should not be less than-----.
187. Insulation Resistance between HV and E at 30°C for a 132KV / 25KV transformer should not be less than-----.
188. Insulation Resistance between LV and HV at 30°C for a 132KV / 25KV transformer should not be less than-----.
189. Traction Transformer can be run for ----- minutes at 50% over load.
190. Traction Transformer can be run for 15 minutes at -----% over load.
191. Traction Transformer can be run for ----- minutes at 100% over load.
192. Traction Transformer can be run for 5 minutes at -----% over load.
193. Setting for oil temperature alarm is -----°C.
194. Setting for oil temperature trip is -----°C.
195. Setting for winding temperature alarm is -----°C.
196. Setting for winding temperature trip is -----°C.
197. Traction Transformer is normally equipped with ----- tap changer. (On load / off load)
198. The ratio of number of turns in primary and secondary winding of a transformer is called as -----.
199. Transformer Oil is dangerous since it is -----.
 a. Inflammable b) Toxic c) Hygroscopic d) Unnatural.
200. Out of the following relations, what would be incorrect for a transformer where N indicates number of turns, V voltage and I current.

a) $\frac{N_1}{N_2} = \frac{V_1}{V_2}$ b) $\frac{V_1}{V_2} = \frac{I_2}{I_1}$ c) $\frac{N_1}{N_2} = \frac{V_1}{V_2} = \frac{I_1}{I_2}$

201. ONAN / ONAF are the types of –

- a) Transformer cooling system.
- b) Winding
- c) Tap Changer
- d) Earthing

202. What it indicates, if the terminal connection of a transformer appear bad in colour.

- a) Abnormal heating of terminals due to loose connection
- b) Transformer Over load
- c) Higher EPR.
- d) Non of the above.

203. Transformer oil sample Crackles on heating ; it is an indication of –

- a) Increased acid content.
- b) Too cold sample
- c) Excessive Water content
- d) Improved BDV .

204. Oil temperature trip facility is given since at higher temperatures-

- a) Transformer oil becomes thick and immovable.
- b) Insulating properties of insulations impair sharply.
- c) Buchholtz relay trips.
- d) It becomes difficult to operate tap changer due thicken transformer oil.

205. What is incorrect in context of Buchholtz Relay?

- a) It is an electromechanical relay.
- b) It protects transformer from internal faults.
- c) It requires collection of gas to operate.
- d) It is situated between bell tank and conservator tank.

206. In case of transformer bushing ,the value of tan-δ testing should not be more than -----.

207. In case of transformer bushing ,the value of capacitance should not be more than ---%

208. During maintenance, it is found that oil level in OIP Condenser bushing is low from the set value what action should be taken?

- a) Transformer can be taken on load.
- b) Bushing shall be replaced.
- c) On lowest tap transformer can be taken on load.
- d) Tan-δ and Capacitance test shall be done and action shall be taken according to results.

209. No need to reset OTI/WTI during ----- scheduled maintenance.

- a) Monthly
- b) Half Yearly
- c) Yearly
- d) Non of the above.

210. OTI indicates?

- a) Average temperature of transformer oil.
- b) Maximum temperature of transformer oil.
- c) Minimum Temperature of Transformer oil
- d) Maximum permissible temperature of transformer oil

211. WTI indicates?
- Average Temperature of transformer winding.
 - Maximum temperature of transformer winding.
 - Minimum temperature of transformer winding.
 - Maximum permissible temperature of transformer winding.
212. According to TI/MI -38 what action shall not necessarily be done during monthly maintenance?
- EPR testing
 - Inspection of Silica gel breather.
 - Check OTI/WTI
 - To check bus bar connection for bad –colour.
213. Which Instrument is used for PI checking?
- Ammeter , Voltmeter , Watt meter
 - Earth Tester
 - Megger
 - BDV Tester.
214. Winding is said in good health ,if the value of Polarization Index is-
- Less than 1
 - More than 2
 - Value of Polarization Index does not indicate winding condition.
 - More than 1, less than 2.
215. Unit for measurement of Polarization Index.
- Volt per second
 - Mega –Ohms per second
 - Volt per rotation
 - there is no unit.
216. During half yearly maintenance ,oil sample for BDV test should be taken –
- Just after shutting down the transformer.
 - After cooling of transformer oil.
 - After keeping the transformer at 5 No. Tap for half an hour.
 - Sample bottle should be filled by taking small quantities over a considerable time during the maintenance.
217. The symbols R60/R10 and R600/R60 bear the relation with ----- .
- BDV
 - PPM
 - $\tan-\delta$
 - Polarization Index.
218. What does it mean by R60/R10 in relation with PI?
- Resistance of 60Ω and 10Ω .
 - Megger readings after 10 sec. and 60 sec. respectively .
 - Megger readings after 10 sec. and 60 sec when rotation of handle has been stopped.
 - Non of the above.
219. According to TI/MI 38, what action should be taken if the value of PI test is less than 1.1 .
- Replace transformer oil.
 - Transformer is in good condition.
 - Oil filtration and again PI test.
 - TI/MI38 do not say any thing about PI test.
220. Which test is not performed on transformer oil?
- IR
 - DGA
 - BDV
 - PPM
221. DGA testing is a test of dissolved ----- in transformer oil.
222. ----- Test is done to test Electrical Strength of transformer oil.

- a. IR b) DGA c) BDV d) PPM
223. Which test should be done to know water quantity present in oil sample?
a. Crackle Test b) PPM c) Colour Test d) Tan- δ Test.
224. Crackle Test is done to deduce the water quantity in oil sample.(True/false)
225. Factor that affects insulation resistance?
a. Size of winding b) Temperature
c) Moisture d) All of the above.
226. While meggering a transformer ,----- temperature should also be recorded along with the megger reading.
a. Air b) MOLG c) OTI d) a & c
227. While meggering ,what should also be recorded on the test record along with megger reading?
a. Megger Rating. b) Make & Serial Number
c) Air & OTI d) All of the above.
228. To megger Traction Transformer 500 volt megger is suitable. (True /False) 229. What is incorrect about Oil filtration?
a. Initially IR falls with rise of temperature.
b. With filtering out dirt and moisture BDV improves.
c. Oil filtration do not permits dissolved gases to escape out from oil.
d. IR value increases with fall of oil temperature when filtration plant is shut-off.
230. Which test shall not be done for OIP condenser bushing during yearly maintenance?
a. tan- δ b) Capacitance c) IR d) Crackle
231. Generally spark gap for 25KV bushing of traction transformer is
a. 16.5 cm b) 25 cm c) 75 cm d) 1mt.
232. On selection of higher taps of a tap-changer voltage increases since-
a. No. of turns in winding increases.
b. Winding resistance reduces.
c. Insulation resistance of winding reduces
d. Incoming voltage to winding increases.
233. Electrode gap of BDV tester is -----mm.
234. Bushing CT is associated with?
a. Power Transformer b) AT- 100KVA c) AT at SP d) Feeder CB
235. Bushing CT is provided with all bushings of a power transformer. (True / False)
236. Location of PRD?
a. Behind control panel b) below marshaling box
c) Above bell tank d) beside conservator tank.
237. Is it true that in the course of usage, acid forms naturally in transformer oil? (Yes/No)
238. Is transformer oil a inflammable liquid? (Yes/ No)
239. Capacity of a transformer is expressed in KW. (True/False)
240. Buchholtz relay is oil pressure relay. (true/false)

241. Transformer capacity is expressed in KVA.(true/false)
242. BDV value of transformer oil should not be less than 60KV.(true/false)
243. BDV value of transformer oil should not be more than 60KV.(true/false)
244. In a TSS, concrete wall between both the transformers is known as Baffel –Wall. (true/false).
245. Transformer oil is a mineral-oil used as fuel .(true/false)
246. Synthetic oils can also be used as Transformer –Oil.(true/false)
247. Sampling of transformer oil should be done in dry, hot and clear atmosphere. (true/false)
248. PRD is used to protect the transformer from high internal pressure.(true/false)
249. Drain Cork is used to protect the transformer from high internal pressure.(true/false)
250. In context of transformer, copper loss means wear & tear of winding. (true/false)
251. In context of transformer, Iron-loss means wear & tear of Core. (true/false)
252. Step-up transformer increases voltage. (true/false)
253. Step-down transformer reduces electrical power. (true /false)
254. Transformer is a device which bridges high and low voltage circuits. (true/fase)
255. Periodicity of POH of Power transformer is 4 years. (true/false)
256. New transformer oil is clear and transparent in colour. (true/ false)
257. Out put voltage of a transformer can be controlled by tap-changer. (true/false)
258. There is no relation between turn ratio and voltage ratio of a transformer.(true/false)
259. Transformers may also be classified on number of phases. (true/fase)
260. In case of Auto transformer, both the primary and secondary terminals are connected with the same winding.(true/false)
261. A transformer works only in one direction that is , imposing voltage to primary voltage appears on secondary terminals but imposing voltage to secondary no voltage appears on primary terminals. (true/false)
262. Transformer work in both directions, i.e. primary to secondary and vice-versa. (true/false)
263. If an ONAN transformer is turned to ONAF, its capacity improves. (true/false)
264. Normally HT bushing is oil filled type. (true/false)
265. HT bushing is always shield type. (true/false)
266. On BDV test, if the results are less than the standard one, oil filtration should be done. (true/false)
267. It indicates some thing abnormal if there is considerable rise in readings of OTI/WTI from that of last readings. (true/false)
268. That actions are not required during the half yearly maintenance which are done in monthly maintenance.(true/false)
269. Before meggering it is compulsory to make the bushing free from dust and moisture. (true /false)
270. In case of single phase traction transformer, it is not compulsory to open terminal connections prior to meggering of the transformer. (true/false)
271. Tan – δ test indicates the quality of the insulating material. (true/false)
272. For transformer bushing, value of tan- δ should not be less than 0.007. (true/false)

273. Capacitance value for transformer bushing should not be less than 110% of factory set value.(true/false)
274. CB controls the supply of -----.(Sector, Sub-Sector,Elementary Section)
275. BM controls the supply of -----.(Sector, Sub-Sector,Elementary Section)
276. Isolator controls the supply of -----.(Sector, Sub-Sector,Elementary Section)
277. On faults----- trips automatically. (CB, BM, OHE, PT-II)
278. OFF load hand operated switch is well known as ----- (CB,BM, MCB,Isolator)
279. What is not controlled by TPC through remote control? (CB, BM, DPI)
280. What is common among TPI, DPI, SPI and BPI?
- A CB is connected to all of them.
 - All of them is used for transformer isolation.
 - All are located in a FP.
 - Each of them is a type of isolator.
281. When 25KV isolator is in opened condition, what should be the clearance between its fixed and moving contact?
282. Code ----- is prefixed before number of isolator connected with main line OHE.
283. Out of the following, what is not there in the pole unit of CB/BM?
- Fix and Moving Contact.
 - Arc quenching medium.
 - Main and Arcing Contact.
 - Auxiliary contact.
284. Out of the following, what is not the type operating mechanism of a CB or BM?
- Air open/ Air Close
 - Spring open / spring close
 - Air open / spring close.
 - ONAN / ONAF
285. What is not compulsory for maintenance of CB / BM?
- To obtain PTW from TPC.
 - To open SPI/DPI from both sides.
 - To keep switch gear on local control.
 - To keep 110 volt DC supply switched off during the work.
 - Non of the above.
286. Normally gas pressure in SF6 type CB/BM is maintained at -----.
287. Low gas pressure alarm operates at ----- kg/cm² for SF6 CB/BM ,where normal gas pressure is 5 Kg/cm²
288. SF6 CB/BM(5Kg/cm²) locks-out at low gas pressure of ----- kg/cm².
289. Which component of SF6 CB/BM generates low gas pressure alarm/lock-out signals?
290. Function of Gas Density switch is –
- to check purity of SF6 gas.
 - to control total break time .
 - to generate signal according to gas pressure in pole unit.
291. ----- is used to check gas pressure in pole-unit.

(Gas density switch, Gas pressure gauge, Compressor)

292. Normal working air pressure for 25KV CB/BM is -----.
293. Air pressure alarm, for 25KV CB/BM, operates at -----.
294. 25KV CB/BM locks out due to low air pressure at -----
295. In a 25KV CB/BM air pressure is maintained by -----
- a) Compressor b) Air pressure limit switch
- c) Safety valve d) TPC
296. In 25KV CB/BM, ----- is used for safety of Air Cylinder.
297. -----°C is taken as Standard for determination of Gas Pressure in 25KV CB/BM.
298. Only a competent railway servant can operate the 25KV Isolator switch. (True/False)
299. Operation of 25KV Isolator switch is permitted to all railway servants. (True/False)
300. In open state ,the clearance between fix and moving contact of an 25KV Isolator should be 500mm. (True/False)
301. In open state ,the clearance between fix and moving contact of an 132KV Isolator should be more than 500mm. (True/False)
302. On-Load operation of an 25 KV isolator switch should not be done. (True/False)
303. An elementary section can be isolated by isolator switch. (True/False)
304. Nitrogen Gas is filled in the pole unit of Vacuum type CB. (True/False)
305. Any type of Gas or Air is not filled in the pole unit of Vacuum type CB/BM, (True/False)
306. Total Break time of 25KV single pole SF6 Circuit Breaker should not be more than 65 milli-seconds. (True/False)
307. Total Break time of 25KV single pole SF6 BM should not be more than 80 Mili-seconds. (True/False)
308. In no condition SF6 gas can convert into liquid state. (True/False)
309. At some specific high pressure and low temperature, SF6 gas converts into liquid state. (True/False)
310. PTW must be obtained from TPC for the maintenance of CB/BM. (True/False)
311. It is safe to keep the CB/BM on local control while its maintenance is in progress. (True/False)
312. It is safe to switch off 110 volt DC supply of CB/BM while its maintenance is in progress. (True/False)
313. Gas density switch generates alarm according to gas pressure in the pole unit. (True/False)
314. It is impossible to check the settings of gas density switch. (True/False)
315. Combined earth pit resistance of a TSS should not be more than ----- Ω .
316. Combined earth pit resistance of a SSP should not be more than ----- Ω .
317. Combined earth pit resistance of a SP should not be more than ----- Ω .
318. Single earth-pit resistance should not be more than -----.
319. The ideal value of EPR would be -----.
320. As per ACTM, earth electrodes should be ----- meters long.
321. As per ACTM, bore of earth electrodes should be ----- cm.
322. As per ACTM, minimum separation between two earth pits is -----.

323. Treatment by mixture of salt-charcoal should be done if the EPR is less than 10Ω . (true/false)
324. Treatment by mixture of salt-charcoal should be done if the EPR is more than 10Ω . (true/false)
325. It is good to pour water in earth pit at a regular interval. (true/false)
326. Over a year, EPR should be checked during dry and hot season. (true/false)
327. In a switching station, all earth electrodes are connected in ----- connection. (series/parallel)
328. Earth pit for remote control equipment should not be connected with earth pits/ earth grid of switching station. (true/false)
329. Earthing for RCE should not be connected with earthing of switching ,because-
- Traction current may harm to RCE equipments.
 - RCE equipments work on DC supply.
 - There is no such restriction.
330. LA rating for 25KV system is -----.
331. LA rating for 110KV system is -----.
332. LA rating for 132KV system is -----.
333. LA rating for 220KV system is -----.
334. The abnormal conditions ,LA protects from, is ---
- Short circuit
 - Open circuit
 - Low voltage
 - Voltage surge.
335. LA may be tested from Megger. (true/false)
336. Prior to erection, LA should be tested from -----.
337. POH of LA should be done after 4 years. (true/false)
338. There is no POH schedule for LA. (true/false)
339. 42KV LA should be Meggered by 500 volt megger. (true/false)
340. Megger value for 42KV LA should be? ($2500M\Omega$, $1G\Omega$, $10G\Omega$, $200K\Omega$)
341. Megger value for 198KV LA should be? ($2500M\Omega$, $1G\Omega$, $10G\Omega$, $200K\Omega$)
342. LA is connected between line and earth. (True / False)
343. In three phase system (132 KV) , LA is connected between any two phases. (True / False)
344. Within a TSS, the minimum height of 25KV bus-bar from ground level is -----.
345. Control circuits for switching stations works on ----- volts DC.
346. In a TSS, voltage ratio of 100KVA AT is ---
- 100KV /230 volt
 - 100KV/440 volt
 - 25KV/230 volt
 - 25KV/ 440volt.
347. Electrical Clearance for 25KV system is -----.
348. Catenary indication is a must for Closing Operation of -----
- Doors of control penal of TSS.
 - Sectioning BM of SSP
 - HV CB
 - Bridging BM.
349. At voltage ,lesser than 19 KV –

- d) Sudden rise of current by 200% of normal current due to any reason.
362. Which relay gets its input from both the CT and PT?
 a) OCR b) DPR c) EFR d) DFR
363. Delta-I relay is said as back-up to DPR. (True/False)
364. Every type of CB is having the facility to alter the setting of its tripping current.(true/false)
365. What would you do, if you want to change the tripping current of a CB?
 a. It might not be done; the CB would have been replaced.
 b. CT would have been replaced.
 c. Relay setting should be adjusted.
 d. Battery voltage should be changed.
366. WPC relay is placed in SP. (true/false)
367. WPC relay is placed in TSS. (true/false)
368. What is correct about WPC relay?
 a. One No in SP b) two No. in SP c) one No. in TSS d) two No. in TSS
369. Earth –Screen is a protection against –
 a) Touch Voltage b) Step Voltage c) Lightning Stroke d) Earth Fault.
370. CTD is an interlock arrangement –
 a) It is a false statement b) CB tripping under 110 volt DC supply
 c) CB tripping and auto recloser. d) High voltage and alarm.
371. OCR-I is a protection against -
 a) Sustained over Currents due to over load.
 b) Sudden rise of current due to earth fault.
 c) Over current due to earth fault away from TSS.
 d) Sudden rise of current by 200% of normal current due to any reason.
372. ITR is a fault sensing relay. (true/false)
373. ITR is a auxiliary relay for transformer protection. (true/false)
374. It is not the auto –reset type relay-
 a) OCR b) DPR c) WPC d) ITR
375. Is it necessary to check the transformer before putting on load if it was out from circuit due to Differential relay? (Yes/No)
376. Voltage ratio of PT type I -----.
377. Voltage ratio of PT type II -----.
378. KVA rating of AT normally used for CLS is -----.
379. Voltage ration of AT normally used for CLS is -----.
380. Rating of AT normally used in SP/SSP is -----KVA
381. -----No of AT is used in TSS. (1, 2, 3, 4)
382. 100KVA AT of TSS is used for-
 a) Yard Lighting b) Stand by
 c) Filtration Plant d) Power Factor correction.
383. Rating of PT normally used for catenary indication is -----.

384. DO fuse rating for 10 KVA AT is -----.
385. Rating of KIT- KAT fuse for 10KVA AT is -----.
386. Minimum permissible Megger value between HT- E for a CT is -----MΩ
387. Minimum permissible Megger value between LT- E for a CT is -----MΩ
388. Minimum permissible Megger value between HT- LT for a CT is -----MΩ
389. Minimum permissible Megger value between HT- E for a PT is -----MΩ
390. Minimum permissible Megger value between LT- E for a PT is -----MΩ
391. Minimum permissible Megger value between HT- LT for a PT is -----MΩ
392. Minimum permissible Megger value between HT- E for a AT is -----MΩ
393. Minimum permissible Megger value between LT- E for a AT is -----MΩ
394. Minimum permissible Megger value between HT- LT for a AT is -----MΩ
395. In case of CT, number of turns in primary is ----- than number of turns in secondary.
396. In case of PT number of turns in primary is ----- than number of turns in secondary.
397. The secondary winding of a CT should not be open circuited if primary is charged-
- There is no such restriction.
 - Primary becomes Over-Voltage
 - CT winding will burn –out.
 - CB can not be closed
398. Most suited place for cable storage is –
- Moist and Dark
 - Moist and Sun light
 - Dry and dark
 - Dry and Sun light.
399. What is used to indicate the position of under ground cable?-----
400. Cable laying should be done in cable trenches ;due to
- Ease of maintenance.
 - Mechanical protection
 - Eases of identification during maintenance.
 - all of the above.
401. While storing cables ,its ends should be properly covered by something like plastic etc.-
- It is of no use.
 - Such action is wrong.
 - It must be done.
 - It is sufficient to cover only one end.
402. To protect the cable from the effects of moisture its free ends should be covered by something like plastic etc. (true/false)
403. What you understand about size of a cable if it is said 70 Sq mm two core cable-
- Cross sectional area of the cable is 70 sq mm.
 - Size of each core is 70 sq mm
 - Size of one core is 35 sq mm
 - Cable is to be used for CLS purposes.
404. There is a fuse in the secondary of the CT. (true/false)
405. There is a fuse in the secondary of the PT. (true/false)
406. Some times ,there is only secondary winding in CT. (true/false)
407. DO fuse is protection for ----- . (OHE , AT)
408. Can DO-fuse be used for protection of CT. (Yes/ No)
409. 230 volt AT winding should be meggered from 500 volt megger. (true/false)
410. Size means length of the cable used for.(true/ false).

411. Armor is meant for mechanical protection of the cable.(true/false)
412. Cable size of discharge –rod used in 25KV OHE is –
a. Multi-core 40 sq. mm b) Single Core 40 sq. mm
c) Multi-core 20 sq. mm d) Single Core 20 sq. mm
413. To crimp a lug properly on the cable core, how many strands are permitted to cut?
a. 0 b) 1 c) 2 d) 3
414. The insulation resistance of a cable depends on –
a. Condition of insulation b) length
c) Thickness of insulation d) all of the above.
415. Hand tool used to put the lug on cable core tightly is –
a. Torque Rinch b) Ring Spanner c) Crimping tool d) LN key

ANSWER – OBJECTIVE QUESTION ON TRD

PSI

- 1.Ampere
- 2.Volts
3. Ohms
- 4.Current
- 5.Voltage
- 6.Resistance
- 7.Current
- 8.Voltage
- 9.Resistance
- 10.Current, Voltage, Resistance
- 11.Mega- Ohms
- 12.Megger
- 13.Insulation resistance

14. Insulation Resistance

15. 10 lakhs Ohms

16. Series

17. Parallel

18. 1000

19. 100

20. 10

21. 12

22. 2.54

23. KWH

24. Watt.

25. Mechanical Power.

26. Mechanical Power

27. 746

28. Rectifier

29. Inverter

30. 1

31. 0.88

32. 27.5

33. 19

34. ∞

35. 2 mts

36. Plan

37. Elevation

38. c

39. d

40. b

41. c

42. d

43. North- South

44. a

45. c

46. b

47. d

48. c

49. d

50. Y

51. c

52. C

53.d
54.b
55.c
56.d
57.a
58.19
59.a
60.c
61.b
62.c
63.Khalasi
64.TR-2
65.b
66.d
67.c
68.c
69.TR-7
70.d
71.d
72.True
73.True
74.False
75.True
76.False
77.True
78.False
79.False
80.True
81.True
82.False
83.False
84.True
85.False
86.False
87.False
88.True
89.True
90.True
91.False

92.True
93.True
94.Battery
95.2.2 volts
96.Chemical
97.DC
98.Rectifier
99.2.2 volts
100.1.8 volts
101.Distilled water
102.Sulfuric Acid
103.1.220
104.1.180
105.AH
106.Voltage
107.Capacity
108.Capacity
109.15
110.0.0007
111.27°C
112.Distilled Water
113.Trickle
114.Boost Charging.
115.Glass or Porcelain
116.Sulfation
117.Bad
118.Increases
119.Decreases
120.200
121.40
122.40
123.Hydrometer
124.1.000
125.a
126.b
127.a
128.d
129.d
130.False
131.True

132.False
133.true
134.False
135.False
136.True
137.True
138.False
139.True
140.True
141.False
142.True
143.True
144.False
145.True
146.False
147.True
148.False
149.True
150.False
151.True
152.False
153.False
154.True
155.True
156.False
157.False
158.True
159.False
160.True
161.True
162.True
163.False
164.True
165.True
166.True
167.Volt-Amperes
168.Two
169.Blue
170.Pink

171.60
172.Clear transparent
173.Buchholtz relay
174.Black
175.c
176.c
177.a
178.MOLG
179.b
180.Copper loss
181.Iron loss
182.Voltage ratio(Transformation ratio)
183.Secondary side current
184.ppm
185.10
186.400MΩ
187.2000 MΩ
188.2500 MΩ
189.15
190.50
191.5
192.100
193. 80
194.85
195.90
196.95
197.off load
198.Turn Ratio (Transformation Ratio)
199.a
200.c
201.a
202.a
203.c
204.b

205.a

206.0.007

207.110

208.d
209.d
210.b
211.b
212.a
213.c
214.b
215.d
216.a
217.d
218.b
219.c
220.a
221.gases
222.c
223.b
224.false
225.d
226.c
227.d
228.False
229.c
230.d
231.b
232.a
233.2.5
234.a

235.True
236.c
237.Yes
238.Yes
239.False
240.False
241.True
242.True
243.False
244.True
245.False
246.True
247.true
248.True
249.False
250.False
251.False
252.True
253.False
254.True
255.False
256.True
257.True
258.False
259.True
260.True
261.False
262.True
263.True
264.True
265.False
266.True

267.True
268.False
269.True
270.False
271.True
272.False
273.False
274.Sector
275.Sub-Sector
276.Elementary section
277.CB
278.Isolator
279.DPI
280.d
281.500mm
282.SM
283.d
284.d
285.e
286.5.5 Kg/cm²
287.4.5 Kg/cm²
288.4.0 Kg/cm²
289.Gas Density switch
290.c
291.Gas Density switch
292.15 Kg/cm²
293.13 Kg/cm²
294.12 Kg/cm²
295.b
296.Safety Valve

297.20
298.True
299.False
300.True
301.True
302.True

303.True
304.False
305.True
306.True
307.True
308.False
309.True
310.True
311.True
312.True
313.True
314.False
315.0.5Ω
316.2.0Ω
317.2.0Ω
318.10.0Ω
319.0
320.4
321.4
322.6
323.False
324.True
325.True
326.True
327.Parallel
328.True
329.a

330.42kv
331.98kv
332.120kv
333.198kv
334.d
335.True
336.Megger
337.False
338.True
339.False
340.1GΩ
341.10GΩ
342.True
343. False
344.3.80mts
345.110
346.c
347.a
348.d
349.a
350.b
351.a
352.c
353.d
354.d
355.d
356.True
357.d
358.d
359.a
360.a
361.c
362.b

363.True
364.False
365.c
366.False
367.True
368.d
369.c
370.b
371.d
372.False
373.True
374.d
375.Yes
376.25kv/100 volts
377.25kv/110 volts
378.10
379.25kv/230 volts
380.10
381.2
382.c
383.25kv/100 volts
384.1 amp.
385.63 amp
386.200 MΩ
387.2 MΩ
388.200 MΩ
389.200 MΩ
390.2 MΩ
391.200 MΩ
392.200 MΩ
393.2 MΩ
394.200 MΩ
395.Less
396.More
397.c
398.c
399.Route Indicter/ Cable Marker
400.d
401.c

402.True
403.b
404.False
405.True
406.True
407.AT
408.NO
409.True
410.False
411.True
412.b
413.a
414.d
415.c