

Subjective questions on MCT-02

- Q1. What is brake power certificate? Define and what are different types of BPC.s issued in Indian railway?
- Q2. What should be the value of pressure in the engine and in the brake van in case of coaching stock and freight stock?
- Q3. What should be done if poor brake power is experienced by driver enroute?
- Q4. Write short notes on following
- 1-troubleshooting in case of poor brake power
 - 2-allowed brake power percentage for different stocks
- Q5. Explain ERRU . What are the advantages of ERRU over RRU.?
- Q6. Write down the initial charging procedure of a lead acid cell?
- Q7. What are the causes for fire in coaches?
- Q8. Describe the train lighting system of ICF coaches.
- Q9. Describe the train lighting system of ICF coaches.
- Q10. Describe the under frame mounted AC system of ICF coaches.
- Q11. Describe the train lighting system of LHB coaches.
- Q12. Describe the roof mounted AC system of LHB coaches.
- Q13. Describe the roof mounted AC system of ICF coaches.
- Q14. What are different generation system that are being used in Indian railways?
- Q15. What is procedure of maintenance of fans in ICF coaches?
- Q16. What is procedure of maintenance of battery and battery box of ICF coaches?
- Q17. What is end on generation system what are it,s advantages and disadvantages over self generation system?
- Q18. What is head on generation system ? what are it,s salient features?
- Q19. What is self generation system? What are it,s salient features?

Q20. What is draw gear? What are its types? What are main components of conventional draw gear?

Q21. What are various defects observed in draw gear and screw coupling?

Q22. What are maintenance instructions for enhanced draw gear and screw coupling?

Q23. What is buffing gear what are constructional features of a conventional buffing gear?

Q24. Describe the procedure for maintenance of Buffers in ICF coaches.

Q25. What is coupling and tell about different types of couplings used in different rolling stock?

Q26. What are the components of draw gear and screw coupling?

Q27. What is conventional buffing gear what are its main components?

Q28. What is slack less drawbar what are its special features and describe in detail?

Q29. Write short notes on following

1-anti creep test of CBC

2-Universal coupling

Q30. What is BDG write its constructional features and advantages in detail?

Q31. What is CBC, and what are its main parts?

Q32. What is schaku coupler what are its constructional and design features give details?

Q33. What are special features of DEMU coaches what is air spring and what is necessity of using air spring in DEMU coaches?

Q34. Describe the features of a DEMU coaches.

Q35. Describe braking system of DEMU coaches.

Q36. What are the components of air spring?

Q37. What is FIBA what are components of fiba describe in detail ?

Q38. What are the advantages of air spring over helical springs what are components of air spring?

Q39. What are LHB coaches what are the advantages of LHB coaches?

Q40. Explain the troubleshooting procedure of WSP system

Q41. Write note on suspension system of LHB coaches.

Q42. Compare between spherical roller bearing and cartridge roller bearing.

Q43. Write note on use of rubber components in LHB coaches.

Q44. Write note on safety features of LHB coaches.

Q45. Differentiate between LS1 to LS5 trolleys of a LHB coach.

Q46. Describe the procedure of primary maintenance of a LHB rake.

Q47. Describe the procedure of secondary maintenance of a LHB rake.

Q48. Mention the type of bolts and their tightening torque for various components of LHB coach.

Q49. Describe

(a) anti-telescopic feature

(b) anti climbing feature of a LHB coach.

Q50. Mention the components and working of Earthing equipment used in LHB coaches.

Q51. Mention the various types of dampers used in LHB coaches, Also mention their capacity and maintenance procedure of these dampers.

Q52. Write about various schedules of LHB coaches attended in open line and activities performed in these schedules?

Q53. What are the special features of interiors of LHB coaches?

Q54. Write down the procedure of SS1 schedule of LHB coaches?

Q55. Describe the procedure of pairing of secondary spring in LHB coaches.

- Q56. What are measures done to make LHB coach crashworthy?
- Q57. Write about the various types of steels used to form the LHB shell?
- Q58. Draw a neat diagram and explain the working of disk brake system of LHB coach.
- Q59. Draw a neat diagram of DV and explain its working.
- Q60. Differentiate between air brake system of LHB and ICF coach.
- Q61. Mention different components of a WSP system and briefly explain its working.
- Q62. Which type of bogie is used in LHB coach write it's salient features?
- Q63. Compare salient features of FIAT bogie and ICF bogie?
- Q64. What is wheel slide protection device in LHB coaches give full details?
- Q65. What is airbrake testing procedure of LHB rake?
- Q66. What is WSP testing procedure of LHB rake?
- Q67. Write short notes on following
- 1-Buffer height adjustment in LHB coach
 - 2- Passenger comfort features in LHB coaches
- Q68. What is Bio toilet what are features of a biotoilet system? write short note on aerobic and anaerobic bacteria?
- Q69. Write short notes on following
- 1- Bio vacuum toilet
 - 2- P trap and S trap in biotoilet
- Q70. What is "wheel shelling"? What steps should be taken to reduce wheel shelling cases.
- Q71. What is single car test procedure for LHB coach?
- Q72. Describe rake testing procedure of LHB rake in detail?
- Q73. What are the salient features of new pattern of freight examination?
- Q74. What are salient features of CC rakes?

Q75. What is end to end examination what are its salient features explain in detail?

Q76. What are maximum moving dimensions, write down the values of different maximum moving dimensions for a BG track?

Q77. What is ODC, what are types of clearances?

Q78. What are different types of ODC and their operating instructions?

Q79. What is derailment and what is the classification of derailment as per Railway Manual?

Q80. What are types of derailment and causes of each type?

Q81. What is derailment mechanism, explain in brief.

Q82. What are causes of derailment?

Q83. How can we start track investigation in case of accident?

Q84. What are rail defects that cause derailment and what are their permissible values?

Q85. What are rolling stock defects that cause derailment?

Q86. What are the duties of senior C & W supervisor reaching first at the accident site?

Q87. What is CRS enquiry give brief detail?

Q88. What is ART? Write down its classification in brief.

Q89. List down tools & equipment's placed in A & B class ART.?

Q90. Write short note on: A. SPART B. RCRV

Q91. What is train parting and what are the reasons for train parting?

Q92. What are repercussions of train parting explain in detail?

Q93. What are common defects noted in CBC's that are responsible for train parting?

Q94. What are the precautions to be taken by train examining staff to avoid train parting incidents?

Q95. What are the actions taken by field staff after train parting has occurred?

Q96. What are the guidelines for operation of CBC equipped coaches?

Q97. What are preventive measures to avoid train parting en route?

Q98. Write down the procedure to release and isolate brake binding at an en route station in case of BMBS coach.

Q99. Write the procedure to release and initiate brake binding of LHB coach.

Q100. Write the procedure to release and isolating brake binding in case of BMBS Wagon.

Q101. What are the main causes of brake binding, describe in detail?

Q102. Write the procedure to release and initiate brake binding at an en route station for conventional air brake stack.

Q103. What is brake binding and what are its repercussions?

Q104. What are tank wagons, how the tank wagons are classified & write the codes for different types of tank wagons.

Q105. What are different barrel mountings & safety fittings used in tank wagons & also tell their functions.

Q106. Describe the steam cleaning for pressure vessels, petroleum & other highly inflammable products.

Q107. Describe the cleaning of tanks for corrosive liquid.

Q108. What is the procedure of repair and maintenance of tank wagon in sick line?

Q109. What are different types of tank wagons used in Indian railways give details?

Q110. What are different barrel mountings and safety fittings used in tank wagons?

Q111. What is the list of important modifications in tank wagon and where does it to be done?

Q112. What are the various preventive measures that has to be taken to avoid fire risks due to proximity of sealing wires with OHE wires in Tank wagons?

Q113. What are the precaution that has to be taken for petroleum and other inflammable products?

Q114. What are the precaution that has to be taken for loading and unloading of corrosive liquids in tank wagons?

Q 115. How will you ensure that the tanks are free contamination of gas of contents after steam cleaning for different tank wagons before attending to repairs?

Q 116. What is an ODC & define maximum moving dimensions of a rolling stock.

Q 117. What are different types of clearances, describe ?

Q 118. Classify different types of ODC and briefly describe the various operating conditions associated for operation of each class.

Q 119. What are the various instructions for movement of ODC in electricity powered sections?

Q 120. What is the official procedure to be followed for movement of ODC?

Q 121. What do you understand by freight stock in IR & what are the different classification of freight stock in IR?

Q 122. What is CASNUB Bogie & describe its features?

Q 123. Describe briefly about the important parameters considered in designing the freight stock?

Q 124. List the important freight stock used on Indian railways?

Q 125. How is freight stock classified? what is the system of designation of wagons?

Q 126. Describe briefly about the structural details of wagons?

Q 127. What are the salient features of different bogies used in freight stock?

Q 128. Describe classifications of CASNUB bogie in detail.

Q 129. Write short notes on 1. Empty Load box 2. Features of BVZI wagon 3. Wagon Numbering System

Q 130. Write short notes on 1. BCNHL Wagon 2. Features of BOXNH Wagon 3. BOBRN Wagon

Q 131. What are the salient features of new pattern of freight train examination?

Q 132. What are the salient features of end to end freight train examination?

Q 133. What are the salient features of premium end to end freight train examination?

Q 134. What are the salient features of CC rake examination?

Q 135. What are salient features of GDR check?

Q 136. Write short notes on following

- 1- FOIS
- 2- Validity and invalidity of BPC of different pattern of goods rake
- 2-

Q 137. What is BLC Wagon? What are necessity of introducing BLC Wagons? Compare BLC wagon & BFKI Wagon.

Q 138. Write salient features of BLC Wagon

Q 139. Give detailed comparison of BLC and BFKI wagon?

Q 140. What are advantages of employing slackless draw bar in BLC wagons what are constructional and design features of a slackless draw bar?

Q 141. Write short notes on: - 1. Automatic Twist Lock 2. LSD 3. Slack less draw bar

Q 142. Write the salient features of maintenance patterns of BLC Wagons.

Q 143. What is purpose of marshalling of coaching stock & how it is done?

Q 144. What is purpose of marshalling of goods stock & how it is done?

Q 145. Compare salient features of FIAT & ICF Bogie?

Q 146. Give a brief introduction of IR conference association.

Q 147. Give a brief introduction of pattern of Neutral Train examination.

Q 148. What is the work of IRCA for mechanical Dept., give salient features of IRCA.

Q 149. What do you understand by IRCA? What is its subject matter? Give a brief introduction of its contents?

Q 150. What are rejectable defects describe briefly any 10 rejectable defects?

Q 151. According to IRCA what is system of codification of workshops give full detail?

Q 152. What are the salient features of air brake system with BMBS?

Q 153. What is ROH, why is it done and what is ROH periodicity of different wagons.

Q 154. What is procedure of ROH of air brake Wagon with CASNUB Bogie.

Q 155. What is dismantling procedure of BOXN/BCN wagon during ROH?

Q 156. What is assembling procedure of bogie during ROH of air brake stock wagon?

Q 157. What are the modifications to be carried out during ROH of wagon stock?

Q 158. Write short notes on following

- 1- ROH periodicity of different wagon stock
- 2- Wagon particulars to be taken before ROH of a wagon

Q 159. What are different stainless steel wagons used in IR and what are their salient features?

Q 160. What are different aluminum wagons and write their salient features?

Q 161. What is the necessity of using higher Axle load wagons? What are different higher axle load wagons being used in IR, what are their salient features?

Q 162. What are the precautions for welding stainless steel?

Q 163. What is ineffectiveness? Explain the various conditions of ineffectiveness for different types of coaching and freight stock?

Q 164. What is the role of supervisors to minimize the ineffectiveness of various types of stocks?

Q 165. What is ineffectiveness of rolling stock what is the allowed percentage of ineffectiveness of different types of rolling stock in Indian railway?

Q 166. What are railway accidents what is the classification of railway accidents according to railway accident manual?

Q-167. What is the role of supervisor at accident site?

Q-168. What are the different track parameters that should be recorded by a C&W supervisor at accident site?

Q 169. What is CRS enquiry in which railway accidents it is done write salient features of CRS enquiry?

Q 170. What are the different parameters of rolling stock which must be recorded in case of accident?

Q 171. What are various steps that should be followed in investigation of a railway accident?

Q 172. What is accident relief train, what are different types of accident relief trains?

Q 173. What are different types of accident relief trains and what are their compositions?

Q 174. What is wheel impact load detector, give its salient features?

Q 175. What are box detectors, give its salient features?

Q 176. What is TBMS, give its salient features?

Q 177. Write short notes on-

- A) WILD
- B) Hot box detector
- C) TBMS

Q 178. What is WCM system, write it's salient features?

Q 179. What is WILD system and write down the procedure of calibration of WILD system in brief.

Q 180. What is disaster what are types of disaster explain in detail. What is disaster in context of Railway?

Q 181. What is the system of disaster management in Indian Railways?

Q 182. What do you mean by Golden hours and what are the hooter codes?

Q 183. What are the emergency cells formed by railways after disaster and what are its work?

Q 184. What is the responsibility of train crew in case of accident?

Q 185. What is the responsibility of senior most official present at the accident site?

Q 186. What is the function of guard of train involved in accident?

Q 187. What is the function of station master of a section in case of a accident in that section ?

Q 188. What is the function of section controller in case of train accident?

Q 189. What are the salient features of good disaster management plan explain in brief?

Q 190. What is the responsibility of commercial department at accident site?

Q 191. What is the responsibility of security department at accident site?

Q 192. What is the responsibility of S & T department and medical department at accident site?

Q 193. What is the role of C & W supervisor at accident site?

Q 194. What are the track parameters that are to be recorded at accident site, what is joint inspection?

Q 195. What is disaster ? What are it,s types ? what is system of disaster management in railway?

Q 196. What is role of supervisors in disaster management in railway?

Q 197. What is the PL no. what is its importance, write down the method of verifying a PL no.?

Q 198. What are the classification of stores in Indian Railways?

Q 199. What are Stock and non Stock items? Differentiate between stock and non stock items.

Q 200. What is the procedure of making an item as stock item?

Q 201. What are different forms used in store ? give full details?

Q 202. What is the procedure of placing demand of a non stock item?

Q 203. What is inventory control? What are different methods of inventory control in a Depot?

Q 204. Write short notes on any two-

A) VED analysis

B) ESN analysis

C) ABC analysis

Q 205. What is tender, write types of tender?

Q 206. Write short notes on any two-

A) PAC

B) Global Tender

C) Open Tender

Q 207. What is the method of procuring article through quotation method in a depot & quotation method is adopted under which circumstances?

Q 208. What is material management? what is it,s importance in a industrial organization ? what are the different steps through which material management is done in Indian railways?

Q 209. What are the quotation powers of different grades of officer as per the latest SOP? What are the precautions to be taken during procurement by quotation?

Q 210. What is the procedure of condemnation and return to store?

Q 211. Write down the criteria for categorization of goods yard?

Q 212. Write down the criteria for categorization of goods depots & goods yard sick line?

Q 213. What are the facilities and infrastructure required in the goods yard?

Q 214. Draw the layout of a C&W depot.

Q 215. Draw the layout of a C&W sick line and infrastructure required for a coach holding of 250 coaches.

Q 216. What are the facilities required in the freight examination yard?

Q 217. What is the minimum infrastructure required for premium and CC examination?

Q 218. What are the facilities required for maintenance of stainless steel wagon?

Q 219. What are the guiding principles for designing a layout of a coaching depot?

Q 220. Draw a rough sketch explaining various facilities provided in a major coaching depot?

Q 221. Draw a layout of a freight depot examining 15 rakes per day and handling greater than 250 FWU,s per month in sickline?

Q 223. What are the infrastructural facilities required including M&P at examination points and sick line of a freight depot examining 15 rakes per day and handling greater than 250 FWU,s per month in sick line?

Q 224. What is hulk bolting in manufacturing of wagons? What are its advantages over riveting what are the other areas where hulk bolting is used?

Q 225. What is the process of hulk bolting explain in detail?

Q 226. What are the machines and equipments required in hulk bolting of wagons give full description?

Q 227. What are advantages of hulk bolting as compared to riveting describe in detail?

Q 229. How can we prevent occurrence of accident on C&W account describe in detail?

Q 229. What are platform maintenance activities of carriage and wagon department what are the defects which must be checked in order to avoid accident?

Q 230. What are various types of wheel defects how can these be checked?

Q 231. What is hot box and what measures would you take to minimize it?

Q 232. Why is maintenance of rolling stock is necessary ,what are various systems of maintenance , which system is adopted in Indian railways?

Q 233. Describe briefly about rolling in examination ,terminating load examination and intensive examination?

Q 234. What is rake maintenance ?what parameters must be ensured to avoid enroute failure of coaching stock?

Q 235. What are causes of enroute detachment of a rolling stock?what are the preventive measures to avoid enroute detachment?

Q 236. What is intermediate overhauling of ICF coaches ?what activities are done during IOH?

Q 237. What is SS1 of LHB coaches what activities are done in it?

Q 238. How will you measure reliability of coaching stock ,explain in detail any one parameter of reliability measurement?

Q 239. How will you maintain axles,journals,wheels and roller bearings in the workshops?

Q 240. What are various defects normally observed in buffing gear?what attention should be given in buffing gear during POH?

Q 241. What maintenance would you suggest for helical springs used in suspension of coaching stock to avoid failures between POH to POH?