

**(The question bank contains the illustrative example of objective, short notes as well as essay type questions, but this is not exhaustive.)**

### **QUESTION BANK FOR WORKS**

#### **I. Choose the correct answer**

1. Additions and alterations of a permanent nature in staff quarters shall be carried out with the prior approval of  
 a. DEN                      b. DRM                      **c. PCE**                      d. None of the above
2. Use of new materials available in market may be used with the approval of  
 a. ADEN                      b. DEN                      **c. SAG**                      d. None of the above
3. Mosquito proof shutters should be provided in higher than  
 a. Type III and above                      **b. Type IV and above**                      c. Type V and above
4. Group latrines should not be located from well supplying drinking water with in  
 a. 15 metres.                      b. 30 metres                      **c. 45 metre.**                      d. None of the above
5. The number of water closets to be provided in office buildings for 100 persons.  
 a. 2 Nos                      b. 3 Nos                      **c. 4 Nos**                      d. None of the above
6. The number of urinals to be provided for workshop(Factories) for male 200 persons.  
 a. 5 Nos                      b. 6 Nos                      **c. 7 Nos**                      d. None of the above
7. Hospitals important room flooring should be  
**a. Mosaic**                      b. Cement concrete                      c. Granite                      d. None of the above
8. The colony committee will be constituted for railway colonies when the number of staff quarters is more than  
 a. 500 Qrs                      **b. 1000 Qrs**                      c. 2000 Qrs                      d. None of the above
9. Transfer of buildings should be affected with approval of \_\_\_\_\_ Committee  
 a. Colony committee                      b. SIG                      **c. Quarters Committee**                      d. None of the above
10. Colony committee will be hold meetings once in every \_\_\_\_\_ months  
 a. 1                      **b. 2**                      c. 3                      d. None of the above
11. Painting woodwork should be normally being done once in \_\_\_\_\_ years  
 a. 2-3 years                      b. 3-5 years                      **c. 5-7 years**                      d. None of the above
12. ADEN should inspect FOB once in a year \_\_\_\_\_  
 a. 10%                      **b. 20%**                      c. 50%                      d. None of the above
13. Handing over of commissioned assets by construction organization to open line with in \_\_\_\_\_ days of commissioning of the said assets.  
 a. 30                      b. 60                      **c. 90**                      d. None of the above

14. Major dismantling sites minimum level of supervision should be nominated by  
a. ADEN/AXEN      b. DEN/XEN      **c. Sr.DEN/Dy.CE**      d. None of the above
15. The schedule of white washing and colour washing for staff Qrs where rainfall is less than 1500mm per year once in  
a. 1 year      **b. 2 years**      c. 3 years      d. None of the above
16. The slope of Platform end ramp should be provided  
**a. 1 in 6**      b. 1 in 8      c. 1 in 10      d. None of the above
17. The water supply system should be designed on the basis of at least \_\_\_\_liters/person/day  
a.150      **b.200**      c.250      d. None of the above
18. Station classified as category 'E' for provision of passenger amenities should have annual earning  
a. >Rs.3 crores      b. Between Rs.1-3 crores      **c. <1 crore**      d. None of the above
19. Retiring Room should be provided only where a minimum occupation expected by commercial department is  
a. 40%      **b. 60%**      c. 100%      d. None of the above
20. Height of letters for Principal & Secondary name boards are  
a. 75 mm      b.200mm      **c. 300mm**      d. None of the above
21. Platform Number signs board colour should be  
**a. White figure on blue background**      b. Blue figure on white background  
c. Black figure on white background      d. None of the above
22. For foot-over bridges, sub-way and pathway the lowest overhead clearance should be  
a. 2 meters.      **b.2.75 meters**      c.3 meter.      d. None of the above
23. The principal board height from platform level to bottom of board should be  
a. 1.5 meters      b. 1.75 meters      **c. 2 meters**      d. None of the above
24. The minimum residual free chlorine should be available at tail end point  
a. 0.1 ppm      **b. 0.2 ppm**      c. 0.3 ppm      d. None of the above
25. The spacing of manholes designed for 300 mm diameter sewer is  
a. 30 meters      b. 40 meters      **c. 45 meters**      d. None of the above
26. Booking office counter bottom height should be \_\_\_\_\_ m above floor level  
a. 0.5mt      **b 1mt**      c. 1.2mt      d. None of the above
27. Demarcation line should be drawn at \_\_\_\_\_ m from the edge of platform for free movement of passengers and not to allow the trolleys.  
a. 1.2m      b. 1.5m      **c. 1.8m**      d. None of the above
28. Large scale covering of platform covers at cities and towns are for a population of more than \_\_\_\_\_.  
a. 50,000      **b. 100,000**      c. 200,000      d. None of the above
29. For foot over bridges and sub ways minimum width for movement of passengers should be \_\_\_\_\_ m.  
a. 1.5m      **b. 2m**      c. 2.5m      d. None of the above

30. All single face platforms should be provided with a suitable fencing or hedging of a height of  
a. 1.5m                      **b. 1.8m**                      c. 2m                      d. None of the above
31. As per scale of minimum essential amenities at 'A' class station \_\_\_\_\_ number of water taps should be on each platform.  
a. 10                      **b. 12**                      c. 15                      d. None of the above
32. Water cooler may be provided if the total number of passengers is more than \_\_\_\_\_ per day.  
a. 500                      **b. 1000**                      c. 2000                      d. None of the above
33. Horizontal separation for water main to any drain and sewer \_\_\_\_\_ m  
a. 1m                      b. 2m                      **c. 3m**                      d. None of the above
34. The rate of flow at delivery end of hydrant shall not be less than \_\_\_\_\_ liters/min.  
**a. 100**                      b. 150                      c. 200                      d. None of the above
35. The size of pit before planting should be  
**a. 0.5 m<sup>2</sup>**                      b. 0.75 m<sup>2</sup>                      c. 1.0 m<sup>2</sup>                      d. None of the above
36. Provision of Lawns in Officers Bungalows may be adopted as a guideline  
a. 100 m<sup>2</sup>                      b. 150 m<sup>2</sup>                      **c. 200 m<sup>2</sup>**                      d. None of the above
37. Survey of surviving trees should be maintained in the register the minimum girth of  
**a. 15 cm**                      b. 30 cm                      c. 50 cm                      d. None of the above
38. Smoking is prohibited while conveying, handling or using of explosives with in  
a. 5 m                      **b. 10 m**                      c. 100 m                      d. None of the above
39. The minimum safety distance for heavy blasting not less than  
a. 60 m.                      b. 100 m                      **c. 150 m**                      d. None of the above
40. Section 145 of the Railway Act deals \_\_\_\_\_ nature of offence  
a. Obstructing Rly servant in his duty                      **b. Drunkenness**                      c. Defacing public notice
41. The maintenance of Law and Order on railways including running trains dealt with  
a. RPF                      b. Local Police                      **c. GRP**                      d. None of the above
42. Rock to be blasted near by track should be protected with wooden sleeper  
**a. 60 m**                      b. 100 m                      c. 150 m                      d. None of the above
43. When there is a tie at an action and a railway servant happens to be one of the bidders, offer shall be given preference to  
a. Outsider                      **b. Rly servant**                      c. Cancel                      d. None of the above
44. Index Plan and Index Section should be prepared in sheet size  
**a. AO**                      b. A1                      c. A2                      d. None of the above
45. At wayside stations where Engineering staff is not posted, daily watering to young trees may be entrusted to \_\_\_\_\_ staff.  
**a. Operating**                      b. S&T                      c. Commercial                      d. None of the above
46. Title block should be drawn at \_\_\_\_\_ corner of drawing.  
a. Left bottom                      **b. Right bottom**                      c. Left top                      d. None of the above
47. Blasting operations with in \_\_\_\_\_ metres of a running line should be carried out under block protection.  
a. 60m                      **b. 100m**                      c. 150m                      d. None of the above
48. No blasting should be done within \_\_\_\_\_ hour of the time when any train is expected to pass.  
**a. ½**                      b. 1                      c. 1½                      d. None of the above
49. The responsible of Law and Order in Rly staff quarters area dealt with \_\_\_\_\_  
a. RPF                      b. GRP                      **c. Local Police**                      d. None of the above
50. Office records may be handed over to GRP with the authority of \_\_\_\_\_  
a. SE/Works                      **b. DEN**                      c. PCE                      d. None of the above

51. Under section 147 of the Rly Act empowers a Rly official to effect the arrest of any person who has committed \_\_\_\_\_ offence  
**a. cognizable**      b. non-cognizable      c. none of the above      d. None of the above
52. Reserve price for each lot sold by auction should be fixed by \_\_\_\_\_ in consultation with the Accounts Officer.  
a. ADEN      **b. DEN**      c. PCE      d. None of the above
53. The depth of pit for planting young tree should be dug \_\_\_\_\_ m  
a. ½      **b. 1**      c. 1½      d. None of the above
54. The periodicity of inspection for encroachment should be done once in  
**a. 3 months**      b. 6 months      c. one year      d. None of the above
55. In areas having habitation bordering railway land and also where habitation is likely in near future, boundary should be provided with  
**a. Boundary walls**      b. Fencing      c. Boundary Stone      d. None of the above
56. Encroachments by outsiders removal of which requires action under PPE Act  
**a. Category – A**      b. Category –B      c. Category – C      d. None of the above
57. Engineer's Representative shall mean \_\_\_\_\_ in direct incharge of the work  
**a. ADEN/SSE/SE**      b. DEN      c. Sr.DEN      d. None of the above
58. Contract document shall be signed in \_\_\_\_\_ (No of copies) by the Railway and Contractor.  
a. 2      **b.3**      c.5      d. None of the above
59. The Security for Railway property lies with  
**a. RPF**      b. Local Police      c. GRP      d. None of the above
60. All the communication need to be in \_\_\_\_\_  
a. Oral      **b. Writing**      c. Non of the above      d. None of the above
61. Liquidated damages will be imposed to extension of time for delay due to  
a. Railway      **b. Contractor**      c. Force Majeure clause      d. None of the above
62. Contractor has to commence the work with in \_\_\_\_\_ days after receiving the letter of acceptance  
a) 7      b) 10      **c) 15**      d. None of the above
63. Demarcation of Land Boundary stones should, in no case be at a greater distance apart \_\_\_\_\_ m.  
**a. 50**      b. 100      c. 200      d. None of the above
64. The boundary stones may be of suitable size and section, projecting about \_\_\_\_\_ mm above ground  
a. 300      **b. 500**      c. 1000      d. None of the above
65. Inspection of land boundary verification should be done by SE/Works & SE/P.Way once in \_\_\_\_\_  
a. 3 months      b. six month      **c. 1 year**      d. None of the above
66. in case of as per section 17 of the Act the land can be occupied on expiry of \_\_\_\_\_ days after publication of notice under Section 9(i) of the act.  
a. 10      **b. 15**      c. 30      d. None of the above
67. Liquidated damage is \_\_\_\_\_ % to \_\_\_\_\_ % of Contract value of the work for each week or part of the week.  
**a. 0.5 to 1**      b. 1 to 2      c. 2 to 3      d. None of the above
68. All suburban stations have been included in Category \_\_\_\_\_  
a. A      b. B      **c. C**      d. None of the above
69. Under section 158 of the Rly Act empowers a Rly official can not effect the arrest of any person who has committed \_\_\_\_\_ offence  
a. cognizable      **b. non-cognizable**      c. non of the above      d. None of the above

70. The sitting of buildings or other structures in the vicinity of tracks should be avoided.  
**a) Inside of curve** b) Out side of curve c) None of the above d. None of the above
71. Formation width for double line straight track Minimum width in cutting (excluding side drains) \_\_\_\_\_ mm  
a. 12550 **b. 11150** c. 6850 d. None of the above
72. The pathways should have a minimum width of \_\_\_\_\_ m and should ensure that it is clear of all obstructions.  
a. 1.5 **b. 2** c. 2.5 d. None of the above
73. As per categories of lines future max permissible speed of Group 'A' line is  
a. 110 Kmph b. 130 Kmph **c. 160 Kmph** d. None of the above
74. For BG track the minimum length of straight between reverse curve should be  
a. 30 m **b. 50 m** c. 100 m d. None of the above
75. For BG 'A' category track the minimum radius of vertical curves shall be  
a. 2500 m b. 3000 m **c. 4000 m** d. None of the above
76. During final location survey masonry pillars should be built along the centre line at intervals of not less than  
a. 100 m **b. 500 m** c. 1000 m d. None of the above
77. Grade compensation to be allowed for BG track should be  
a. 0.02% b. 0.03% **c. 0.04%** d. None of the above
78. In land plan permanent land should be marked in  
a. Yellow colour **b. Pink colour** c. Red colour d. None of the above
79. Taking possession of land not lower than -----in status than of the Engineering Department  
a. Dy.CE b. XEN **c. Inspector of Works(JE/SE/Works)**
80. Order under sub-section (1) of section 5 of PPE Act 1971 deals  
a. Form 'A' **b. Form 'B'** c. Form 'C' d. None of the above
81. Rates fixed for water pipe line x'ing for cultivation by individual farmers  
a. Rs.500 **b. Rs.1000** c. Rs.2000 d. None of the above
82. Bench mark should be left along the line in final location survey at intervals of not more than  
a. 100 m b. 500 m **c. 1000 m** d. None of the above
83. The minimum sleeper density shall be provided for Group 'B' Line \_\_\_\_\_  
a. M+4 **b. M+7** c. M+9 d. None of the above
84. The centre line finally located should be marked out by pegs at every \_\_\_\_\_ m  
a. 10m **b. 20m** c. 50m d. None of the above
85. Index plan and section should be drawn to a scale of \_\_\_\_\_  
a. 1 : 10,000 **b. 1 : 50,000** c. 1 : 100,000 d. None of the above
86. Important rivers should be surveyed for a distance of \_\_\_\_\_ KM up stream side.  
a. 2 km b. 5km **c. 7 km** d. None of the above
87. Petty repair book should be kept at \_\_\_\_\_  
a. SE/Works office b. ADEN office **c. SM office** d. None of the above
88. Minimum radius of curves for BG \_\_\_\_\_ m  
**a. 175** b. 250 c. 475 d. None of the above
89. Formation width for single line straight track Minimum width in cutting (excluding side drains) \_\_\_\_\_ mm  
a. 6100 b. 6250 **c. 6850** d. None of the above
90. The maximum permissible cant gain on transition curve should not more than \_\_\_\_\_ mm/second.  
a. 35 **b. 55** c. 100 d. None of the above
91. Departmental charges should be collected from deposit work \_\_\_\_\_ % including land cost.  
a. 10% **b. 12½%** c. 15% d. None of the above

92. Land for assisted siding outside the railway boundaries will be acquired under the land acquisition Act by \_\_\_\_\_  
 a. **Railway**                      b. Siding owner                      c. Non of the above                      d. None of the above
93. The rate for earth work shall be inclusive of initial lead up to  
 a. **30 m**                      b. 45 m                      c. 50 m                      d. None of the above
94. The classification of soils met with in excavation of the work shall be determined by  
 a. Sr.SE/Works                      b. **ADEN/AXEN**                      c. DEN/XEN                      d. None of the above
95. The side slope of cutting shall be for hard rock  
 a. 1 vertical to 2 horizontal                      b. 1 vertical to 1 vertical                      c. **1 vertical to ¼<sup>th</sup> horizontal**
96. The weight of pitching stone shall be between  
 a. 25 kg to 50 kg                      b. **30 kg to 55 kg**                      c. 35 kg to 50 kg                      d. None of the above
97. The absorption of water by stock brick after 24 hours immersion in cold water shall not exceed by its weight.  
 a. **20 %**                      b. 25%                      c. 30%                      d. None of the above
98. Minimum period of removal of forms for walls, columns and vertical sides of slab and beams.  
 a. 7 days                      b. 3 days                      c. **24 to 48 hours**                      d. None of the above
99. Stock bricks are used the vertical and bed joints shall not more than  
 a. **10 mm**                      b. 12 mm                      c. 20 mm                      d. None of the above
100. Reinforcement for half-brick wall should be placed along the middle of the joint  
 a. **every 4<sup>th</sup> layer**                      b. every 6<sup>th</sup> layer                      c. every 10 layer.                      d. None of the above
101. In Random Rubble Masonry selected stones on face work shall not less than  
 a. 0.4 Sq ft                      b. **0.5 Sq ft**                      c. 1 Sq ft.                      d. None of the above
102. Brick Masonry bonding with old work toothing out alternate course of at least  
 a. 5 cm                      b. **7 cm**                      c. 10 cm                      d. None of the above
103. The distance from edge of cutting to catch water drain shall not be less than \_\_\_\_\_ mt.  
 a. **2m**                      b. 3m                      c. 5m                      d. None of the above
104. The thickness of turfing materials shall be cut to \_\_\_\_\_ cm.  
 a. 5-8cm                      b. **8-10cm**                      c. 10-12cm                      d. None of the above
105. Not more than \_\_\_\_\_ holes at a time shall be charged and blasted Electrical exploder.  
 a. 5                      b. 8                      c. **10**                      d. None of the above
106. Stock brick shall have a crushing strength of not less than \_\_\_\_\_ kg/cm<sup>2</sup> when dry.  
 a. 33                      b. **44**                      c. 55                      d. None of the above
107. The proportions of cement mortar for pointing should be \_\_\_\_\_.  
 a. 1 : 2                      b. **1 : 3**                      c. 1 : 4                      d. None of the above
108. All brick work in cement mortar shall be cured for at least \_\_\_\_\_ days.  
 a. 7 days                      b. 10 days                      c. **14 days**                      d. None of the above
109. Where the surface is to be plastered the joint shall be raked clear of mortar for a depth of \_\_\_\_\_ mm.  
 a. 6mm                      b. **12 mm**                      c. 20mm                      d. None of the above
110. Mortar to be used for half brick wall not weaker than \_\_\_\_\_.  
 a. 1 : 2                      b. **1 : 4**                      c. 1 : 6                      d. None of the above

111. No stone work/Brick work shall be done above \_\_\_\_\_ m from ground level with out scaffolding.  
**a. 1 m**                      b. 1.2m                      c. 1.5m                      d. None of the above
112. In RR masonry bond stone/through stone shall be provided in every course not more than \_\_\_\_\_ m in horizontal  
a. 0.5m                      **b. 1m**                      c. 2m                      d. None of the above
113. Polio diseases is caused due to  
a. Bacteria                      **b. Viral infection**                      c. Flies                      d. None of the above
114. \_\_\_\_\_ shall be responsible for the arrangements to obtain supply of water necessary for work.  
**a. Contractor**                      b. Railway                      c. both                      d. None of the above
115. Up to three story building the minimum head required for water tank should be  
a. 10 m                      **b. 17 m**                      c. 20 m                      d. None of the above
116. \_\_\_\_\_ is responsible for setting out of all the works in relation to the original points  
a. Railway                      **b. Contractor**                      c. both                      d. None of the above
117. Contractor shall not carryout any work between \_\_\_\_\_ and \_\_\_\_\_ without previous permission of the Engineer.  
**a. Sunset, Sunrise**                      b. Sunrise, Sunset                      c. none of the above                      d. None of the above
118. Growth of algae in a natural water body tends to increase.  
**a. Turbidity**                      b. Alkalinity                      c. Hardness                      d. None of the above
119. An estimate is prepared in order to enable the authority competent to give administrative approval to the expenditure is called  
a. Detailed Estimates                      **b. Abstract Estimates**                      c. Revised Estimates                      d. None of the above
120. Abstract estimate should be prepared in Form No. \_\_\_\_\_  
a. E.553                      **b. E.702**                      c. E.704                      d. None of the above
121. \_\_\_\_\_ shall be responsible for arrangements to obtain supply of electric power for the work  
a. Railway                      **b. Contractor**                      c. both                      d. None of the above
122. Estimates for deposit work to prepare plan, drawing & estimates departmental charges should be collected from the party for the value of work more than Rs.1 lakh  
a. 1%                      **b. 2%**                      c. 2.5%                      d. None of the above
123. Water borne diseases are caused due to \_\_\_\_\_ impurities  
a. Physical                      b. Chemical                      **c. Bacterial**                      d. None of the above
124. pH value is a symbol for \_\_\_\_\_ concentration.  
**a. Hydrogen ion**                      b. Nitrogen ion                      c. calcium ion                      d. None of the above

125. The aeration of water is done for the removal of \_\_\_\_\_.  
a. Bacteria                      b. colour                      **c. odder**                      d. None of the above
126. In monsoon period, \_\_\_\_\_ works should not be carried out.  
**a. Renovation**                      b. Construction                      c. Earthwork                      d. None of the above
127. In water distribution system at consumers end, the minimum residual gauge pressure should be \_\_\_\_\_.kg/cm<sup>2</sup>.  
a. 1                      b. 2                      **c. 4**                      d. None of the above
128. Maximum Velocity of flow in a sewer is recommended not to exceed \_\_\_\_\_ mps  
a. 1                      **b. 2**                      c. 3                      d. None of the above
129. Detailed estimate should be prepared in Form No. \_\_\_\_\_.  
a. E.702                      **b. E.703**                      c. E.704                      d. None of the above
131. To get the technical sanction of the competent authority \_\_\_\_\_ estimate is to be prepared.  
a. Abstract                      **b. Detailed**                      c. Construction                      d. None of the above
132. Deposit work should be executed by \_\_\_\_\_.  
a. State Govt.                      **b. Railway**                      c. None of the above                      d. None of the above
133. Minimum distance centre to centre of tracks for new works / additions to existing works.  
a) 4265mm                      b) 4725 mm                      **c) 5300 mm**                      d. None of the above
134. Where 25 K.V. A.C Traction is likely to be used, the minimum height above rail level for a distance of 1600mm on either side of the centre of track shall be for Light overhead structure such as foot over bridges.  
a) 4875 mm                      b) 5870 mm                      **c) 6250 mm**                      d. None of the above
135. Formation width for double line straight track Minimum width in embankment  
a) 6850mm                      b) 11550 mm                      **c) 12150 mm**                      d. None of the above
136. Gauge on straight including curves of 350 m radius shall be  
a) **-5mm to +3mm**                      b) 6mm loose                      c) exact gauge                      d. None of the above
137. Where 25 K.V. A.C traction is likely to be used, the minimum height above rail level for a distance of 1600mm on either side of the centre of track shall be for Heavy overhead structure such as road over or fly over bridges.  
a) 4875 mm                      **b) 5870 mm**                      c) 6250 mm                      d. None of the above
138. Minimum horizontal distance from centre of track to any structure except a platform for new works from 1065mm above rail level to 3355mm.  
a) 2135mm                      **b) 2360mm**                      c) 1905mm                      d. None of the above
139. Formation width on curves increase due to extra ballast on outside of curves  
a) 100 mm                      **b) 150 mm**                      c) 200 mm                      d. None of the above



140. Clogging due to fine sand, clay and sand the material used for removing clogging  
**a. Sodium hexametaphosphate**    b. Hydrochloric acid    c. Chlorine
141. Data for Estimating Requirements of Water for Apron washing  
 a. 5 lits/ per sqm    **b. 10 per sqm**    c. 15 per sqm    d. None of the above
142. Minimum height above rail level of door way of 1370mm on either side of centre track in workshop where no electric traction is used  
 a. 2465mm    b. 4875mm    **c. 6250 mm**    d. None of the above
143. Quantity of water required for washing of carriages on washing lines for BG  
**a. 3600 lit per carriage**    b. 3000 lit per carriage    c. 2800 lit per carriage
144. Data for Estimating Requirements of Water in Offices per head  
 a. 30 lit per head    b. 35 lit per head    **c. 45 lit per head**    d. None of the above
145. Absolute verticality is ideal to a deviation of 100mm per \_\_\_\_\_ metres of boring is generally acceptable where submersible pumps are not to be installed.  
 a. 20 m    **b. 30m**    c. 45m    d. None of the above
146. The suction lift, which should be made as low as possible; the greatest suction-lift that may be expected at sea-level is about.  
 a. 12m    b. 10m    **c. 7m**    d. None of the above
147. The delivery pipe shall be of such size that the velocity of water is about  
 a. 2 m/s.    **b. 2.5 m/s.**    c. 3 m/s.    d. None of the above
148. Reinforced concrete pipes are used in water supplies are classified as P2 with test pressures of  
 a. 2 kg/cm<sup>2</sup>    **b. 4 kg/cm<sup>2</sup>**    c. 6 kg/cm<sup>2</sup>    d. None of the above
149. For use on gravity mains, the working pressure should not exceed \_\_\_\_\_ of the test pressure.  
**a. 2/3**    b. 3/4    c. 1/2    d. None of the above
150. PSC competes economically with steel for pipe diameters of \_\_\_\_\_ mm and above  
 a. 300    b. 500    **c. 600**    d. None of the above
151. A minimum of \_\_\_\_\_ minutes contact time must be provided before delivery of water to the consumer  
 a. 15 to 30    **b. 30 to 60**    c. 60 to 90    d. None of the above
152. Tanks used for the storage of drinking water should be rubbed and cleaned at such intervals as specified by the  
 a. ADEN    **b. DEN**    c. Sr.DEN    d. None of the above
153. The number of service pipes 20mm dia that can be supplied from a properly designed distribution-main of 100 mm dia  
 a. 36    b. 46    **c. 56**    d. None of the above

154. Minimum residual pressures at ferrule points for two storey building is  
a. 7m                      **b. 12m**                      c. 17m                      d. None of the above
155. Generally \_\_\_\_\_ % of the water supplied may be considered to reach the sewers  
a. 60                      **b. 80**                      c. 90                      d. None of the above
156. Vertical separation for water main to any drain and sewer \_\_\_\_\_ m  
**a. 0.5**                      b. 1                      c. 3                      d. None of the above
157. \_\_\_\_\_ is recovered from the running bills of successful bidder of contract  
a) EMD                      **b) SD**                      c) CD
158. All instructions to the contractor is given by \_\_\_\_\_  
a) oral                      **b) written**                      c) both a & b
159. Contractor shall commence the work within \_\_\_\_ days after receipt of letter of authority  
a) 7                      b) 3                      **c) 15**
160. In Measurement book, \_\_\_\_\_ pages to be machine numbered.  
a) odd                      b) even                      **c) all**
161. Security deposit is \_\_\_\_\_ % of contract value.  
a) 2                      **b) 5**                      c) 10
162. Maximum value of Limited tender by PHOD is \_\_\_\_\_ lakhs.  
**a) 15 crores**                      b) 20 crores                      c) 5 crores
163. Approved list of contractor is prepared in consultation with \_\_\_\_\_ department  
a) stores                      b) signal                      **c) accounts**
164. Termination of contract can be given by the officer \_\_\_\_\_ the authority who signed the contract.  
a) lower than                      **b) not lower than**                      c) none of the above
165. Open tender is published atleast in \_\_\_\_\_ regional paper  
**a) 1**                      b) 2                      c) 3
166. A tender which is submitted after due date and time of submission but before opening is called \_\_\_\_\_ tender  
a) Open r                      b) Late                      **c) Delayed**
167. The amount of EMD for a work of 4 lakhs is Rs. \_\_\_\_\_  
a) 4000                      **b) 8000**                      c) none of the above
168. The maximum value of work order with in powers of DEN is Rs. \_\_\_\_\_  
**a) 25,000**                      b) 50,000                      c) 100,000
169. For quotations, annual ceiling for Sr.DEN is Rs. \_\_\_\_\_ lakhs  
a) 1                      b) 5                      **c) 2**

170. Zonal contract is for the period from 1st \_\_\_\_\_  
a) March                      b) January                      **c) July**
171. In case of Limited tenders, the number of contractors have to be invited from the approved list should be at least \_\_\_\_\_  
a) 5                              **b) 10**                              c) 7
172. Maximum LAP that can be accumulated by an employee is  
a) 180 days                      b) 240 days                      **c) 300 days.**
173. Parents can be included in \_\_\_\_\_passes.  
a) Privilege                      **b) Transfer**                      c) Duty pass
174. SF.1 issued for \_\_\_\_\_  
a) Major penalty              b) Minor penalty              c) Suspension
175. Casual leaves eligible to open line staff  
a) 8                              b) 10                              c) 11
176. Number of privilege passes eligible for Group C & D staff after 5 years service.  
a) 1 Set                      b) 2 sets                      **c) 3 Sets**
177. Number of privilege ticket order eligible for railway staff  
**a) 4 Set**                      b) 2 sets                      c) 1 Sets
178. Number of days earn leave credited per annum  
a) 10                              b) 15                              **c) 30**
179. Number of days LHAP credited per annum  
a) 10                              **b) 20**                              c) 30
180. Validity of single journey privilege pass  
a) 3 months                      b) 4 months                      c) 1 month
181. When was the official language act formed \_\_\_\_\_  
a) 1947                      b) 1956                      c)1963                      d) 1976
182. When the official language rules were formed \_\_\_\_\_  
a) 1947                      b) 1956                      c)1963                      d) 1976
183. As per OL policy Jammu & Kishmar comes under \_\_\_\_\_ region  
a) A                              b) B                              c) C                              d) none
184. When is "Hindi Day" celebrated every year?  
a) 12th Feb              b) 12th April                      c) 14th Feb                      **d) 14th Sept.**
185. According to official language rules, TamilNadu falls under which regions.  
a) Region A              b) Region B              c) Region C                      d) None

186. Which is only Union Territory classified under regions B?  
 a) Andaman & Nicobar                      b) Pondicheary  
 c) Chandigarh                                  d) Daman & Diu
187. The distance between boundary two boundary pillars for demarcation of land boundary is  
 a) 100m              b) 50 m              c) 200m              d) 150m
188. Licensing of the area or regularisation of the realises structures may be limited to max of \_\_\_\_\_ sq.m in each individual case  
 a) 600              **b) 500**              c) 400              d) 300
189. Temporary licensing of land for conduction exhibitions, malls, charnels etc. can be permitted on licensing bases for a max period of \_\_\_\_\_ months  
 a) 6              b) 5              c) 1              **d) 3**
190. Temporary licensing of land for conduction shopping etc. can be permitted on licensing fee \_\_\_\_\_ of the market value  
 a) 10%              b) 25%              c) 15%              **d) 20%**
191. Detailed estimation is prepared to enable  
 a) Call tender    b) to execute work              **c) to obtain technical sanction**
192. Revised estimate to be prepared when  
 a) Expenditure exceeds 25 % of Agt. Value  
 b) after completion of work  
 c) While submitting CC III bill  
 d) becomes apparent that expenditure likely to exceed the provision there on
193. To control over revenue budget this plays the important management tool  
 a) Exchequer              b) Revenue Allocation Register  
 c) both a) & b)              d) none
194. If the radius of a circular curve is 700 m, degree for the curve is \_\_\_\_\_  
 (a) 0.5              **(b) 0.4**              (c) 0.75
195. \_\_\_\_\_ is provided on curve to balance the centrifugal force.  
 (a) transition    (b) superelevation    (c) versine
196. Form No for NS Indent is  
**a. S 1302**              b. S.1313              c. S 1315
197. Stock verification of T&P is carried out once in  
 a. 1 years              b. 2 years              **c. 3 years**
198. Challans are prepared with form No.  
**a. ST47**              b. ST 46              c. ST 57
199. No of form for Stock Indent is  
 a. S1302              **b. S 1313**              c. S 1315

200. Stock indent is prepared in \_\_\_\_\_ number of copies.  
A) 2                      **b) 6**                      c) 5
201. The accounts stock verification of P.WAY materials are conducted once in \_\_\_\_\_ years  
**a) 1**                      b) 2                      c) 3.
202. DMTR is used to account of stores \_\_\_\_\_.  
a. receipts only              b. issues only                      **c. both a& b**
203. Reserve price is fixed to sell the scrap materials by \_\_\_\_\_.  
a. PCE                      **b. COS**                      c. FA & CAO
204. Stock sheets are prepared in \_\_\_\_\_ copies after stock verification.  
a. 1                      b 2                      **c. 3**
205. Ledger postings are made from the  
a. **DBR / DBI**              b. Gate pass                      c. Challan
206. RMC note is used for transporting \_\_\_\_ materials.  
**a) Rly**                      b) Defence                      c) Public
207. Dead stores are the items not used for more than \_\_\_\_\_ months  
a. 12 months              **b. 24 months**                      c. 36 months
208. Station classified as category 'D' for provision of passenger amenities should have annual earning  
a. >Rs.3 crores              **b. Between Rs.1-3 crores** c. <1 crore              d. None of the above
209. Station classified as category 'C' for provision of passenger amenities should have annual earning  
a. >Rs.3 crores              b. Between Rs.1-3 crores              c. <1 crore              **d. All suburban stations**
210. Station classified as category 'A1' for provision of passenger amenities should have annual earning  
**a. >Rs.50 crores**              b. Between Rs.6 crores              c. >3 crore              d. None of the above
211. Number of tapes in each PF for B category station based on minimum essential amenities.  
a. 21                      **b. 12**                      c. 6                      d. None of the above
212. Number of seats in each PF for A category station based on minimum essential amenities.  
.  
**a. 100**                      b. 75                      c. 50                      d. None of the above
213. Number of booking counters for B category station based on minimum essential amenities.  
.  
a. 12                      b. 10                      **c. 6**                      d. None of the above
214. Number of urinals for A1 category station based on minimum essential amenities.  
**a. 12**                      b. 10                      c. 6                      d. None of the above

215. Number of latrines for D category station based on minimum essential amenities.  
a. 12                      b. 10                      **c. 4**                      d. None of the above
216. Extra for lead more than 400m the unit of rate is  
a.  $10\text{m}^3$                       b. per KM for  $\text{m}^3$                       **c. per KM for  $10\text{m}^3$**                       d. None of the above
217. Deduction of voids for supply of stone metal 200 mm and above is  
a. 5%                      **b. 8%**                      c. 20%                      d. None of the above
218. Loading of materials like stone, jelly, sand, gravel, etc., initial lead upto \_\_\_\_\_ m free.  
a. 30m                      b. 50m                      **c. 100m**                      d. None of the above
219. Measurement of window, ventilator should be deduct \_\_\_\_\_ cm from overall size.  
a. 0                      **b. 0.5**                      c. 1                      d. None of the above
220. The weight of aluminium section should not go beyond as indicated in the drawing.  
**a. +/- 5%**                      b. +/- 10%                      c. +/- 1%                      d. None of the above
221. The unit of payment for sinking well foundation is  
a. per m dia                      b. per m depth                      **c. per m of perimeter per m of depth**
222. Data for estimating requirement of water for office per head per day  
a. 30 litres                      **b. 45 litres**                      c. 25 litres                      d. None of the above
223. Data for estimating requirement of water for CC apron washing per  $\text{m}^2$   
**a. 10 litres**                      **b. 25 litres**                      c. 30 litres                      d. None of the above
224. Data for estimating requirement of water for washing of carriage on washing line of BG coach  
a. 2600 litres                      **b. 3600 litres**                      c. 500 litres                      d. None of the above
225. Clogging of well due to chemical can be removed by using  
**a. Hydrochloric acid**                      b. Chlorine                      c. Sodium hexametaphosphate
226. The degree of curve is defined as  
a.  $1750/D$                       **b.  $1750/R$**                       c.  $R/1750$                       d. None of the above
227. The radius of  $4^\circ$  curve is  
a. 1750m                      b. 875m                      **c. 437.5m**                      d. None of the above
228. The inspection of sewage system by SE/Works is  
a. Once in 3 months                      b. Once in 6 month                      **c. Once in a year**
229. The licence fee for land used to lay private siding  
**a. 6%**                      b. 10%                      c. 20%                      d. None of the above
230. The minimum licence fee should be  
a. Rs.500                      **b. Rs.1000**                      c. Rs.2000                      d. None of the above

231. The maximum period of lease for Kendriya Vidyalaya may be give upto  
a. 10 years      b. 30 years      **c. 99 years**      d. None of the above
232. The inspection interval of encroachment by SE/Works is once in  
**a. 3 months**      b. 6 months      c. 1 year      d. None of the above
233. Encroachment by outsider removal of which requires action under PPE Act.  
**a. Category-A**      b. Category-B      c. Category-C      d. None of the above
234. Minimum clearance of check rails for a curve  
**a. 44mm**      b. 51mm      c. 57mm      d. None of the above
235. Maximum gradient in station yards unless special safety devices are adopted and/or special rules enforced to prevent accidents for new works  
a. 1 in 260      b. 1 in 400      **c. 1 in 1200**      d. None of the above
236. Maximum height above rail level for goods platforms  
a. 760mm      b. 840mm      **c. 1065mm**      d. None of the above
237. Banner flag shall be provided at \_\_\_\_\_m from works spot for BG  
a. 500m      **b. 600m**      c. 1200m      d. None of the above
238. Detonators shall be provided at \_\_\_\_\_ m from the works spot for BG  
a. 600m      b. 100m      **c. 1200m**      d. None of the above
239. Termination board for Goods train shall be provided at for BG  
a. 600m      b. 750m      **c. length of longest goods train**
240. The minimum radius of vertical curve for B route shall be  
a. 4000m      **b. 3000m**      c. 2500m      d. None of the above
241. The desirable minimum length of straight between reverse curve for BG shall be  
a. 30m      **b. 50m**      c. 100m      d. None of the above
242. Compensation for curves on gradients for BG  
a. 0.03% per degree      **b. a. 0.04% per degree**      c. a. 0.05% per degree
243. Estimates need not to be prepared for chargeable under revenue works  
a. Rs.50,000      b. Rs.100,000      **c. Rs.200,000**      d. None of the above
244. Advances are eligible to contractor, if the estimated value of tender more than  
a. Rs.50, 00, 000      **b. Rs.1 Crore**      c. Rs. 2 Crore      d. None of the above
245. For measurement of earth work cross section test check by ADEN/AXEN  
a. 10%      **b. 20%**      c. 100%      d. None of the above
246. The life of detonator is \_\_\_\_\_years  
a. 5      **b. 7**      c. 12      d. None of the above

247. (1) The steepest gradient that exists in a section is called as ..... Gradient.
- (a) Pusher                      (b ) Momentum              **(c) Ruling.**                      d. None of the above
248. When the algebraic difference between the grades is equal to or more than ..... percent a vertical curve is provided.
- (a) 0.4%**                      (b) 0.04 %                      (c ) 4%.                      d. None of the above
249. Minimum Free Board required in a bridge is
- a) 1 m**                      b) 1.20 m                      c) 600 mm                      d. None of the above
250. Sub structure of a bridge does not include
- a) Abutment                      b) Girder/Slab                      c) Piers                      d) Wing and Return walls
251. Wing walls and return walls are provided to retain
- a) earth on approaches                      b) ballast                      c) track on approaches                      d. None of the above
252. In grade of concrete M 25, 'M' refers to
- a) Max.                      b) Minimum                      **c) Mix**                      d. None of the above
253. Weep holes are provided in
- a) piers                      **b) abutments**                      c) foundation                      d. None of the above
254. The pressure on soil worked out shall be ..... the SBC of the soil.
- a) more than                      b)not equal to                      **c) less than**                      d. None of the above
255. \_\_\_\_\_ soil has the least SBC of the soil.
- a) Hard moorum                      b) Stiff clay                      **c) Black cotton soil**                      d. None of the above
256. The clear cover for slab main reinforcement in buildings is
- a) 20 mm**                      b) 30 mm                      c) 50 mm                      d. None of the above

## II. Write short answers for the following:

1. What are the different types of cements available in the market and their use?
2. What is the quality standard of water used in RCC?
3. What are the tests to be conducted for bricks?
4. What are the different grades of sand and their use?
5. What is EMD and explain?
6. What is SD and how it is recovered?
7. What is performance guaranty and explain?
8. When delay is due to contractor how extension of time is given?
9. Who has to arrange for water & power for construction works?
10. Give two reasons for determination of contract owing to default of contractor.
11. When repayment of Security Deposit and performance guaranty will be made?
12. Give specification for soling stone.
13. Give specification for turfing material.



14. Give specification for brick jelly.
15. Give specification for painting old wood work.
16. Give specification for island formation.
17. Define Void ratio and Porosity.
18. Define OMC and MDD.
19. Give four physical standards of portable drinking water.
20. Give four chemical standards of portable drinking water.
21. Define super chlorination.
22. Define secondary chlorination.
23. Define BOD
24. Give the soil suitable for forming bank.
25. Give different types of roller used in forming new bank.
26. Give four types of soil as per IS classification.
27. Give four items up to what extent no deduction should be done.
28. Define vertical curve and its limits for BG & MG.
29. Define transition curve and its advantages.
30. What are the limits of work order issued by various officers?
31. What are the different types of contract bills?
32. List out any four numbers of inspection schedule of SE/Works.
33. Give the Proforma for submitting progress report.
34. Give the points to be considered in orientation of buildings while planning of Railway staff quarters.
35. Give the points to be considered while planning for new staff quarters.
36. Give the details of norms for the following fitments in an office buildings
  - Wash Basins
  - Drinking water fountains
37. Give the details of norms for the following fitments in a factory.
  - Washing tap with drinking arrangements
  - Ambulation taps
38. Plan area including staircase circulation and sleeping of balcony for type III
39. What is meant by railway sanitation committee?
40. Give recommended heights for BG passenger platform.
41. List out any four facilities to be provided for physically challenged persons?
42. How to improve the yield of open well in sandy soil.
43. List out any four types of pumps used in railways.
44. List out the any four type of sewer lines used.
45. Give the Proforma for survey of shriveling tree.
46. List out the categories of encroachments and explain briefly.
47. What are the steps to control unauthorized use of railway land.
48. What is the period of intervals of stock verification for different items?
49. What is stock sheet?
50. Minimum basic amenities at halt station.
51. Yardstick for provision of passenger amenities at D class station.
52. What are the short term facilities to be provided for physically challenged persons?
53. What are the long term facilities to be provided for physically challenged persons?
54. Give four places of large scale covering of PF.

### III. Essay type questions

1. Write specification for supply of the following materials.
  - i) Bricks
  - ii) Fine aggregate (Sand)
  - iii) Course aggregate (Blue metal)
2. What are the test to be conducted for the following materials and give the accepted range.
  - i) Cement
  - ii) Steel
  - iii) Course aggregate
3. Explain about different situations to give extension of time and explain each.
4. Give short notes on any three:-
  - i) Liquidate damages,
  - ii) Works during night,
  - iii) Performance guaranty
5. Write the specification for the following works any two:-
  - i) Brick work
  - ii) RR Masonry
  - iii) CR Masonry
6. Write the specification for the following
  - i) Plastering
  - ii) Concrete
  - iii) Pointing
7. Write the specification for the following
  - i) WBM road
  - ii) Bituminous road
  - iii) Cement concrete road
8. Write the specification for the following
  - i) Protective works
  - ii) AC sheet roofing
  - iii) Weathering course
9. Write the specification for the following
  - i) Paining
  - ii) White washing and colour washing
  - iii) Distempering and water proof cement painting
10. Write short notes on the following:
  - i) Liquid limit
  - ii) Plastic limit
  - iii) Shrinkage limit
11. Write short answer on the following while using BSR items:
  - i) What is the free lead and lifts in earth work chapter?
  - ii) Size of stock brick and country brick.
  - iii) What is the % of deduction to be made for stacks of soling, pitching & RR stone?
  - iv) Who has to supply the steel and cement for BSR works items?
  - v) Which grade pipes and specials used for GI and CI pipe line works?
12. Write short notes on the following:
  - i) OMC & MDD
  - ii) Compaction
  - iii) Blanketing

13. How will you determine the safe bearing capacity of soil and explain?
14. a) How will you collect water sample for analysis?  
b) How will you improve the yield in open well?
15. a) What is the need of doing chlorination?  
b) How to assess the chlorine demand?  
c) What is meant by break point chlorination?  
d) What is meant by residual chlorine and what is recommended limits?
16. Describe the different materials used for chlorination and explain.
17. Draw a neat sketch of GLR and OHT with full details in parts.
18. Design a septic tank for a colony of 200 staff quarters and draw a neat sketch?
19. Write short notes on the following:
  - a) Manhole
  - b) Ventilating column
  - c) Self cleaning velocity
20. Write short notes on the following:
  - a) Dispersion trench
  - b) Soak pit
  - c) Bio-latrines
21. What are the quality controls to be adopted for construction of new bank?
22. Estimate the material and labour required for roof slab 6m x 6m size 15 cm thick by assuming necessary reinforcement.
23. Design a circular curve with transition curve to the following data:
  - i) Degree of curve is  $2^\circ$
  - ii) Chainage of apex 1500m
  - iii) Assume all other data required
24. How will you set the circular curve by Rankin's method?
25. Prepare a work order requisition for the following items with contractor % of -8%.
  - a) Supply of stock bricks 10,000 Nos (rate Rs.3600 per 1000 No)
  - b) Supply of sand  $100 \text{ m}^3$  (rate Rs.883 per  $\text{m}^3$ )
  - c) Supply of blue metal 20mm size  $10 \text{ m}^3$  (rate Rs.826 per  $\text{m}^3$ )
26. Write short notes on the following
  - i) Basic amenities in staff quarters.
  - ii) Petty Repair Book.
  - iii) Inspection register for building
27. Write short notes on the following
  - i) Colony committee
  - ii) Service Improvements Group
  - iii) Sanitation Committees
28. What is the procedure for eviction of unauthorized occupants of Railway land?
29. Write short notes on the following.
  - a) Lease and License
  - b) Assisted siding and Private siding
30. How will you procure stocked and non-stocked items?
31. What is the procedure for conducting stock verification in SE/Works office?
32. Explain about stock sheets and returns.
33. How will you dispose released and surplus materials?
34. How will you protect the railway line during blasting of hard rock adjacent to track?
35. How will you protect the railway track for construction of ROB.

36. What are the different types of survey to be conducted for new line and explain in detailed?
37. How will you categories of line on BG in Indian Railway and briefly explain each?
38. What are the different types of estimates and explain any three in detailed?
39. Write short notes on the following:
  - a) Preliminary works programme
  - b) List of approved works
  - c) Material modification
40. Write short notes on the following:
  - a) Urgency certificate
  - b) EMD and SD
  - c) Liquidity damages
41. Write short notes on the following:
  - a) Single tender and open tender
  - b) Limited and special limited tender
  - c) Quotation and work order
42. What are all the essential duties of Section Engineer/Works?
43. What are the points to be considered while planning of Railway Staff Colonies?
44. Write short notes on the following any three:
  - a) S.M Book
  - b) M.Book
45. Write short notes on the following any three:
  - a) Petty repair book
  - b) Cleaning of storage water tanks.
46. a) What are all the different pipe materials used for conveyance of water from source?  
 b) How will you maintain a sewerage system?
47. What are all the matters to be inspected by sanitation committees?
48. a) How will you lay and joint the sewer pipes?  
 b) Self cleansing Velocity
49. What are the precautions to be observed during blasting?
50. a) Write specification for storage of cement.  
 b) What are the quality controls to be adopted for cement concrete?
51. Write Hindi equivalent for the following :
 

(a) Discuss	(b) Division
(c) Track Machine	(d) Note
(e) Casual Leave	(f) Urgent
(g) Grant	(h) Dearness Allowance
(i) Traveling Allowance	(j) House Rent Allowance
52. Write Hindi words equivalent for the following
 

(a) Decision	(b) Indefinite
(c) Dispute	(d) Consistent
(e) Why delay?	(f) Please discuss
(g) May be filed	(h) Approved
(i) I agree	(j) Sanctioned