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Roll No.

220753

**5th Sem./ Civil
Subject : Railways, Bridges & Tunnels**

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

- Q.1 Two important Constituents in the Composition of steel used for rail are. (CO1)
a) Carbon & Sulphur
b) Manganese & Phosphorous
c) Carbon & Manganese
d) Carbon & Silicon
- Q.2 In broad gauge, the clear horizontal distance between the inner flanges of two rails forming a track is- (CO2)
a) 1.676 m b) 1.00 mm
c) 1.764m d) 1.284m
- Q.3 In which type of bridge, the platform of the bridge is supported by cables (CO3)
a) Deck b) Through
c) Suspension d) None of the above
- Q.4 The useful life of timber bridge is (CO4)
a) 1-2 years b) 25-30 years
c) 10-15 years d) 5-10 years

- Q.5 Which type of tunnel section is suitable in soft rocks. (CO5)
a) Horse shoe shaped b) Rectangular type shape
c) Circular shape d) Segmental shape
- Q.6 The operation of loading of rock, earth or any other excavated material is called (CO6)
a) Bloating b) Mucking
c) Driving d) Grouting

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 In meter gauge, the clear distance between the inner flanges of two rails forming a trace is _____. (CO2)
- Q.8 The material used as an elastic cushion between the sleeper and the top of formation is called _____. (CO1)
- Q.9 _____ type bridge is not suitable for a shallow wide river. (CO3)
- Q.10 An abutment serves both as a pier and _____. (CO4)
- Q.11 _____ shaped tunnels are suitable for carrying water. (CO6)
- Q.12 _____ is the art of providing fresh air inside tunnels during or after their construction. (CO6)

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SECTION-C

Note: Short answer type Question. Attempt any eight questions out of Ten Questions. (8x4=32)

- Q.13 What is Gauge in Railways? Explain its types. (CO2)
- Q.14 What are the requirements of an ideal material for Ballast? (CO1)
- Q.15 Give comparison between flat footed rails and double headed rails. (CO1)
- Q.16 Write the different type of crossings. Explain them briefly. (CO2)
- Q.17 Draw the plan and section showing Component parts of a Bridge. (CO4)
- Q.18 Write a short note on lighting of tunnels. (CO6)
- Q.19 Broadly give the Classification of bridges. (CO3)
- Q.20 What are the purpose of providing bearing in a bridge structure? (CO4)
- Q.21 List different shapes of tunnels & describe any two of them. (CO5)
- Q.22 What is the difference between a Bridge and a culvert? (CO3)

SECTION-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x8=16)

- Q.23 What is the need of ventilation in tunnels?
Discuss different methods of ventilation for tunnels. (CO6)

Q.24 What is the function of sleepers? Enumerate the advantages and disadvantage of the cost iron sleepers? (CO2)

Q25 Explain different types of bridge bearings with neat sketches. (CO2)