

No. of Printed Pages : 4
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 track 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)
- Q.25 Explain different types of bridge bearings with neat sketches. (CO2)