

Q.21 What do you understand by coning of wheels?

Q.22 What is creep of rail? Explain the cause of creep.

SECTION-D

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

Q.23 Explain the various types of gauges practiced in India. Also write the factors affecting the selection of a gauge?

Q.24 Explain various parts of sub-structure of a bridge?

Q.25 What is the necessity of ventilation in tunnels? Also describe the different methods of ventilation.

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Roll No.

5th Semester/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 The end supports of a bridge superstructure are known as

- a) Wing wall b) Piers
- c) Abutments d) Bed blocks

Q.2 Which one of the following are not the types of superstructures?

- a) Abutments b) Girders
- c) Arches d) Footpath

Q.3 What is the minimum free board required in a railway bridge?

- a) 1m b) 1.20m
- c) 600mm d) 300mm

- Q.4 What is the typical shape of a railway tunnel?
- Circular
 - Elliptical
 - Horseshoe
 - Arched roof with vertical walls
- Q.5 Why is tunnel lining necessary?
- To improve aesthetics
 - To improve ventilation
 - To reduce noise levels
 - To provide structural support and prevent ground movement
- Q.6 The cost of laying railway line should be _____.
- Maximum
 - minimum

SECTION-B

- Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)
- Q.7 Topographical, agricultural and industrial maps are used for the study of _____.
- Q.8 The gauge of 610 mm is called _____.
- Q.9 The function of rails is to provide _____ path.
- Q.10 Timber sleeper are _____ durable than concrete sleepers.

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- Q.11 The ballast should be _____ in shape.
- Q.12 _____ is the art of providing fresh air inside tunnels during or after their construction.

SECTION-C

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

- Q.13 Give sketches of:-
- Double headed rail
 - Bull headed rail.
- Q.14 Enlist any five advantages of timber sleepers?
- Q.15 Draw the cross-section of tunnel for double line broad gauge railway track.
- Q.16 What is a bridge? Enumerate any four importance of bridge.
- Q.17 What do you understand by wing walls? Enumerate the types of wing walls.
- Q.18 Write down the classification of tunnels.
- Q.19 What is ventilation of tunnels? What is its necessity. (Any two)
- Q.20 What are the advantages and disadvantage of needle beam method?

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