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Roll No.

180753/030753/743

**5th Sem / Branch : Civil, Constr. Mgmt., Civil Engg
(Spl Highway Engg.)
Sub.: Railway Bridges & Tunnels**

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory
(10x1=10)

- Q.1 Who is known as father of railway
a) Lord Dalhousie b) Warren Hasting
c) Lord william d) Robert clive
- Q.2 In location survey _____ are constructed at every tangent of curve
a) Traffic b) Bearing
c) Pillar d) None of the above
- Q.3 Rail whose head is larger than foot is called
a) Flat foot b) Square foot
c) Sheep foot d) Bull headed
- Q.4 Which joint reduces vertical disturbance of the wheel at the joint
a) Vertical b) Horizontal
c) Curved d) Staggered
- Q.5 What is the distance between wing rail and crossing rail

- a) Crossing clearance b) Control
c) Adjacent d) CTC System
- Q.6 Viaduct in bridge is constructed over
a) Deep Valley b) Hill
c) Approches d) Wing
- Q.7 End Supports of bridge and called
a) Piers b) Beams
c) Abutment d) None of the above
- Q.8 Open foundation is called
a) Well foundation b) Spread foundation
c) Raft foundation d) None of the above
- Q.9 Intermediate support bridge called
a) Pier b) Abutment
c) Wall d) None of the above
- Q.10 Rocker and roller bearing walls are suitable for spung
a) Less than 5 m b) More than 20 m
c) None of the above d) Both A & B

SECTION-B

Note: Objective type questions. All questions are compulsory.
(10x1=10)

- Q.11 Splayed wings are provided in which part of bridge _____.
Q.12 _____ tunnel Section is suitable for tunnel in soft rocks.

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- Q.13 Structure provided at end of bridge to retain soil is called _____.
Q.14 Rocker bearing is suitable for spans _____.
Q.15 Bridge constructed over a deep valley is called _____.
Q.16 Bearing plates are used in which type of _____ sleepers.
Q.17 Staggered joints are provided on _____ Curve.
Q.18 _____ Spike is used to join bull headed rail.
Q.19 Meeting place of two rails is known as _____ joint.
Q.20 Chair is used to hold _____ rails.

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 Explain various types of sleepers in brief.
Q.22 Define turnout and explains its various components and their functions.
Q.23 Explain Double slip and Scissor cross-overs.
Q.24 What is necessity of ventilation in tunnel and explain the mechanical method of ventilation of tunnel.
Q.25 Explain various method of drainage of tunnel.
Q.26 What are various advantage of good track maintenane.
Q.27 What are various components of bridge explain briefly.

- Q.28 Define pile foundation and also write down various type of piles according to material us.
Q.29 Differentiate between temporary and permanent bridge.
Q.30 Define purpose of bearing in bridge and write functions of bearing.
Q.31 Write short note on circular shape tunnel with diagram.
Q.32 What are requirement of permanent way.
Q.33 What are advantage of uniform gauge and why uniformity in gauge is desired.
Q.34 Explain conning of wheels in railway why it is required.
Q.35 What are requirement of good ballast and what are type of ballast.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$

- Q.36 Give classification of bridge according to material used in details and Explain need for construction of bridge.
Q.37 Explain criteria for site selection of bridge.
Q.38 What are functions of fixtures and fasteners used in rail and explain different type of fasteners along with diagram of any one.