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180753/030753/743

Roll No. ....

**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.

- 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. (12x5=60)

- Q.21 Explain various types of sleepers in brief.
- Q.22 Define turnout and explain 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 maintenance.
- Q.27 What are various components of bridge explain briefly.

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- Q.28 Define pile foundation and also write down various type of piles according to material used.
- 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 coning 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. (2x10=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.

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