

1. Which type of pier is typically used in locations where the foundation is set deep into the ground?

- a) Solid pier
- b) Hollow pier
- c) Stub pier
- d) Caisson pier

Answer: d) Caisson pier

Caisson piers are often used in locations where the foundation needs to be set deep into the ground, such as in water bodies or areas with weak soil. They are cylindrical structures sunk into the ground and filled with concrete.

---

2. What stability analysis method involves assessing the resistance of piers against overturning and sliding?

- a) Shear analysis
- b) Lateral analysis
- c) Stability analysis
- d) Axial analysis

Answer: c) Stability analysis

Stability analysis involves evaluating the resistance of piers against overturning and sliding, ensuring they can withstand external forces and remain structurally sound.

3. Which type of abutment is characterized by its wing walls extending parallel to the bridge deck?

- a) Cantilever abutment
- b) Counterfort abutment
- c) U-type abutment
- d) Return-wall abutment

Answer: d) Return-wall abutment

Return-wall abutments are designed with wing walls extending parallel to the bridge deck, providing additional stability and support.

---

4. What are the primary forces acting on piers of a bridge structure?

- a) Compression and torsion
- b) Shear and tension
- c) Bending and flexion
- d) Compression and bending

Answer: a) Compression and torsion

The primary forces acting on piers of a bridge structure are compression (from vertical loads) and torsion (from horizontal or twisting loads), which must be carefully considered in their

design.

---

5. Which bridge code provision primarily addresses the design of abutments and wing walls?

- a) AASHTO
- b) Eurocode
- c) BS 5400
- d) ACI 318

Answer: a) AASHTO

The American Association of State Highway and Transportation Officials (AASHTO) provides guidelines and standards for the design of bridges, including provisions for abutments and wing walls.

---

6. In stability analysis, what does the term “overturning” refer to?

- a) Horizontal movement of piers
- b) Vertical movement of piers
- c) Lateral movement of piers
- d) Rotation of piers

Answer: d) Rotation of piers

“Overturning” in stability analysis refers to the rotation of piers around their base due to horizontal or lateral forces, which can lead to instability if not adequately resisted.

---

7. Which type of pier is characterized by its hollow interior?

- a) Solid pier
- b) Caisson pier
- c) Stub pier
- d) Hammerhead pier

Answer: b) Caisson pier

Caisson piers have a hollow interior, allowing them to be sunk into the ground and filled with concrete to provide stability and support.

---

8. What type of abutment is designed to resist lateral earth pressure through the use of counterforts?

- a) Cantilever abutment
- b) Counterfort abutment
- c) U-type abutment
- d) Return-wall abutment

Answer: b) Counterfort abutment

Counterfort abutments are designed with counterforts to resist lateral earth pressure, providing additional support and stability to the bridge structure.

---

9. Which force primarily causes bending in piers of a bridge structure?

- a) Vertical loads
- b) Horizontal loads
- c) Torsional loads
- d) Lateral loads

Answer: a) Vertical loads

Vertical loads, such as the weight of the bridge deck and traffic, primarily cause bending in piers of a bridge structure.

---

10. What purpose do wing walls serve in the design of abutments?

- a) To resist vertical loads
- b) To prevent overturning
- c) To provide aesthetic appeal
- d) To guide lateral earth pressure

Answer: d) To guide lateral earth pressure

Wing walls in the design of abutments serve to guide and distribute lateral earth pressure, enhancing the stability of the bridge structure.

Related posts:

1. Stones, Brick, Mortar and Concrete MCQs
2. Timber ,Glass , Steel and Aluminium MCQS
3. Flooring , Roofing ,Plumbing and Sanitary Material MCQS
4. Paints, Enamels and Varnishes MCQs
5. Miscellaneous ConstructionMaterials MCQs
6. Surveying & Levelling MCQS
7. Theodolite Traversing MCQs
8. Tacheometry MCQS
9. Curves MCQS
10. Hydrographic Survey MCQs
11. Drawing of Building Elements MCQS
12. Building Planning MCQS
13. Building Services MCQs
14. Architectural Principles MCQs
15. Town Planning & Perspective Drawing MCQs
16. Simple Stress and Strains MCQs
17. Bending and Shearing Stresses MCQs
18. Beam Deflection Methods MCQs
19. Columns and Struts MCQs
20. Torsion of Shafts MCQs
21. Review of Fluid Properties MCQs

22. Kinematics of Flow MCQs
23. Dynamics of Flow MCQs
24. Laminar Flow MCQs
25. Fluid Mechanics MCQs
26. Highway Engineering MCQs
27. Bituminous & Cement Concrete Payments MCQS
28. Transportation Engineering MCQs
29. Airport Planning and Geometrical Elements MCQs
30. Airport, Obstructions, Lightning & Traffic control MCQs
31. Preliminary and detailed investigation methods MCQs
32. Construction equipments MCQs
33. Contracts MCQs
34. Specifications & Public Works Accounts MCQs
35. Site Organization & Systems Approach to Planning MCQs
36. Construction Estimation MCQs
37. Rate Analysis MCQs
38. Detailed Estimates MCQs
39. Cost of Works MCQS
40. Valuation MCQS
41. Marine Construction MCQs
42. Harbour Planning MCQs
43. Natural Phenomena MCQS
44. Marine Structures MCQs
45. Docks and Locks MCQS
46. Urban Planning MCQs
47. Urban Planning MCQs: Sustainability, Finance, and Emerging Concepts
48. Urban Planning MCQs

49. Traffic transportation systems MCQs
50. Development plans MCQS
51. Remote Sensing MCQs
52. Remote Sensing Platforms and Sensors MCQS
53. Geographic Information System MCQS
54. Data Models mCQs
55. Integrated Applications of Remote sensing and GIS MCQs
56. Renewable Energy MCQs
57. Renewable Energy Systems Overview MCQ
58. Renewable Energy MCQs
59. Alternative Energy Sources MCQs
60. Electric Energy Conservation MCQs
61. Entrepreneurship MCQs
62. Motivation MCQS
63. Small Business Setup MCQs
64. Finance and Accounting MCQs
65. Entrepreneurial Sickness and Small Business Growth MCQs
66. Design features and construction of Foundations MCQs
67. Formwork and Temporary structures MCQs
68. Masonry and walls MCQS
69. Floor and Roof Construction MCQs
70. Earthquake-Resistant Building MCQs
71. Virtual work and Energy Principles MCQS
72. Indeterminate Structures-I MCQS
73. Indeterminate Structures - II MCQs
74. V Arches and Suspension Cables MCQS
75. Rolling loads and Influence Lines MCQS

76. Railway Track Construction MCQs
77. Railway Track Design and Signaling MCQs
78. Bridge Construction Essentials MCQs
79. Bridge Construction MCQs
80. Tunnels MCQs
81. Geology Earth's Processes and Phenomena MCQs
82. Mineralogy and crystallography MCQs
83. Petrology MCQs
84. Structural geology MCQs
85. Geology, Remote Sensing, and GIS MCQs
86. Waste water Treatment Operations MCQs
87. Biological Treatment of waste-water MCQs
88. Advanced Waste-water treatment MCQs
89. Introduction of Air pollution MCQs
90. Air pollution chemistry MCQs
91. Undamped Single Degree of Freedom System MCQs
92. Damped Single Degree of Freedom System MCQ
93. Response to harmonic and periodic vibrations MCQs
94. Response to Arbitrary, Step, and Pulse Excitation MCQs
95. Multi Degree of Freedom System MCQs
96. Structural Engineering MCQs
97. Building Services MCQs
98. Lift & Escalator MCQs
99. Fire-Fighting MCQs
100. Acoustics and sound insulation and HVAC system MCQs
101. Miscellaneous Services MCQs
102. Basic Principles of Structural Design MCQs

103. Design of Beams MCQs
104. Design of Slabs MCQs
105. Columns & Footings MCQs
106. Staircases MCQs
107. Water Resources MCQs
108. Water Supply Systems MCQs
109. Water Treatment methods MCQs
110. Sewerage Systems MCQs
111. Wastewater Analysis & Disposal MCQs
112. Irrigation water requirement and Soil-Water-Crop relationship MCQs
113. Ground Water and Well irrigation MCQs
114. Hydrology MCQs
115. Canals and Structures MCQs
116. Floods MCQs
117. Prefabrication in Construction MCQs
118. Prefabricated Construction MCQs
119. Design Principles MCQs
120. Structural Joint MCQs
121. Design of abnormal load MCQs
122. Advance Pavement Design MCQs
123. Flexible Pavements MCQs
124. Rigid Pavements MCQs
125. Rigid pavement design MCQs
126. Evaluation and Strengthening of Existing Pavements MCQs
127. Cost Effective & ECO-Friendly Structures MCQs
128. Cost effective construction techniques and equipments MCQs
129. Cost effective sanitation MCQs

130. Low Cost Road Construction MCQs
131. Cost analysis and comparison MCQ
132. Turbulent flow MCQS
133. Uniform flow in open channels MCQs
134. Non uniform flow in open channels MCQs
135. Forces on immersed bodies MCQs
136. Fluid Machines MCQs
137. Intellectual Property Rights MCQs
138. Copyright MCQs
139. Patents MCQs
140. Trade Marks, Designs & GI MCQs
141. Contemporary Issues & Enforcement of IPR MCQs
142. Concept of EIA MCQs
143. Methods of Impact Identification MCQs
144. Impact analysis MCQs
145. Preparation of written documentation MCQs
146. Public Participation in Environmental Decision making MCQs
147. Linear Models MCQs
148. Transportation Models And Network Models MCQs
149. Inventory Models MCQs
150. Queueing Models MCQS
151. Decision Models MCQs
152. Basis of Structural Design and Connection Design MCQS
153. Design of Compression and Tension Members MCQs
154. Design of Flexural Members MCQs
155. Design of Columns and Column Bases MCQs
156. Design of Industrial Buildings MCQS

157. Hydrological Cycle mCQs
158. Hydrological Measurement MCQs
159. Groundwater and Well Dynamics MCQs
160. Hydrology MCQs
161. Hydrology MCQs
162. Selection of foundation and Sub-soil exploration/investigation MCQs
163. Shallow Foundation MCQs
164. Pile foundations MCqs
165. Foundations on problematic soil & Introduction to Geosynthetics MCQs
166. Retaining Walls and Earth Pressure MCQs
167. Types of Bridge Super Structures MCQs
168. Design of R.C. Bridge MCQs
169. Design of Steel Bridges MCQs
170. Foundations and Bearings MCQs
171. Engineering Seismology MCQS
172. Response Spectrum MCQs
173. Aseismic Structural Modelling MCQS
174. Design of structure for earthquake resistance MCQS
175. Seismic control of structures MCQs
176. Introduction to Artificial Intelligence MCQs
177. Various types of production systems and search techniques MCQs
178. Knowledge Representation and Probabilistic Reasoning MCQS
179. Game playing techniques MCQs
180. Introduction to learning ,ANN MCQs
181. Concrete Structure MCQs
182. Damage Assessment MCQs
183. Influence on Serviceability and Durability MCQs

184. Maintenance and Retrofitting Techniques MCQs
185. Materials for Repair and Retrofitting MCQs
186. Paradigm Shift in Water Management MCQS
187. Sustainable Water Resources Management MCQs
188. Integrated Water Resources Management (IWRM) Approach MCQs
189. Surface and Subsurface Water Systems MCQS
190. Conventional and Non-conventional Techniques for Water Security MCQs
191. Concept of dynamic programming MCQ
192. Basic Structure of Computer MCQ
193. Memory Management MCQ
194. Introduction to Computational Intelligence MCQ
195. RL & Bandit Algorithms MCQs
196. Hive, Pig, and ETL Processing MCQ
197. Data Warehousing MCQ
198. Introduction to Extreme Programming (XP) MCQs
199. Data Link Layer MCQ
200. Type Checking & Run Time Environment MCQs