

## Sample Question Bank

### Design of Bridge

Sr No	Question	A	B	C	D	Correct Answer	Marks
1	In a single span bridge, the clear span is the distance between	Centres of Abutments	Inner faces of Abutments	Outer faces of Abutments	Width of Abutment	B	2
2	Which one of the following is not the correct statement for ideal bridge sites	Be narrow	Should not possess high banks	Direct alignment of road	Be geologically	B	2
3	Which IRC loading is adopted for temporary structures and timber bridges?	IRC Class AA Loading	IRC Class 70 R Loading	IRC Class A Loading	IRC Class B Loading	D	2
4	What is the first stage in traffic engineering studies?	Traffic volume studies	Spot speed studies	Speed and delay studies	Origin and destination	A	2
5	The dispersion of wheel load may be assumed to be _____ through wearing coat	60 degree	45 degree	30 degree	15 degree	B	2
6	The Reinforced concrete slab type decks as super structure is economical for spans upto	10m	8m	12m	15m	B	2
7	The essential feature of pneumatic caissons is _____	Removing water by Compressed	Skin friction is zero	None of the mentioned	All of the mentioned	A	2
8	An open _____ is a convenient form of foundation for Bridge piers.	Monoliths	Cylinder	Multiple wells	Cofferdam	B	2
9	Metallic bearings is to be provided for skew bridges with skew angle	less than 20 degrees	more than 20 degrees	more than 30 degrees	none of the above	A	2
10	Calculate the shape factor S of the elastomeric bearing of size 320mmX 630mm and thickness is 30mm.	3.536	4.256	3.789	2.956	A	2
11	A bridge of more than _____ span is treated as long span bridge.	30 m	60 m	90 m	120 m	D	2
12	A culvert has span less than	3 m	6 m	9 m	12 m	B	2
13	Calculate impact factor for IRC Class A or Class B loading on RCC Bridge of span 10m, constant A is 4.5 and constant B is 6.	0.28	0.3	0.15	0.2	A	2
14	The standard IRC loads specified in IRC _____	5	6	18	27	B	2

15	The longitudinal girders are spaced at intervals of _____	3m	4 to 5m	2 to 2.5m	5m	C	2
16	A _____ caisson is open at top and closed at bottom.	Wells	Pneumatic caissons	Cylinders	Box caissons	D	2
17	For a major bridge usually the type of foundation is	grillage foundation	spread foundation	well foundation	caisson foundation	C	2
18	Calculate Stress due to buoyancy acting on semicircular Pier of having area of the pier at Top- 21.5 m <sup>2</sup> area of the pier at bottom 42.00 m <sup>2</sup> , and height of	52.40 N/mm <sup>2</sup>	58.18 N/mm <sup>2</sup>	63.54 N/mm <sup>2</sup>	69.75 N/mm <sup>2</sup>	B	2
19	In Bridges with curved alignment which following bearing are adopted for supporting curved decks	Sliding Cum Rocker Bearing	Steel Roller Cum Rocker Bearing	R.C. Rocker Cum Roller Bearing	Rocker Bearing	A	2
20	Which type of bearing is used only for long span bridges in view of their cost?	Rocker Bearing	Cast Steel Hinge	Mild Steel Rocker Bearing	Elastomeric Bearing	C	2
21	Masonry arch bridges are used to span less than	3 m	3 to 15 m	15 to 20 m	20 to 30 m	B	2
22	A bascule bridge is a	fixed bridge	movable bridge	Deck bridge	Through Bridge	B	2
23	A longitudinal forces result from vehicles braking and accelerating while travelling on a bridge is assumed to be applied at _____ height above the	1.5m	2.0m	1.2m	1.6m	C	2
24	Width of foot path generally vary between____on volume and importance of pedestrian	1.5m – 3.0m	1.2m – 2.0m	3.0m – 4.0m	2m – 3.2m	A	2
25	In case of bridge greater than 10.7m in height and which cannot be inspected from beneath due to watery situation the instrument suited for inspection	Electrical resistance meter	Strain gauges	Barins snooper vehicle	Rain gauges	C	2
26	Wing walls and return walls are provided to retain	Earth on approaches	ballast	Track on approaches	none of the above	A	2
27	The most suitable foundation for a culvert is	spread foundation	pile foundation	well foundation	caisson foundation	A	2
28	Calculate water current force acting on semicircular Pier of 2m top width at water level and base width of 4.0m and height of pier upto water level is 9m.	673.62KN	542.83KN	833.76KN	734.23KN	C	2
29	Steel plates are provided in Laminated Elastomeric Bearings to	prevent the rubber layers	Increase ductility	Increase axial load capacity	restrict lateral movement	A	2
30	Which type of bearing accommodates both rotation and translation through deformation of the elastomer?	Rocker Bearing	Cast Steel Hinge	Mild Steel Rocker Bearing	Elastomeric Bearing	D	2