

5th sem. Civil
Railway & Bridge Engineering

2Marks

- (1) Define skew Bridge ?
- (2) Define afflux and free board ?
- (3) Write down the use of coffer-dam ?
- (4) What is ballast ?
- (5) Define permanent way with sketch ?
- (6) State the general principle of design of a bridge foundation ?
- (7) Define sleeper density ?
- (8) Distinguish between bridge and culvert ?
- (9) Mention different types of IRC Bridge loading ?
- (10) Define fish plates ?
- (11) Define Cant and Cant deficiency ?
- (12) Define creep of rails and buckling of rails ?
- (13) Define gauge of a railways . Mention different types of gauge ?
- (14) What is the maximum value of super elevation Provided in a track as per railway board?
- (15) Write Dicken's and Ryve's formula for the determination of flood discharge ?
- (16) Classify different types of bridge ?

5Marks

- (a) Classify Indian Railways based on route , traffic and maximum permissible speed on the routes ?
- (b) If a 8° curve track diverge from main curve of 5° in an opportunity direction in the layout of a B.G. yard, calculate the super elevation and speed on the branch line in the maximum speed permitted on the main line is 45 km per hour .
- (c) Explain the functions and requirements of the sleepers?
- (d) Explain the functions and requirement of the ballast ?

- (e) What do you understand by D T.M. ? Explain. Give the objectives and scope of this method on Indian Railways ?
- (f) What are the traffic requirements of Highway Bridge ?
- (g) Write the advantages of railway ?
- (h) Describe the method of welding of rail ?
- (i) What is wing walls ? Explain its types .
- (j) Write down the requirement and characteristics of an ideal bridge side ?
- (k) Give brief description of various types of cause way ?
- (l) Explain afflux with Murrison's formula and Molesworth's formula ?

10marks

- 3.** Describe briefly about the selection of gauge ?
- 4.** Classify and discuss briefly classification of steel and concrete bridges ?
- 5.** Describe the components of a bridge with neat sketch ?
- 6.** What is trun-out ? Draw a neat line diagram of right hand and left hand turnout and show their component parts ?
- 7.** Mention and explain the general principles of the design of bridge foundation ?
- 8.** Explain various type of crossing in use on Indian Railways ?