BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY
Question Bank (I-Scheme)

Name of subject: Railway & Bridge Engineering **Unit Test: I**
Subject code: 22403 **Course: CE**
Semester: IV

CHAPTER 1 (Basics of Railway Engineering)

(2 Marks)

a. List the modes of transportation systems.

b. Define rail gauge.

c. State the necessity of ballast provision in railways.

d. State the necessity of rail joints.

(4 Marks)

a. Describe the causes and effects of creep of rail.

b. Explain the functions of rail fixtures and fastenings.

c. Discuss the factors affecting while selection of rail gauge.

d. Discuss the preventive measures to avoid creep of rail.

e. Summarize the requirements of a good railway sleeper.

CHAPTER 2 (Track Geometrics, Construction and Maintenance)

(2 Marks)

a. Define (i) ruling gradient (ii) pusher gradient. Define telescope inverted & telescope normal.
b. Name the types of station yard.
c. Define cant deficiency.
d. Define point and crossing.

(4 Marks)

a. Explain the tilting of rails in terms of its advantages.

b. Explain the requirements of a railway station.

c. Explain the tools required for track maintenance.

d. Define Alignment. State the factors governing rail alignment.

e. Explain with neat sketch ‘coning of wheel’.

f. State four necessities of periodic track maintenance.

g. Explain with neat sketch Marshalyard.

h. Explain with suitable diagram scissor crossover.

CHAPTER 3 (Overview of Bridge Engineering)

(2 Marks)

a. Define HFL and freeboard.

b. Define Afflux.

(4 Marks)

a. State the factors affecting selection of site of a bridge.

b. Explain the classification of bridge according to functions and according to materials.

c. Explain the classification of bridge according to alignment and according to materials.

d. Explain the component parts of Bridge.

e. Define superstructure and substructure of bridge.

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