BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

Question Bank (K-Scheme)

Name of subject: Railway & Bridge Engineering **Unit Test: I**
Subject code: 314312 **Course: CE**
Semester: IV

CHAPTER 1 (Introduction to Railway Engineering)

(2 Marks)

a. Define Sleeper Density.

b. Define rail gauge.

c. State the necessity of ballast provision in railways.

d. List the requirements of a rail joints.

e. What is Tilting of rails?

(4 Marks)

a. Describe the causes of Creep in detail.

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.

f. Explain with neat sketch 'Coning of wheels'.

CHAPTER 2 (Track Geometrics)

(2 Marks)

a. Define (i) ruling gradient (ii) pusher gradient.

b. Name the types of station yard.

c. Define (a) cant deficiency (b) gradient.

d. Define point and crossing.

(4 Marks)

a. State the different duties of a Permanent Way Inspector.

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 Grade Compensation on curves.

f. State four necessities of periodic track maintenance.

g. Explain with neat sketch Marshalling yard.

h. Explain with suitable diagram scissor crossover.

CHAPTER 3 (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 position of Highest Flood Level (HFL).

d. Explain the component parts of Bridge.

……