

C.U.SHAH UNIVERSITY

Summer Examination-2018

Subject Name: Railway, Bridge and Tunnel Engineering

Subject Code: 4TE06RBT1

Branch: B.Tech (Civil)

Semester: 6

Date: 07/05/2018

Time: 02:30 To 05:30

Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Attempt the following questions

(14)

Q-1

- a) Define gauge. Enlist types of gauges used in India. (1)
- b) Draw a neat sketch showing components of railway track. (1)
- c) Explain term "Negative Super elevation". (1)
- d) Define Signaling and Interlocking. (1)
- e) Classify railway station. (1)
- f) Which are the stages involved in construction of new railway line? (1)
- g) Write objectives of maintenance of railway track. (1)
- h) What are the causes of scouring? (1)
- i) Define : Afflux (1)
- j) Explain rocker bearing with sketch. (1)
- k) Give tunnel classification briefly. (1)
- l) List out stresses acting on bridge (1)
- m) Which are the unfavorable conditions observed during tunnel construction? (1)
- n) Define Portal and Shaft. (1)

Attempt any four questions from Q-2 to Q-8

Q-2

Attempt all questions

(14)

- A) Why drainage is necessary in tunnel? Discuss various drainage systems for tunnel. (6)
- B) What is creep? Discuss the theories propounded to explain probable causes of creep. (5)
- C) Draw sketch of different shapes of tunnel. (3)

Q-3

Attempt all questions

(14)

- A) What is Ballast? Write Function and requirement of good ballast (7)
- B) Explain various methods of tunnel ventilation. (4)
- C) Discuss factors affecting site selection of bridge. (3)

Q-4

Attempt all questions

(14)

- A) Explain strengthening of bridges. (3)
- B) Explain semaphore signals and Colored light signals. (7)
- C) Explain various types of spikes with neat sketches. (4)



