

Enrollment No: _____

Exam Seat No: _____

C. U. SHAH UNIVERSITY

Winter Examination-2022

Subject Name : Railway, Bridge and Tunnel Engineering

Subject Code : 4TE06RBT1

Branch: B.Tech (Civil)

Semester: 6

Date: 26/09/2022

Time: 11:00 To 02:00

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.
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Q-1	Attempt the following questions:	(14)
	a) Define Track modulus	(1)
	b) Define Relief of stress	(1)
	c) Give the sketches of the Flat footed rail	(1)
	d) What is creep?	(1)
	e) What is ballast?	(1)
	f) Give the sketches of the Split head.	(1)
	g) Give the sketches of the Inclined base plate	(1)
	h) What is the requirement of a lubricant?	(1)
	i) What is meant by corrugated rails?	(1)
	j) Define a railway station.	(1)
	k) Give the sketches of the Crushed head	(1)
	l) What is leveling crossing?	(1)
	m) Why are signals required?	(1)
	n) Why and where the Fouling marks provided?	(1)

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

Q-2	Attempt all questions	(14)
A	Describe in detail the various surveys which are conducted before laying a new railway track.	07
B	Write explanatory notes on	07
	1) Mean tractive effort of a locomotive	
	2) Elastic theory for track stresses	
Q-3	Attempt all questions	(14)
A	Mention different types of rails and explain their properties	07
B	Explain clearly what is meant by buckling	07
Q-4	Attempt all questions	(14)
A	Discuss the methods adopted to reduce wear of rails.	07



B	Enumerate the important factors which influence number of rail features.	07
Q-5	Attempt all questions	(14)
A	Explain the causes of creep.	07
B	Give sketch of the following	07
	1) A creep anchor	
	2) Creep during starting	
	3) Creep during stopping.	
Q-6	Attempt all questions	(14)
A	What are the functions of sleepers? What are the material used for sleepers? Describe them in detail	07
B	Explain why transverse sleeper are universally adopted.	07
Q-7	Attempt all questions	(14)
A	Describe the various material which are commonly used as ballast in a railway track	07
B	What are square joints and staggered joints? What are the advantages of staggered joints ?	07
Q-8	Attempt all questions	(14)
A	Describe different types and shapes of switches	07
B	Describe the arrangement s to be provided for good traffic at wayside station.	07

