Reg. No. : | | | | | | | | | | |

Question Paper Code : 53104

B.E./B.Tech. DEGREE EXAMINATION, DEC 2020

Civil Engineering

15UCE304 -HIGHWAY AND RAILWAY ENGINEERING

(Regulation 2015)

Duration: One hour Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The Indian Roads Congress was formed in the year CO1 -R

   (a) 1928 (b) 1934 (c) 1929 (d) 1930

2. The first 20 year development plan is also called as CO1- R

   (a) Nagpur road plan (b) Lucknow road plan

   (c) Bombay road plan (d) Delhi road plan

3. Bitumen is obtained from CO2-R

   (a) Wood (b) Petroleum (c) Coal (d) Kerosene

4. The mix design should take into consideration CO2-R

   (a) Stability (b) Durability

   (c) Stability and durability (d) Age

5. The materials not included in highway construction are CO3- R

   (a) Stone (b) Dust (c) Soil (d) Petrol

6. The most preferred shape of highway drainage is CO3-R

   (a) Rectangular (b) Trapezoidal (c) Triangular (d) Circular

7. The first Indian railway was laid in CO4-R

   (a) 1775 (b) 1804 (c) 1825 (d) 1853

8. The life of a wooden sleeper depends upon CO4-R

(a) quality of its timber (b) ability to resist decay

(c) resistance to weathering (d) all the above

9. If n is length of a rail in meters the number of sleepers per rail length generally varies from CO5-R

(a) n to $(n + 2)$ (b) $(n + 2)$ to $(n + 4)$ (c) $(n + 3)$ to $(n + 6)$ (d) $(n + 4)$to$(n + 5)$

10. Arrangement made to divert the trains from one track to another is known as CO5-R

(a) railway point (b) railway crossing (c) turnout (d) railway junction

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11.	What are the various classifications of roads? Converse in detail.	CO1- U	(8)
12.	What are the typical layers of a flexible pavement? Discuss in detail with a sketch.	CO2- U	(8)
13.	Explicate the causes and remedies of Transverse cracks.	CO3 -Ana	(8)
14.	What is meant by gradient? Enumerate the various types of gradient with all the detail.	CO4- U	(8)
15.	Explain about Track Drainage. How Surface and Sub surface Water can be removed from Railway track. Give all in detail.	CO5- U	(8)