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Roll No. ....

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**5th Sem / Civil  
Subject : Highway Engineering**

Time : 3 Hrs.

M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 CRRI was established in the year \_\_\_\_\_. (CO1)

- a) 1934
- b) 1947
- c) 1981
- d) 1950

Q.2 Width of two-lane carriage way without raised kerb is (CO1)

- a) 7 m
- b) 7.5 m
- c) 6.5 m
- d) 8.0 m

Q.3 The general topography of the area is shown through \_\_\_\_\_. (CO1)

- a) Master plan
- b) Project report
- c) Index map
- d) Preliminary survey map

Q.4 The test used to evaluate the strength of soil subgrade is. (CO2)

- a) Liquid limit Test
- b) Impact Test
- c) CBR Test
- d) Abrasion Test

Q.5 Turfing is employed to prevent \_\_\_\_\_. (CO4)

- a) Landslide
- b) Frost action
- c) Soil erosion
- d) None of these

Q.6 \_\_\_\_\_ strip is used for landing and take-off of aircraft. (CO6)

- a) Runway
- b) Taxiway
- c) Clearway
- d) Aviation

**SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Camber? (CO1)

Q.8 A rapid examination conducted about road alignment without instrument is \_\_\_\_\_. (CO1)

Q.9 The hardness of road aggregates is tested by \_\_\_\_\_. (CO3)

Q.10 Define prime coat? (CO2)

Q.11 Define landslide? (CO4)

Q.12 Formation of pot holes is the most common road failure occurring in \_\_\_\_\_. (CO4)

(1)

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(2)

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## **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Write the difference between stopping and overtaking site distance. (CO1)
- Q.14 What is the significance of C.B.R. Test? (CO3)
- Q.15 What are the causes of failure of bituminous road? (CO2)
- Q.16 What is WBM road? Write the steps for construction of WBM road. (CO2)
- Q.17 Explain various methods to control the soil erosion on hill road. (CO4)
- Q.18 What are the requirement of an efficient hill road drainage system? (CO4)
- Q.19 Draw the X-section of a road in embankment showing side drains. (CO4)
- Q.20 What are the common causes of formation of ruts? What are the remedies to control it? (CO3)
- Q.21 Explain the significance of road safety audits. (CO5)
- Q.22 Explain types of pavements used in airport runway. (CO6)

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## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 a) What is subgrade soil? Enlist four function of subgrade.
- b) Explain CBR test to evaluate strength of soil subgrade.
- Q.24 Explain the necessity of surve and why extra widening road is required at horizontal curve.(CO1)
- Q.25 Explain flexible and rigid pavement in detail with diagrams. (CO2)

(1760)

(4)

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