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Roll No.

220752

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

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- 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)

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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)

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 curve and why extra widening road is required at horizontal curve.(CO1)
- Q.25 Explain flexible and rigid pavement in detail with diagrams. (CO2)