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Roll No. ....

180752/170752/  
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**5th Sem / Branch : Civil/Constr. Mgmt, Civil  
Engg. (Sp. Highway Engg.)  
Sub. : Highway Engg.**

Time : 3Hrs.

M.M. : 100

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 the part of road which is used only by vehicular traffic is termed as \_\_\_\_\_. (CO-1)  
a) Foot path                      b) Express way  
c) Carriage way                d) Street
- Q.2 The width of carriage way for a single lane road should be \_\_\_\_\_. (CO-2)  
a) 3.75 m                        b) 2.75 m  
c) 1.75 m                        d) 0.75 m
- Q.3 the area of land acquired along the road alignment is \_\_\_\_\_. (CO-3)  
a) Formation width            b) Marshy Land  
c) Right of way                d) Road geometrics
- Q.4 The hardness of road aggregates is tested by \_\_\_\_\_. (CO-4)  
a) Softening point test      b) Ductility test  
c) Viscosity test                d) Abrasion test
- Q.5 A large space erected at the airport for housing aircrafts is called \_\_\_\_\_. (CO-10)

- a) Runway                      b) Apron  
c) Hanger                      d) Right of way

- Q.6 A straight blade machine mounted on tractor for site clearance is \_\_\_\_\_. (CO-9)  
a) Bull dozer                    b) Scraper  
c) Grader                        d) Dragline
- Q.7 Formation of pot holes is the most common road failure occurring in \_\_\_\_\_. (CO-8)  
a) Rigid pavements          b) Flexible pavements  
c) Shoulder                      d) None of these
- Q.8 The drain provided on the hills at the higher altitude to catch water is \_\_\_\_\_. (CO-6)  
a) Side drain                    b) Cross drain  
c) Catch water drain          d) Under drain
- Q.9 \_\_\_\_\_ pavements can be laid directly over subgrade. (CO-5)  
a) Rigid                          b) Flexible  
c) None of these                d) Both A and B
- Q.10 The removal of subsoil moisture is termed as \_\_\_\_\_. (CO-7)  
a) Surface drainage          b) Sub surface drainage  
c) Cross drainage              d) None of these

**SECTION-B**

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 The main trunk roads of a state connecting national highways and district headquarters are \_\_\_\_\_. (CO-1)

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- Q.12 The ruling gradient recommended in plain area is \_\_\_\_\_. (CO-2)
- Q.13 Compaction of concrete pavements is done by \_\_\_\_\_. (CO-5)
- Q.14 The downward and outward movement of a rock slope is \_\_\_\_\_. (CO-6)
- Q.15 \_\_\_\_\_ is a flying machine without an engine. (CO-10)
- Q.16 The application of bitumen binder to the existing pavement followed by cover aggregates is termed as \_\_\_\_\_. (CO-8)
- Q.17 The removal of rain water from surface of the road is termed as \_\_\_\_\_. (CO-7)
- Q.18 The descending of large mass of snow down the hill is \_\_\_\_\_. (CO-6)
- Q.19 The ability of road aggregates to resist fracture under repeated blows is tested by \_\_\_\_\_. (CO-5)
- Q.20 The first stage of route selection is \_\_\_\_\_. (CO-4)

### SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 Define IRC classification of roads. (CO-1)
- Q.22 What are the factors affecting road alignment? (CO-3)
- Q.23 Define camber. Why it is provided. (CO-2)
- Q.24 What is the difference between Tar and bitumen. (CO-4)

- Q.25 What are the important factors to be considered while selecting a site for an airport. (CO-10)
- Q.26 Write short note on Dumper. (CO-9)
- Q.27 What are the common causes of failure in road pavements? (CO-8)
- Q.28 What is sub-surface drainage? Why it is provided? (CO-7)
- Q.29 What are the special problems faced during the maintenance of hill roads? (CO-6)
- Q.30 State the merits and demerits of rigid pavements. (CO-5)
- Q.31 What is the difference between tar and bituman? (CO-4)
- Q.32 Define the types of joints in concrete pavement. (CO-5)
- Q.33 Give causes of failure of bituminous roads. (CO-4)
- Q.34 What are the main causes responsible for the formation of cracks? (CO-8)
- Q.35 Define the methods to control soil erosion. (CO-6)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain the construction steps for bituminous concrete. (CO-5)
- Q.37 What is the function of road function? What are the different types of rollers used in India (CO-9)
- Q.38 What are the requirement of a good road aggregate? Write the functions of "Subgrade soil" (CO-4)