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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)

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- 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 bitumen? (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)