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Civil Engg

Subject:- Highway Engg

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 NHAI is working under the guidance of _____

 - a) MOST
 - b) CRRI
 - c) IRC
 - d) all of the these

Q.2 A dividing strip is the middle of the road way is called

 - a) Central Strip
 - b) Mid Street
 - c) Median strip
 - d) Road Centre

Q.3 The land width of a road is also termed as

 - a) Right of way
 - b) Formation width
 - c) Shoulder
 - d) Road margin

Q.4 Viscosity test is used to determine fluidity of

 - a) Cutback
 - b) Asphalt
 - c) Bitumen
 - d) Tar

- Q.5 A layer of coating provided sometimes between base course and wearing coat is called

 - a) Base coat
 - b) Prime coat
 - c) Sub surface course
 - d) Wearing coat

Q.6 A alternate bay method is used for construction of

 - a) WBM
 - b) Flexible pavement
 - c) Rigid pavement
 - d) All of these

Q.7 The holes provided in protection works with slope outwards are _____

 - a) Catch drain
 - b) Borrow pit
 - c) Weephole
 - d) Side gutter drain

Q.8 The strip of land between the side drain and the lower edge of embankment is called

 - a) Berm
 - b) Borrow pit
 - c) Spoil bank
 - d) Counter berm

Q.9 The site is best for airport

 - a) Hill
 - b) Valley
 - c) Hill top
 - d) Mountain

Q.10 A flying machine without an engine.

 - a) Aeroplane
 - b) Glider
 - c) Airship
 - d) Helicopter

SECTION-B

Note: Objective type questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.11 The part of road which is used only by vehicular traffic is called _____
- Q.12 The ruling gradient recommended in plain area _____
- Q.13 _____ Map shows the contours of the area.
- Q.14 Cutback can be used in all weather. (True/False)
- Q.15 _____ Pavements are also known as black top roads.
- Q.16 Downward and outward movement of a rock slope is _____
- Q.17 In cold climates regions, poor drainage leads to _____
- Q.18 WBM road are less prone to formation of corrugations than bituminous roads. (True/False)
- Q.19 A straight blade machine mounted on tractor for site clearance is _____
- Q.20 The portion of airport adjacent to hanger used for loading and unloading of aircrafts is called _____

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. $(12 \times 5 = 60)$

- Q.21 What you understand by gradient. Explain different types of gradients provided on Indian highways?
- Q.22 Explain the objectives of location survey?
- Q.23 What is the difference between tar and bitumen?

- Q.24 What are the special problems faced during the maintenance of hill roads?
- Q.25 Draw the cross section of hill road.
- Q.26 What is sub surface drainage? Why it is provided?
- Q.27 State the importance of highway transportation.
- Q.28 Explain various types of construction maintenance that is carried out in highway.
- Q.29 Explain in detail WMM.
- Q.30 Write the name of different type of surfacing. Explain any one.
- Q.31 Explain the different types of joint in concrete pavement.
- Q.32 State common types of failure in flexible pavement.
- Q.33 Define patch work. Why it is needed? Explain the method of patching.
- Q.34 What is necessary of studying airport engineering in India. Explain.
- Q.35 Write a short notes on : Runway and taxiway

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 10 = 20)$

- Q.36 What is Subgrade Soil? What is its function? Explain CBR test to evaluate the strength of soil subgrade.
- Q.37 What is soil stabilization? What are the different methods of soil stabilization?
- Q.38 List down the different type of tool, equipment & plant used in road construction? Explain in details