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V Semester Diploma Examination, April/May-2019

TRANSPORTATION ENGINEERING

Time : 3 Hours]

[Max. Marks : 100

- Instructions :** (i) Answer any **six** questions from Part – A.
(ii) Answer any **seven** questions from Part – B.

PART – A

1. What is gradient ? List the objects of providing gradient in Highways. 5
2. Explain the factors controlling Highways alignment. 5
3. What is meant by 'Soil Stabilisation' ? And what are the objects of soil stabilization ? 5
4. Define the terms : 5
 - (i) Afflux
 - (ii) Water way
 - (iii) Free board
 - (iv) Apron
5. Explain coffer dam and list the requirements of coffer dam. 5
6. What are the factors to be considered while selecting a good railway alignment ? 5
7. Explain with neat sketch 'Flat Footed Rail'. 5
8. List the duties of PWI. 5
9. Define the terms : 5
 - (i) Dock
 - (ii) Break water
 - (iii) Jetty
 - (iv) Quay

PART - B

10. (a) Mention the various surveys to be conducted for the Road alignment and explain briefly the final location survey. 5
(b) Classify the types of gradients and write their IRC recommended values. 5
11. Explain the method of construction of WBM road with a neat sketch. 10
12. (a) Classify the types of transverse joints in cement concrete roads and explain expansion joint with a sketch. 5
(b) Define Road arboriculture and identify the objects of Road side arboriculture. 5
13. (a) Show the component parts of a Bridge with a sketch. 5
(b) What are the points to be considered while selecting a site for a bridge ? 5
14. (a) Explain Economic span of a bridge and write the factors affecting the Economic span of a bridge. 5
(b) Explain bridge bearings and mention its functions. 5
15. (a) Differentiate between coning of wheels and tilting of rails. 5
(b) Write a note on Mono-block pre-stressed concrete sleepers with pandrol clips. 5
16. What is a turn-out ? With neat sketch show the component parts of a turn-out. 10
17. (a) Explain way side station for single line with a neat sketch. 5
(b) Explain Marshalling yard. 5
18. (a) Explain the salient features of a tube railway. 5
(b) Show the cross-section of an elevated railway with dimensions. 5
19. (a) Describe the method of transferring the centre line to the inside of the tunnel. 5
(b) Define the terms : 5
(i) Run-way
(ii) Taxi-way
(iii) Hanger
(iv) Wind rose