

Total No. of printed pages = 4

END SEMESTER EXAMINATION – 2019

Semester – 5th

Subject Code : CT-501

CONSTRUCTION TECHNOLOGY

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

1. Questions on PART-A are compulsory.
2. Answer any *five* questions from PART-B.

PART – A

Marks – 25

Answer the following questions as directed :

1×15=15

1. The value of broad gauge is — mm.
(Fill in the blank)
2. Wheels of the train are coned with a value of
(a) 1 in 20 (b) 1 in 25
(c) 1 in 30 (d) 1 in 40

(Choose the correct answer)

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3. IRC stands for _____. (Fill in the blank)
4. Cement concrete dams are considered as rigid dams. (Write true or false)
5. Gravity dams resist water force through their self weight. (Write true or false)
6. Earthen dams are non-rigid dams. (Write true or false)
7. Uplift pressure is minor in arch dam because of their thin section. (Write True or False)
8. Earthen dams are suitable as overflow dams. (Write true or false)
9. Concrete dams can be designed as overflow dams. (Write true or false)
10. Ballast in railway track absorbs shocks and vibrations due to moving train. (Write true or false)
11. Camber is cross-slope provided to road surface to drain off rain water. (Write true or false)
12. The minimum sight distance to be available at every section of road is
 - (a) SSD
 - (b) OSD
 - (c) ISD
 - (d) HSD
 (Choose the correct answer)

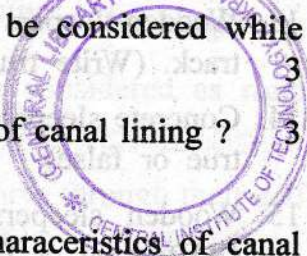
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13. Wooden sleepers are the ideal sleepers for railway track. (Write true or false)
 14. Concrete sleepers have high scrap value. (Write true or false)
 15. Wooden sleepers have minimum service life. (Write true or false)
- Define the following : $1 \times 10 = 10$
16. Sight distance
 17. Storage dam
 18. Diversion dam
 19. Detention dam
 20. Overflow dam
 21. Homogeneous soil dam
 22. Zoned typed soil dam
 23. Permanent canal
 24. Productive canal
 25. Ridge canal.
- PART - B
Marks - 45
26. (a) Explain canal classification based on discharge. 3

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- (b) Explain the factors to be considered while fixing canal alignment. 3
- (c) What are the necessity of canal lining ? 3
27. (a) What should be the characteristics of canal lining material ? 3
- (b) What are the advantages and disadvantages of wooden sleeper ? 3
- (c) Explain any two types of ballast materials. 3
28. (a) Draw the cross-section of a railway track. 4
- (b) Explain the classification of dam according to use. 5
29. (a) What are the advantages of gravity dam ? 4
- (b) Explain physical factors governing selection of a particular type of dam. 5
30. (a) Explain the factors to be considered while selecting site for a dam. 5
- (b) Explain the various causes of failure for earthen dams. 4
31. (a) Explain arch dam. 5
- (b) Explain uses of reservoir. 4