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R-17

Code: 7G686

IV B.Tech. II Semester Supplementary Examinations January 2022

Advanced Transportation Engineering

(Civil Engineering)

Max. Marks: 70

Time: 3 Hours

Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)

Marks	CO	Blooms Level
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UNIT-I

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|----|--|-----|-----|----|
| 1. | Explain the functions of rails in a permanent way? Discuss the requirements of good rails to satisfy the expected functions? | 14M | CO1 | L1 |
|----|--|-----|-----|----|

OR

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|----|--|-----|-----|----|
| 2. | Define gauge of a railway track. Enumerate different gauges used in India and discuss their suitability at different locations with reasons. | 14M | CO1 | L1 |
|----|--|-----|-----|----|

UNIT-II

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|----|--|-----|-----|----|
| 3. | Describe the factors that influence the selection of site for a Railway station. | 14M | CO2 | L2 |
|----|--|-----|-----|----|

OR

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|----|---|-----|-----|----|
| 4. | Write explanatory notes on
i. Catch-sidings ii. Classification of railway stations | 14M | CO2 | L2 |
|----|---|-----|-----|----|

UNIT-III

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|----|---|-----|-----|----|
| 5. | Explain the factors effecting airport site selection. | 14M | CO3 | L1 |
|----|---|-----|-----|----|

OR

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|----|---|-----|-----|----|
| 6. | The length of the runway under the Standard condition is 1620m. The airport site has an Elevation of 270m. and the reference temperature of the airport is 32.90°C, It is decided to construct the runway with an effective Gradient of 0.020%. Determine the corrected length of the Runway? | 14M | CO3 | L1 |
|----|---|-----|-----|----|

UNIT-IV

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|----|---|-----|-----|----|
| 7. | Give the classification of Harbors. Justify the answer with neat sketches | 14M | CO4 | L2 |
|----|---|-----|-----|----|

OR

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|----|--|-----|-----|----|
| 8. | Discuss the factors to be considered in the design and construction of Dock walls? | 14M | CO4 | L1 |
|----|--|-----|-----|----|

UNIT-V

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|----|---|-----|-----|----|
| 9. | Describe the features of Mechanical dredgers and Hydraulic dredgers used in dredging operation. | 14M | CO5 | L2 |
|----|---|-----|-----|----|

OR

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|-----|--|-----|-----|----|
| 10. | Write an explanatory note on maintenance of Lock gates and Caissons. | 14M | CO5 | L2 |
|-----|--|-----|-----|----|

END