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Pages: 2

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S7 (S, FE) / S7 (PT) (S, FE) Examination December 2023 (2015 Scheme)



Course Code: CE407

Course Name: TRANSPORTATION ENGINEERING - II

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

Marks

- | | | |
|---|---|-----|
| 1 | a) Explain any five roles of Indian Railways in National Development | (5) |
| | b) Discuss any five features of mass rapid transit system | (5) |
| | c) Sketch the typical cross section of a railway track and name the parts | (5) |
| 2 | a) Explain the types of rails with neat figures. | (6) |
| | b) Discuss the factors affecting selection of a gauge for a railway track | (4) |
| | c) Explain any five causes of creep | (5) |
| 3 | a) Describe the basic requirements of railway track alignment | (5) |
| | b) Explain the theory of coning of wheels with neat figures | (5) |
| | c) Discuss ten needs for uniformity of gauges of railway track | (5) |

PART B

Answer any two full questions, each carries 15 marks.

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|---|---|-----|
| 4 | a) Explain the component parts of a right-hand turnout with a neat sketch | (8) |
| | b) Define marshalling yards. Discuss any five requirements of a marshalling yard | (7) |
| 5 | a) Discuss the necessities for track maintenance | (5) |
| | b) Differentiate between daily maintenance and periodic maintenance | (5) |
| | c) Describe the various causes of railway accidents | (5) |
| 6 | a) Explain the four classification of signals based on its function | (8) |
| | b) Discuss the conventional remedies and advanced electronic/electrical remedies to avoid railway accidents by human elements | (7) |

PART C

Answer any two full questions, each carries 20 marks.

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| 7 | a) Explain any five cross sections of a tunnel with neat sketches | (10) |
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- b) Explain the process of transferring centreline of a tunnel to underground with neat figures (10)
- 8 a) Explain the various types of classification of harbours (10)
- b) Explain any ten construction requirements of transit sheds (5)
- c) Discuss different types of moorings and its sub sections (5)
- 9 a) Discuss any ten objectives of tunnel lining (5)
- b) Discuss four significant requirements of a good harbour (4)
- c) Explain two types of wet docks and its features (5)
- d) Differentiate mound type and wall type breakwaters with any six significant features. (6)
