Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 42254

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

Fifth Semester

Civil Engineering

CE 2303 – RAILWAYS, AIRPORTS AND HARBOUR ENGINEERING

(Common to PTCE 2303/Railways, Airports and Harbour Engineering for B.E. – (Part-Time) Fourth Semester – Civil Engineering – Regulations 2009)

(Regulations 2008)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions.

PART – A **(10×2=20 Marks)**

1. Write the functions of sleepers.
2. Why the widening of gauges needed in curves ?
3. Define interlocking.
4. What is track resistance ?
5. Define airport zoning.
6. What are the components of airports ?
7. Define holding apron.
8. What is meant by basic runway length ?
9. Differentiate 'wharf' and 'jetty'.
10. Differentiate Quay and Pier.

PART – B (5×16=80 Marks)

11. a) Enumerate the engineering surveys for a railway track alignment.

(OR)

b) i) Write note on coning of wheels. (8)

ii) Explain about the creep and kinks in rails. (8)

12. a) Explain the left hand turnout with neat sketch by indicating the parts and working principle.

(OR)

b) Illustrate briefly the construction and maintenance of railway track.

13. a) List the points to be considered for the site selection of a good airport.

(OR)

b) The length of runway and standard condition is 2220 m. the airport site has an elevation of 250 m. Its reference temperature is 31.40°C. If the runway is to be constructed with an effective gradient of 0.19%, determine the corrected runway length.

14. a) What are the functions of terminal buildings ? Explain passengers flow concepts, facilities and services needed for terminals with suitable sketches.

(OR)

b) Briefly explain the visual aids provided at airports.

15. a) Write a detailed report on breakwaters with suitable examples.

(OR)

b) i) Discuss the operation of various dry docks with sketches. (8)

ii) Note on wet and dry docks. (8)