Reg. No. :

Question Paper Code: 35013

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

Fifth Semester

Civil Engineering

01UCE503 – RAILWAYS, AIRPORTS AND HARBOUR ENGINEERING

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What is meant by gradient in a railway track?

2. What are the functions of formation?

3. Mention the types of railway stations.

4. State the principles of interlocking.

5. List out the objectives of airport planning.

6. What are the different types of airport parking system?

7. What is meant by orientation of runway?

8. Define taxiway.

9. List out the coastal protection works.

10. What is a break water?

11. (a) Explain the various conventional surveys for track alignment. (16)

Or

(b) A 8^0 curved track diverges from a main curve of 5^0 on opposite direction in the layout of a B.G yard. Calculate super elevation and speed on branch line if the speed on the main line is $45kmph$. (16)

12. (a) How stations are classified? Explain the features of each station. (16)

Or

(b) Explain in detail, the conventional and mechanized method of track maintenance. (16)

13. (a) Discuss air transport characteristics and socio-economic characteristics of catchment areas. (16)

Or

(b) Explain in detail the socio-economic characteristics of catchment areas with respect to airport planning. (16)

14. (a) Length of runway at MSL is $1600m$. The site has an elevation of $320m$ with a reference temperature 33.6^0C. The runway has to be constructed with an effective gradient of 0.25%. Determine actual length of runway. (16)

Or

(b) Discuss various runway and taxiway markings. (16)

15. (a) Write notes on the following coastal structures (i) piers (ii) wharves (iii) jetties (iv) quays. (16)

Or

(b) Explain the classification of harbors. (16)

———————————

35013