

GANPAT UNIVERSITY**B. TECH. SEM: IV (CIVIL) REGULAR EXAMINATION APRIL-JUNE-2016****2CI- 404: Basic Transportation Systems**

Time: 3 Hours

Total Marks: 60

Instructions: (1) This Question paper has two sections. Attempt each section in separate answer book.

(2) Figures on right indicate marks.

(3) Be precise and to the point in answering the descriptive questions.

Section - I

Que. - 1 (A) A transition curve is to be used to join the ends of a 3.94° circular curve with the straight. The length of the transition curve is 120 m. Work out the shift and offsets at every 30m interval. How will you set this transition curve? (05)

(B) Explain Coning of Wheels in detail. Also state why Tilting of rail is done? (05)

OR

Que. - 1 (A) What is meant by Cant Deficiency? Find out the length of transition curve for a B.G. curve of 3° , having a cant of 10 cm. The maximum permissible speed on the curve is 80kmph and allowable cant deficiency is 75 mm. (05)

(B) Explain various types of rail failures with figure also mention remedial measures for each of them. (05)

Que. - 2 (A) Write the functions and requirements of Rail. (05)

(B) Give the classification of Yards. Explain Marshalling Yard. (05)

OR

Que. - 2 (A) Define Turnout in detail. Also draw the section of Left Hand turnout. (05)

(B) Write the functions and requirements of Sleepers. (05)

Que. - 3 **ANSWER THE FOLLOWING**

(A) Explain dock, jetty, wharves, ware house and transit shed (05)

(B) Define Harbor and give classification of harbor. (05)

Section - II

Que. - 4 (A) Define the following terms: (1) Approach Zone (2) Apron (3) Fuselage (4) Hangar (5) Rudder (05)

(B) Enlist the different types of airport surveys. Explain Soil Survey in detail (05)

OR

Que. - 4 (A) (1) Aerodrome (2) Aeroplane (3) Aircraft (4) Airfield (5) Airport (05)

(B) An option is given either to improve an existing airport or develop a new airport. What will be the governing Considerations? (05)

Que. - 5 (A) What are the Imaginary Surfaces? What is their Significance? Explain with neat sketches the shape of each surface for different types of Airport. (05)

(B) An airport is proposed at an elevation of 400 m above mean sea level where the mean of maximum and mean of average daily temperatures of the hottest month are 44.8°C and 26.2°C respectively. The maximum elevation difference along the proposed profile of runway is 6.3m. If the basic length of runway is 1260 m, determine the actual length of runway to be provided. (05)

OR

Que. - 5 (A) What are the factors which affect the type of Intensity of airport Lighting? (05)

(B) Draw the typical layout of small domestic terminal building. (05)

Que. - 6 ANSWER THE FOLLOWING

(A) Describe in detail the Instrument Landing System. (05)

(B) Explain:

(1) Surface Drainage

(2) Sub Surface Drainage (05)

END OF PAPER