

GANPAT UNIVERSITY**B. TECH. SEMESTER IV CIVIL ENGINEERING****REGULAR EXAMINATION – MAY / JUNE: 2012****C- 404: BASIC TRANSPORTATION SYSTEMS****TIME: 3 HOURS****TOTAL MARKS- 70****INSTRUCTIONS: - (1) Answer to the two sections must be written in separate answer books.****(2) Figures to the right indicate full marks.****(3) Assume suitable data if required.****Section - I**

- Que.-1 (A)** Discuss the role of Railways in industrial and economic progress of a nation. (6)
- (B)** What do you understand by a railway track and a permanent way? (6)
Mention the requirements of an ideal permanent way.

OR

- Que.-1 (A)** How do you define superelevation? What are the objectives of providing superelevation on curves of a railway track? (6)
- (B)** Explain Dog spike and screw spike with figure. (6)

- Que.-2 (A)** Mention the relative merits and demerits of Flat-Footed rails (F.F Rails) and Bull-Headed rails (B.H Rails). (6)
- (B)** What point should be considered for good performance of wooden sleepers in a Railway track? (5)

OR

- Que.-2 (A)** Explain Mechanical methods of Interlocking. (6)
- (B)** Explain requirements of railway station. (5)

- Que.-3 (A)** What material as ballast you would suggest for high speed tracks and why? (4)
- (B)** Explain fishplate with figure. (4)
- (C)** Find out expression for sleeper density for a B.G. track if 19 sleepers are used under a rail length. (4)

Section – II

- Que.-4 (A) Role of Air transportation in national development. (6)
(B) Define: Aerodrome, Airport, Airfield, Wind rose, Taxiway, I.L.S. (6)

OR

- Que.-4 (A) Give the classification of an airport as per ICAO. (6)
(B) Write about Clear zone and Turning zone. (6)

- Que.-5 (A) Write about factors influenced by airport activity. (6)
(B) Explain Airport obstructions. (5)

OR

- Que.-5 (A) Explain two concepts of planning the Terminal building. (6)
(B) Write about general requirements of grading for Airport. (5)

- Que.-6 (A) Advantages of water transportation (4)
(B) Requirements of Harbour (4)
(C) Write about function of Breakwaters and its types (4)

END OF PAPER