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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Civil Engg.) / PIT B.Tech. Civil (Sem.-4)

**TRANSPORTATION ENGINEERING**

Subject Code : BTCE-404-18

M.Code : 77647

Date of Examination : 09-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

1. Answer briefly :

- a) Being a Transportation Engineer, list the role/activities done by you.
- b) Write name of various road patterns, mentioning use of any two with example.
- c) Draw a line diagram of a highway showing its various components.
- d) Name three different lab tests carried out on bitumen and their purpose.
- e) Enumerate role of terminal facilities in transportation system.
- f) What do you understand by construction gauge in Railways?
- g) Mention the advantages of sleepers.
- h) List any four factors considered in site selection for an airport.
- i) Differentiate between main taxi way and exit taxi way
- j) Define wind rose diagram.

## SECTION-B

2. What are the characteristics of road transport system in comparison to other systems?
3. What are Terminal and Transfer facilities? Explain these briefly.
4. How railway is organizing a huge work force? Give the set up structure also.
5. Name the various types of fixtures used by Indian Railways. Which one would you consider to be the best for modern tracks and why?
6. Explain the use of Threshold light, approach light and Beacon in reference to Airports.

## SECTION-C

7.
  - a) Explain Multi modal transportation system in reference to smart cities,
  - b) Give the difference in WBM and WMM. Which one is used extensively?
8.
  - a) What are the gauges adopted worldwide? Mention also the gauge used in India with their specifications.
  - b) Draw the figure of a Permanent way showing its components.
9.
  - a) State the requirements on which runway directions are fixed based on metrological conditions.
  - b) Discuss different types of enroute and Landline aids in airway communications.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**