

**EK-329**

**B.E. (IVth Sem.) CGPA Civil Engg., Exam. 2016**

**TRANSPORTATION ENGG. - I**    **UITians**

**Paper - CE-404**

***Time Allowed : Three Hours***

***Maximum Marks : 60***

- Note :**
- (i) Solve any two parts of given a, b, c & d at one place in continuation.
  - (ii) All parts of questions carry equal marks.
  - (iii) All questions are to be attempted with internal choice.

- Q.1**
- (a) What is Sleeper Density? How it is calculated.
  - (b) What is permanent way. Draw a cross-section of double B.C. line and label all its component parts.
  - (c) Give types of welding done for rails giving advantages.
  - (d) What are various types of ballast used in railways. Give their merits.

- Q.II (a) What is Super Elevation? Why it is necessary for curves?
- (b) What is Cant. Deficiency? How it is calculated for broad gauge?
- (c) What is tractive resistance and tractive efforts give their expressions.
- (d) What are common regulations for speed on curves?
- Q.III (a) Describe briefly various types of marshalling yards.
- (b) Explain crossing number and different shades of switches.
- (c) State interlocking and its principle.
- (d) Discuss modern techniques adopted by railways for safety of passenger trains.
- Q.IV (a) Explain the procedure to be adopted for planning airport drainage.
- (b) Draw a neat sketch of general lighting pattern of an airport runway.

(c) What is wind rose diagram? How it helps in planning the airports.

(d) Write short notes on :

(i) Classification of airports.

(ii) Airport traffic control.

Q.V (a) Explain functions of break water? How are they constructed?

(b) Describe important points to be kept in mind for designing port building.

(c) What are docks and harbours? What are their common types?

(d) Describes facilities to be provided for Major Ports.

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