

Code: CE6T5

**III B.Tech-II Semester–Regular/Supplementary Examinations–March 2018**

**TRANSPORTATION ENGINEERING - II**  
**(CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

**PART – A**

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1. a) What are the different gauges in railways and their dimensions?
- b) What would you observe by coning of wheels?
- c) What are the advantages of welding?
- d) How would you compare the metal sleepers and timber sleepers.
- e) Write any 4 functions of ballast in railways.
- f) What do you observe by cant deficiency and also cant excess limits of super elevation.
- g) Draw the left hand turn out.
- h) What is a semaphore signal?
- i) Write down the advantages of Inter locking.
- j) What is a wind rose diagram and how are they used.
- k) How would you describe dredging?

## PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) How would you describe the role of railways in transportation? 8 M
- b) Explain the requirements of an ideal permanent way with the help of diagram. 8 M
3. a) Explain about the requirements and failures of fish plates. 8 M
- b) If an  $8^\circ$  curve track diverges from main curve  $6^\circ$  in an opposite direction of broad gauge yard. Calculate speed and super elevation of branch line if the maximum speed permitted on mainline is 45 kmph. 8 M
4. a) What is a crossing? What are the requirements of good crossing? 8 M
- b) What is automatic block system of controlling train movements? Explain the working principle of automatic block system. 8 M
5. a) Write any 8 Requirements of an ideal Airport location? Explain. 8 M

b) Explain briefly about the items that are considered in  
Runway geometric design. 8 M

6. a) Explain the classification of harbours based on location .  
8 M

b) Explain the importance of and different types of  
navigational aids. 8 M