

**III B. Tech I Semester Supplementary Examinations, May - 2019**  
**TRANSPORTATION ENGINEERING – II**  
(Civil Engineering)

Time: 3 hours

Max. Marks: 70

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- Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)  
2. Answer **ALL** the question in **Part-A**  
3. Answer any **FOUR** Questions from **Part-B**
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**PART -A**

1. a) Explain how the selection of gauge in railways is done. [2M]
- b) Describe about grade compensation on curves. [2M]
- c) Draw a neat sketch of line diagram of left hand turn out. [2M]
- d) Write a short note on taxiway marking. [3M]
- e) Explain design criteria for design of drainage. [3M]
- f) Write a short note on beacon lights. [2M]

**PART -B**

2. a) Explain briefly about sections of fish plates and failure of fish plates. [7M]
- b) Describe briefly about percussion and drag theory. [7M]
3. a) How do you define the super elevation? What are the objects of providing super elevation on curves of a railway track? [7M]
- b) Determine the length of transition curve and draw the offsets at every 15m. Given that the design speed of the train on curve is 90 kmph on a B.G track. [7M]
4. a) Explain briefly about different types of crossing with neat sketches. [7M]
- b) Describe briefly the major features of CRC & ATC system. [7M]
5. a) What are the issues & concerns which need to be considered for future expansion and development of airports? [7M]
- b) Draw a neat sketch showing the details of the approach surface with references to related imaginary surfaces of an instrument approach runway and explain. [7M]
6. a) Explain structural functions of airport pavement layers with a typical sketch showing component layers of the pavement. [7M]
- b) Write a short note on pavement condition Index (PCI). [7M]
7. a) Explain how the construction of quay walls is done. Describe. [7M]
- b) Write a short note on wharves. [7M]

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