

**B.TECH SEM – VI (2007 COURSE) (CIVIL ENGG.) : SUMMER**

**2018**

**SUBJECT : INFRASTRUCTURE ENGINEERING - I**

Day : **Friday**

**S-2018-2707**

Time : **02.30 PM TO 05.30 PM**

Date : **08/06/2018**

Max. Marks : 80

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**N. B. :**

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining attempt **ANY TWO** questions from each section.
  - 2) Figures to the **RIGHT** indicate **FULL** marks.
  - 3) Answers to both the sections should be written in **SEPARATE** answer book.
  - 4) Assume suitable data if **necessary**.
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**SECTION - I**

- Q.1** a) Describe in detail the objective & steps involved in the preliminary survey for a new railway alignment. **(05)**  
b) What do you mean by gauge widening? Enlist precautions to be taken. **(05)**  
c) Explain the terms super-elevation and negative cant. **(04)**
- Q.2** a) Compare the characteristics of the different types of sleepers used in India. **(07)**  
b) Enlist different functions of sleepers. **(06)**
- Q.3** a) What is the difference between an ordinary fish plates and combination fish plate? **(07)**  
b) What is the importance of traffic survey? **(06)**
- Q.4** a) Write the functions of **(07)**  
i) Scoth block  
ii) Turn table  
iii) Buffer stops  
iv) Triangle  
b) Define "Creep of rail". What are its effects? **(06)**

**SECTION - II**

- Q.5** a) Differentiate between shotcreting and guniting. **(05)**  
b) Explain tunneling method using TBM. **(05)**  
c) Differentiate between transit sheds and ware house. **(04)**
- Q.6** a) What is the importance of ventilation and lighting of tunnels? **(07)**  
b) Explain the procedure to transfer the centre line of tunnel. **(06)**
- Q.7** a) Explain mucking by cherry picker method. **(07)**  
b) Differentiate between Jetty & Wharf. **(06)**
- Q.8** a) Differentiate between Wet Docks & Dry Docks. **(07)**  
b) Explain following terms. **(06)**  
i) Fenders  
ii) Dolphins

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