

**B.TECH SEM – VII (2007 COURSE) (CIVIL ENGG.) : SUMMER -
2018**

SUBJECT: INFRASTRUCTURE ENGINEERING-II

Day: Thursday
Date: 24/05/2018

S-2018-2758

Time: 02.30 PM TO 05.30 PM
Max. Marks: 80

N.B:

- 1) **Q. No.1 and Q. No.5 are COMPULSORY.** Out of remaining questions attempt **ANY TWO** questions from each section.
- 2) Answers to both the sections should be written in the **SEPARATE** answer book.
- 3) Use of non-programmable **CALCULATOR** is allowed.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.
- 5) Figures to the right indicate **FULL** marks.
- 6) Assume suitable data if necessary.

SECTION-I

- Q.1** a) Explain the importance of highway transportation. (06)
b) Explain the concept of National authority of India (NHAI). (04)
c) Discuss the importance of highway drainage. (04)
- Q.2** a) Discuss following: i) Nagpur plan ii) Bombay plan (05)
b) Explain BOT and Bolt project with suitable example. (04)
c) Explain road patters for the 20 year plan. (04)
- Q.3** a) Write a short note on Aggregate Impact Test. (07)
b) Explain in brief PIEV theory. (06)
- Q.4** a) Enlist and explain different types of curves. (05)
b) Explain factors affecting stopping sight distance. (04)
c) Explain different tests on aggregates. Write object of each. (04)

SECTION-II

- Q.5** a) Differentiate between bridge and culverts. (06)
b) Enlist the factors affecting choice of bridges. (04)
c) Explain factor of Safety, Economical Span and Afflux. (04)
- Q.6** a) Differentiate between Temporary bridges and permanent bridges. (05)
b) Enlist and explain loads, forces and stresses coming on bridge structure. (04)
c) Define: i) Approach roads ii) Embankment (04)
- Q.7** a) Explain Temporary bridges and moveable bridges. (05)
b) State various forces cutting abutment. (04)
c) Explain: i) Wing Wall ii) Economic span (04)
- Q.8** a) Explain advantages and limitation of air transportation. (05)
b) Explain selection of site for airport. (04)
c) Define: i) Terminal building ii) Aprons (04)

* * * * *