

**B.TECH SEM – VI (2007 COURSE) (INF. TECH.) : SUMMER -
2018**

SUBJECT: OPERATIONAL RESEARCH

Day: Friday
Date: 08/06/2018

S-2018-2727

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 the remaining attempt **ANY TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SEPARATE** answer book.
- 4) Draw neat labeled diagrams **WHEREVER** necessary.
- 5) Use of non-programmable electronic **CALCULATOR** is allowed.
- 6) Assume suitable data if necessary.

SECTION-I

- Q.1** a) Explain the steps in Travelling salesman problem. (04)
b) Discuss the roll of computers in Operation Research. (05)
c) Discuss the characteristics of operation research. (05)
- Q.2** a) What is Operation Research? Write limitation of Operation Research. (07)
b) What are the advantages and limitations of LP Problem? (06)
- Q.3** a) Describe the Transportation problem with its general mathematical formulation. (07)
b) Describe in detail any four areas for the applications of Operation Research Techniques. (06)
- Q.4** a) Explain with example Scheduling and Sequencing Techniques in detail. (07)
b) Describe assumption in sequencing model in detail. (06)

SECTION-II

- Q.5** a) What is inventory control system? Describe the basic characteristics of inventory system. (07)
b) Explain with example deterministic dynamic programming and queuing theory. (07)
- Q.6** a) Explain the assumption in EOQ formulas. (07)
b) Enumerate the various types of Inventory Models. (06)
- Q.7** a) What is Queuing theory? Describe classification of queuing model. (07)
b) Explain Kendall's notation with model M/M/I in detail. (06)
- Q.8** a) Explain Two Persons zero sum game with value of the game. (07)
b) Write network model with PERT/CPM in detail. (06)

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