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Register Number:

5435

Name of the Candidate:

B.Sc. DEGREE EXAMINATION – 2011

(DOUBLE DEGREE)

(OPERATIONS RESEARCH)

(THIRD YEAR)

(PART-III: PAPER-IV)

740. DECISION THEORY, REPLACEMENT MODEL AND QUEUES

December)

Maximum: 100 Marks

(Time: 3 Hours

SECTION-A

Answer any EIGHT Questions

(8×5=40)

Answer questions carry equal marks

1. Examine the different environments in which decisions are made.
2. Explain the maximum criterion in decision theory.
3. Describe the importance of decision tree analysis.
4. Explain the meaning of node in decision tree.
5. What is a replacement problem? When does it arise?
6. Write a note on individual replacement policy.
7. Explain the basic elements of queuing models.
8. Discuss the features of a pure death process model.
9. State the characteristics of a single server model.
1. Examine the different uses of queuing theory.
- 0.

SECTION-B

Answer any THREE Questions

(3×20=60)

Answer questions carry equal marks

1. Explain the major steps involved in decision making process.
- 1.
1. Describe the various aspects involved in the construction of a decision tree.
- 2.
1. Obtain the optimum cost for replacement of items whose maintenance and repair costs increase with time.
- 3.
1. Derive the distribution of queue length in the steady state for the $\{(m|m|1):(\infty|FIFO)\}$
4. queuing method.
1. Explain in detail a multiple-server model with an illustration.
- 5.

