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April- 2011

**M.B.A.** (Sem. - III)

## (304 D): MODELING TECHNIQUES AND IT FOR OPERATIONS MANAGEMENT

## Production and Material Specialisation (2008 Pattern)

Time: 3 Hours]

[Max. Marks:70

Instructions to the candidates:

- 1) Answer any five questions.
- 2) All questions carry equal marks.
- Q1) Describe the key features of widely used softwares for following:
  - a) Project planning & scheduling.
  - b) Supply chain management.
- Q2) Explain the role of IT in designing, production planning, layout & logistical operations.

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- Q3) State the steps involved in modeling process for managerial decision rules.
- Q4) Explain the concept of ERP? Describe the prerequisites for effective implementation of ERP system in manufacturing organisation.
- Q5) What is decision trees? Explain various application of decision trees in operation management.
- **Q6**) Five jobs  $J_1$  to  $J_5$  are to be processed on two work centres  $WC_1$  &  $WC_2$ . The processing time in hours for these jobs at two work centres are given below.

Job	$J_{1}$	$J_2$	$J_3$	J <sub>4</sub>	$J_{5}$
WC <sub>1</sub>	12	4	5	15	10
$WC_2$	22	5	3	16	8

Determine the optimal Job sequence which minimise the cycle time and idle time in two work centres.

- Q7) Write short notes on (any two):
  - a) Goal programming.
  - b) Design of Experiments.
  - c) Sensitivity Analysis.
  - d) Trans-Shipment model.



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