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Code No. 12010

**FACULTY OF MANAGEMENT**  
M.B.A. III – Semester (CBCS) Examination, December 2019

Subject: Operations Management  
Paper – MB – 301

Time: 3 Hours

Max.Marks: 80

Note: Answer all the questions from Part-A and Part-B.  
Each question carries 4 marks in Part-A and 12 marks in Part-B.

PART – A (5x4 = 20 Marks)  
[Short Answer Type]

Note: Answer all the questions in not more than one page each.

- 1 Batch Processing Method
- 2 Line Balancing
- 3 Work Study
- 4 Materials Management
- 5 Safety Stock

PART – B (5x12 = 60 Marks)  
[Essay Answer Type]

Note: Answer all the questions by using internal choice in not exceeding 4 pages each.

- 6 a) Define and discuss the importance of Production Planning and Control (PPC). Explain the functions of PPC.

OR

- b) Define Process Design and briefly explain the factors affecting Process Design.

- 7 a) Discuss different types of facility layouts. Also discuss the problems faced while deciding on a facility layout.

OR

- b) There are nine jobs, each of which must go through two machines P and Q, in the order PQ, the processing times (in hours) are given below:

Machine	Jobs								
	A	B	C	D	E	F	G	H	I
P	2	5	4	9	6	8	7	5	4
Q	6	8	7	4	3	9	3	8	11

Find the sequence that minimizes the total elapsed time.

- 8 a) Discuss the concept and importance of Method Study and Work Measurement.

OR

- b) Explain the challenges in scheduling various service operations.

- 9 a) Compare and contrast Materials Requirement Planning and Manufacturing Resource Planning.

OR

- b) What are the different methods of vendor evaluation?

- 10 a) What are the functions and types of Inventory Management?

OR

- b) Considering the data illustrated in table below, conduct an ABC analysis.

Item No.	101	102	103	104	105	106	107	108	109	110
Unit Cost	5	11	15	8	7	16	20	4	9	12
Annual Demand	4800	2000	300	800	4800	1200	18000	300	5000	500

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**FACULTY OF MANAGEMENT**

**M.B.A. III – Semester (CBCS) Examination, December 2019**

**Subject: E-Business**

**Paper – MB – 302**

**Time: 3 Hours**

**Max.Marks: 80**

**Note: Answer all the questions from Part-A and Part-B.**

**Each question carries 4 marks in Part-A and 12 marks in Part-B.**

**PART – A (5x4 = 20 Marks)**

**[Short Answer Type]**

**Note: Answer all the questions in not more than one page each.**

- 1 E-Business Value Chain
- 2 Search Engine Positioning
- 3 M-Commerce
- 4 Mobile Commerce Service Providers
- 5 5G Systems

**PART – B (5x12 = 60 Marks)**

**[Essay Answer Type]**

**Note: Answer all the questions by using internal choice in not exceeding 4 pages each.**

- 6 a) "E-Business has revolutionized the business models". Comment discussing concept of E-Business, its advantages and disadvantages.

**OR**

- b) "For E-Business to be successful and effective, proper infrastructure should be in place" comment, discussing elements of E-Business infrastructure.

- 7 a) "E-Business has its own set of legal, ethical and taxation issues". Comment, discussing these issues. Also discuss the Intellectual Property Rights (IPR) in E-Business.

**OR**

- b) "Marketing has been redefined with the advent of e-Marketing". Comment, discussing the concept, scope and strategies involved in e-Marketing.

- 8 a) "With the wide spread diffusion of Smart Mobile Phones, Mobile Commerce has evolved?. Comment, giving the concept and role of Mobile Commerce, also discuss the scope, benefits, varied issues and challenges of M-Commerce.

**OR**

- b) "M-Commerce Services have revolutionized the businesses and the business environment" comment, discussing the varied types of M-Commerce Services and applications.

- 9 a) "Communication Technology has undergone a great revolution with the advent of Wireless, Mobile and Satellite Communication" comment, discussing these communication technologies and their relative merits and demerits.

**OR**

- b) "Mobile Commerce depends a lot on Mobile Communication standards and mobile access technology" comment, giving the concept involved, role played by these, with a special reference to 1G, 2G, 3G, 4G and 5G systems.

10 a) "Mobile Commerce Applications have made a great impact on the way things were being done traditionally". Comment, discussion some of the mobile commerce applications like M-Banking, M-Ticketing, etc.

OR

b) "Mobile Payment Systems are the backbone of the Mobile Commerce" comment, discussing the characteristics and models of Mobile Payment Systems. Also discuss the privacy and security issues involved.

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OU-1422 OU-1422

**FACULTY OF MANAGEMENT****M.B.A. III – Semester (CBCS) Examination, December 2019****Subject: Operations Research****Paper – MB – 303****Time: 3 Hours****Max.Marks: 80****Note: Answer all the questions from Part-A and Part-B.****Each question carries 4 marks in Part-A and 12 marks in Part-B.****PART – A (5x4 = 20 Marks)****[Short Answer Type]****Note: Answer all the questions in not more than one page each.**

- 1 Modelling in OR
- 2 Slack Variable
- 3 Degeneracy in Transportation Problem
- 4 Burst Event
- 5 Reneging

**PART – B (5x12 = 60 Marks)****[Essay Answer Type]****Note: Answer all the questions by using internal choice in not exceeding 4 pages each.**

- 6 a) What is Operations Research? Explain briefly its applications.

**OR**

- b) Solve the following graphically:

$$\text{Max } Z = 5x_1 + 3x_2$$

$$\text{Subject to Constraints: } 2x_1 + x_2 \leq 1000$$

$$x_1 \leq 400$$

$$x_2 \leq 700$$

$$x_1, x_2 \geq 0$$

- 7 a) What is Linear Programming? What are the assumptions in formulating Linear Programming Problem? What are the major Limitations?

**OR**

- b) Use Dual and solve the following:

$$\text{Min } Z = 40x_1 + 200x_2$$

$$\text{Subject to Constraints: } 4x_1 + 40x_2 \geq 160$$

$$3x_1 + 10x_2 \leq 60$$

$$8x_1 + 10x_2 \geq 80$$

$$x_1, x_2 \geq 0$$

- 8 a) Explain the North West Corner method of solving a transportation problem.

**OR**

- b) Solve the following Assignment Problem and find the optimal solution.

		Machines			
		M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	M <sub>4</sub>
Job	J <sub>1</sub>	5	7	11	6
	J <sub>2</sub>	8	5	9	6
	J <sub>3</sub>	4	7	10	7
	J <sub>4</sub>	10	4	8	3

- 9 a) Explain the term crashing and resource leveling in network analysis.

OR

- b) The characteristics of a project schedule are given below:

Activity	Time (Days)	Activity	Time (Days)
1-2	4	5-6	4
1-3	1	5-7	8
2-4	1	6-8	1
3-4	1	7-8	2
3-5	6	8-10	5
4-9	5	9-10	7

- 1) Draw the Network
- 2) Compute the Earliest and Latest Times
- 3) Compute the Total Float and Free Float.

- 10 a) Explain the following:

- i) Saddle Point
- ii) Dominance Principle

OR

- b) Students arrive at the head office of Universal Teacher Publications according to a Poisson input process with a mean rate of 40 per hour. The time required to serve a student has an exponential distribution with a mean of 50 per hour. Assume that the students are served by a single individual; find

- 1) The average waiting time of a student
- 2) What would be the average queue length?
- 3) What would be the average number of customers in the queuing system?

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**FACULTY OF MANAGEMENT**

**M.B.A. III – Semester (CBCS) Examination, December 2019**

**Subject: Innovation Management**

**Paper – MB – 306 Interdisciplinary Paper  
(For All Constituent Colleges & Affiliated Colleges)**

**Time: 3 Hours**

**Max.Marks: 80**

**Note: Answer all the questions from Part-A and Part-B.  
Each question carries 4 marks in Part-A and 12 marks in Part-B.**

**PART – A (5x4 = 20 Marks)  
[Short Answer Type]**

**Note: Answer all the questions in not more than one page each.**

- 1 Technology Leverage
- 2 Allocation of R&D funds to Projects
- 3 R&D Evaluation Criteria
- 4 Types of Innovations
- 5 IT Systems in Innovations

**PART – B (5x12 = 60 Marks)  
[Essay Answer Type]**

**Note: Answer all the questions by using internal choice in not exceeding 4 pages  
each.**

- 6 a) Explain the strategic pressures and issues on R&D and how to overcome them.  
OR  
b) Explain traditional view of R&D and present R&D with the role of technology.
- 7 a) Explain the levels of income and expenditures for R&D project. Name few agencies providing budget for projects in industry.  
OR  
b) What is the role of control and state bodies in R&D Management in changing scenario?
- 8 a) Explain the steps involved in innovation process.  
OR  
b) Describe the evaluation criteria of R&D progress.
- 9 a) What are the reasons for successful and unsuccessful innovations?  
OR  
b) Explain the significance of innovations in R&D and Management Process.
- 10 a) What are the organizational characteristics which facilitates innovations in R&D?  
OR  
b) What factors support for success of the innovations in a Management Process?

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