

PARUL UNIVERSITY
FACULTY OF MANAGEMENT
IMBASummer 2018-19 Examination

Semester: 8
Subject Code: 06200157
Subject Name: Operation Research

Date: 20/05/2019
Time: 10:30am To 01:00pm
Total Marks: 60

Instructions

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Do as Directed.

A). Multiple choice type questions/Fill in the blanks. (Each of 1 mark) (05)

1. Operations Management is a _____ process.

A) Translation	C) Transformation
B) Transaction	D) Transition
2. Which of these Managers would be least likely to be considered in an operations management role within an organization?

A) Production	C) Financial Risk
B) Reservations	D) Quality Manager
3. There are five basic performance objectives which apply to all types of operation. They are:

A) Quality, Speed, Dependability, Flexibility, Cost.	C) Quality, Speed, Error-Free, Flexibility, Price.
B) Quality, Speed, Dependability, Flexibility, Price.	D) Quality, Speed, Adaptability, Flexibility, Cost.
4. An operation which provides the foundation for competitive success is said to have/be:

A) External Neutrality	C) Internal Neutrality
B) Internally Supportive	D) Externally Supportive
5. The strategic positioning of an organization and the businesses within it is called as ____

A) Global Positioning	C) Operations Strategy
B) Corporate Strategy	D) Business Strategy

B). Define the following. (Each of 1 mark) (05)

1. Game Theory
2. Cumulative probability
3. Standard deviation
4. Feasible solution
5. Dummy Variable

C). Direct questions. (Each of 1 mark) (05)

1. What is convex set?
2. What is Slack variable?
3. What is Shadow Price?
4. What is balanced assignment problem?
5. What is unit transportation cost?

Q.2 Answer the following questions.

A). Describe the various steps involved in OR study. (07)

B). Following is demand data for last 100 days of number of TV sets. Calculate the probability of the following events

1. The demand on particular day is 14 TV sets
2. The demand on a particular day is 4 or less TV sets.

Calculate SD

Q.3 Answer the following questions.

A). Explain North west corner method with suitable example. (07)

B). Explain various applications of linear programming in business and industry. (08)

Q.4 Attempt any two questions. (Each of 7.5 mark)

(15)

1. Explain crew assignment problem in detail.
2. Explain MODI method in detail.
3. Explain assignment problem in detail.
4. Explain Game theory with suitable examples.