



**Online PGDM
First Year, Trimester II, Feb,2024**

**Course Name: OPERATIONS MANAGEMENT
Course Code : 2103**

**Max Marks : 70
Max Time : 2 hrs**

Instructions for Students:

This is a closed book examination. No external resource material allowed.

The Question Paper consists of 3 Sections- A, B, C. All sections to be attempted.

Allocated marks for each of the Section and Questions indicated.

Answers should be rich in content, pointwise and precise. Avoid unnecessary long answers.

Section A : Objective Type Questions

(Answer all Questions, each question of 2 marks each, Total Marks: 2x12=24)

Q 1. Identify the correct answer

1.1- Historical demand for a product is as follow (Month- Demand): April- 750; May- 790; June- 700; July- 780; August- 750; September- 810. Using a simple three-month moving average, what is the forecast for October?

- A. 850
- B. 760
- C. 780
- D. 800

1.2- A repeatable pattern of increases or decreases in demand, with demand occurring periodically in short run, is a time series pattern called:

- A. Random
- B. Trend

- C. Seasonal
- D. Cyclical

1.3- A firm who is adept at recognizing global windows of opportunity, acting on those very quickly, with tight linkages together with adding variety of products/services can be said to be competing on:

- A. flexibility and delivery capabilities respectively
- B. delivery and flexibility capabilities respectively
- C. quality and delivery capabilities respectively
- D. flexibility and quality capabilities respectively

1.4 -All of the following costs are likely to decrease as a result of better quality except

- A. inspection costs
- B. scrap costs
- C. warranty and service costs
- D. training costs

1.5- Process improvement requires

- A. removing special causes of process variation
- B. removing random causes of process variation
- C. removing natural causes of process variation
- D. always requires redesigning the process

1.6- Economic Order Quantity (EOQ) for high value items will be _____ than that of low value items.

- A. larger
- B. smaller
- C. same
- D. None of the above

1.7- A project consist of 3 activities X, Y & Z. Duration of activity X is 3 days, activity Y is 4 days and activity Z is 2 days. Predecessor of activity Y is activity X and predecessor of activity Z is Y. The duration of project is

- A. 9 days
- B. 7 days
- C. 4 days
- D. 6 days

1.8- A project consist of 3 activities X, Y & Z. Duration of activity X is 5 days, activity Y is 3 days and activity Z is 6 days. Both X & Y are starting concurrent activities. Predecessor of activity Z is both X & Y. The duration of project is

- A. 9 days
- B. 11 days
- C. 14 days
- D. 12 days

1.9- For a budget hotel, room tariff is likely to be a

- A. order winner
- B. order qualifier
- C. can be either order winner or order qualifier
- D. Neither order winner or order qualifier

1.10- In operations strategy, decision of a firm to increase nos. of physical facilities is likely to build its

- A. flexibility capability
- B. delivery capability
- C. cost efficiency capability
- D. quality capability

1.11- If demand increases by a factor of k , the optimal lot size increases by a factor of

- A. k .
- B. $k/2$.
- C. $k + 2$.
- D. the square root of k .

1.12- Longer period moving average smooth out fluctuations _____ as compared to shorter moving average period in moving average demand forecasting method.

- A. More
- B. Less
- C. Can be more or less
- D. Equally

Section B:

(Answer all questions, Total Marks= 7x2=14)

Q 2. Discuss Cycle Inventory. In reference to cycle inventory, explain why it is advisable for Manager to make order size equal to Economic Order Quantity (EOQ).

(Marks – 7)

Q 3. Project Management is considered as a “Systems Approach” to Management. Discuss the reasons.

(Marks – 7)

Section C

(Answer all questions, Total Marks= 32)

Q 4. Case: The Culture of Quality at Arnold Palmer Hospital (APH):

Founded in 1989, Arnold Palmer Hospital is one of the largest Hospital for women and children in the US with 431 beds in two facilities totaling 676000 square feet. Located in downtown Orlando, Florida, the hospital with more than 2000 employees serves county areas in central Florida and is the only trauma centre for children in that region.

The Arnold Palmer Hospital provides broad range of medical services including neonatal and pediatric intensive care, pediatric oncology and cardiology.

The issue of Assessing Quality Healthcare:

Quality Health care is goal of all hospitals, but Arnold Palmer Hospital has actually developed comprehensive and scientific means of asking customers to judge the quality of care they receive. Executive Director Kathy Swanson states “Hospitals in this area will be distinguished largely on the basis of their customer satisfaction. We must have accurate information about how our patients and their families judge the quality of our care, so I follow the questionnaire results daily. The in-depth survey helps me and others on my team to gain quick knowledge from patient feedback”. Further, Arnold Palmer Hospital employees are empowered to provide gifts in value up to \$200 to patients who find reason to complain about their hospital service such as food, courtesy, responsiveness or cleanliness.

Director Kathy Swanson doesn't just focus on the customer surveys, which are mailed to patients one week after discharge, but also a variety of internal measures. These measures usually start at grassroots level where staff sees a problem and develops ways to monitor & improve performance.

Some of the metrics Swanson carefully monitors for continuous improvements are morbidity, infection rates, readmission rates, costs per case, length of stays and number of complaints etc. The tools she and her team uses include Pareto charts, Process Flow Charts, Process Charts, Fish-bone diagrams (Cause & Effect Diagrams) etc. In addition, the hospital benchmarks itself against hospitals both nationally and internationally.

The result of all these efforts has been a culture of Total Quality Management at Arnold Palmer Hospital which manifested in its high ranking in patient satisfaction and one of the highest survival rates for critically ill infants & children.

(Source: Adapted from “Case – The Culture of Quality at Arnold Palmer Hospital; Operations Management – Jay Heizer, Barry Render, Ninth Edition, Pearson)

Answer the following:

- a) Although patient’s generally do not have medical expertise to judge the health care & treatment they receive, but it is very important for APH to get the patient’s assessment of health care quality? Evaluate the reasons?
- b) Examine the various dimensions or factors of Service Quality with reference to Arnold Palmer Hospital.
- c) Discuss basic principles of Total Quality Management (TQM).
- d) Analyse the Costs of Poor Quality and Costs of Good Quality at Arnold Palmer Hospital.

(Marks: 8x4=32)