Register Number: …………………

MBA DEGREE EXAMINATIONS: NOV/ DEC 2024

(Regulation 2021)

First Semester

MASTER OF BUSINESS ADMINISTRATION

P21MBC1109: Operations Management

COURSE OUTCOMES

CO1:   Explain the concepts and applications of operations management in business organizations for achieving competitive advantage.

CO2:   Propose suitable tools and techniques of operations management for productivity improvement.

CO3:   Display analytical thinking skills in the application of suitable tools governing quality for effective business decision making.

Time: Three Hours   **Maximum Marks: 100**

PART A (30Q x 01 Marks = 30 Marks) Answer any 30 questions only

1. Which of the following is NOT a type of production system?   CO1 [K1]
    a) Batch Production
    b) Mass Production
    c) Custom Production
    d) Variable Production

2. The concept of productivity relates to the: CO1 [K1]
    a) Ratio of output to input
    b) Cost of labor
    c) Number of workers employed
    d) Profit margin

3. Which is NOT a challenge in global operations management?   CO1 [K1]
    a) Cultural differences
    b) Logistics issues
    c) Weather patterns
    d) Technological advancements

4. Demand forecasting is primarily used to: CO1 [K1]
    a) Increase employee efficiency
    b) Predict future demand
    c) Analyze competitors
    d) Control production costs

5. Qualitative forecasting methods include: CO1 [K1]
    a) Moving averages
    b) Expert opinion
    c) Exponential smoothing
    d) Regression analysis

6. Which of the following is an example of quantitative forecasting?   CO1 [K1]

a) Delphi method

b) Sales force composite

c) Trend projection

d) Consumer surveys

7.   A Bill of Materials (BOM) is used to: CO1 [K_1]

a) Plan inventory levels

b) Schedule production

c) List of raw materials required

d) Measure production efficiency

8.   Materials Requirement Planning (MRP) helps in: CO1 [K_1]

a) Forecasting demand

b) Managing material inventory

c) Evaluating worker productivity

d) Deciding factory locations

9.   Aggregate planning involves: CO1 [K_1]

a) Allocating individual tasks

b) Managing resources collectively

c) Adjusting to customer demand

d) Scheduling daily activities

10.   The center of gravity method is used for: CO1 [K_1]

a) Quality control

b) Layout decisions

c) Location selection

d) Forecasting accuracy

11.   Which of the following factors affects location decisions?   CO1 [K_1]

a) Labor costs

b) Product design

c) Customer satisfaction

d) Packaging methods

12.   Supply chain management is concerned with: CO1 [K_1]

a) Inventory control only

b) Worker productivity

c) Movement of goods and services

d) Marketing strategies

13.   Layout strategy is important to: CO1 [K_1]

a) Minimize operational costs

b) Improve product design

c) Reduce labor turnover

d) Enhance marketing campaigns

14.   Which layout is most suitable for a hospital?   CO1 [K_1]

a) Process layout

b) Product layout

c) Fixed-position layout

d) Cellular layout

15.   TQM stands for: CO1 [K_1]

a) Total Quantity Management

b) Total Quality Management

c) Targeted Quality Measures

d) Time Quality Measurement

16. Which of the following is NOT a dimension of quality? CO1 [K1]

a) Durability

b) Aesthetics

c) Responsiveness

d) Inventory cost

17. The 7 QC tools include: CO1 [K1]

a) Pareto chart

b) Market analysis

c) SWOT analysis

d) Budget forecast

18. Statistical process control primarily uses: CO1 [K1]

a) Control charts

b) Linear programming

c) Gantt charts

d) Forecasting models

19. X-bar and R charts are used for: CO1 [K1]

a) Measuring profitability

b) Monitoring process stability

c) Tracking employee performance

d) Designing product layouts

20. The cost of quality includes: CO1 [K1]

a) Marketing expenses

b) Warranty claims

c) Training costs

d) Both b and c

21. What is the primary focus of safety management? CO1 [K1]

a) Reducing insurance premiums

b) Ensuring employee well-being

c) Improving financial performance

d) Minimizing production delays

22. A health management system includes: CO1 [K1]

a) Preventive measures

b) Safety audits

c) Workplace hygiene

d) All of the above

23. Productivity is defined as: CO1 [K1]

a) Output ÷ Input

b) Profit ÷ Costs

c) Revenue ÷ Sales

d) Input ÷ Output

24. Which of the following is an external factor in location decisions? CO1 [K1]

a) Labor availability

b) Proximity to markets

c) Tax incentives

d) All of the above

25. Forecasting accuracy can be measured using: CO1 [K$_1$]
   a) Moving average error
   b) Forecast error
   c) Capacity utilization
   d) Labor efficiency
26. What is the key feature of cellular layout? CO1 [K$_1$]
   a) High costs
   b) Grouping similar processes
   c) Single product flow
   d) Random machine arrangement
27. Which of these is a qualitative forecasting technique? CO1 [K$_1$]
   a) Linear regression
   b) Moving average
   c) Delphi method
   d) Time series
28. Aggregate planning deals with: CO1 [K$_1$]
   a) Short-term scheduling
   b) Long-term facility design
   c) Medium-term capacity decisions
   d) Day-to-day operations
29. Which factor is critical in supply chain management? CO1 [K$_1$]
   a) Forecasting models
   b) Customer relationships
   c) Transportation networks
   d) All of the above
30. Safety management includes: CO1 [K$_1$]
   a) Risk identification
   b) Training programs
   c) Emergency planning
   d) All of the above
31. Which method is used to identify critical factors affecting production? CO1 [K$_1$]
   a) Fishbone diagram
   b) Bar chart
   c) Scatter plot
   d) Line graph
32. Location strategy affects: CO1 [K$_1$]
   a) Costs
   b) Service quality
   c) Accessibility
   d) All of the above
33. Layout strategy in retail aims to: CO1 [K$_1$]
   a) Maximize space utilization
   b) Enhance customer experience
   c) Improve employee productivity
   d) All of the above
34. TQM focuses on: CO1 [K$_1$]
   a) Continuous improvement

b) One-time quality checks

c) Cost reduction only

d) Employee replacement

| 35. | Which of the following is a safety equipment? | CO1 | [K$_1$] |

a) Fire extinguisher

b) Hard hats

c) First-aid kits

d) All of the above

PART B (5Q x 6 Marks = 30 Marks) Answer any 5 questions only

36.	Explain the different aspects of cost of quality.	CO2	[K$_5$]
37.	Illustrate the concept of ABC classification of inventory management.	CO2	[K$_2$]
38.	Discuss any 4 Quality Control tools.	CO2	[K$_6$]
39.	Distinguish between manufacturing organizations (goods) and service organizations (services) with the help of suitable examples.	CO2	[K$_4$]
40.	With the help of suitable examples, distinguish between expansionist strategy and wait-and-see strategy of capacity planning.	CO2	[K$_4$]
41.	A company is considering opening an office in two locations, Pune, and Mumbai. The factor rating for the two cities is given below:	CO2	[K$_3$]

Factor	Weight	Pune	Mumbai
Customer Convenience	0.25	70	80
Bank Accessibility	0.20	40	90
Computer Support	0.20	85	75
Rental Costs	0.15	90	55
Labor Costs	0.10	80	50
Taxes	0.10	90	50

Using factor rating method, select which location is suitable for the insurance company.

Part – C (4Qx10 Marks = 40 marks) Answer any 4 questions only

42.	With the help of a suitable example, discuss the concept of Fish-Bone diagram.	CO3	[K$_6$]
43.	Determine the different factors affecting the facility location decision of a firm.	CO3	[K$_5$]
44.	Evaluate the concept of MRP with the help of suitable example.	CO3	[K$_5$]
45.	Analyze the role of layout strategies in achieving operational efficiency. Provide examples of different layouts and their applications in manufacturing and service industries.	CO3	[K$_4$]
46.	Evaluate the impact of safety, health, and environmental management on operational performance. Propose a safety management plan for a manufacturing plant addressing potential risks.	CO3	[K$_5$]

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