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MCQs

Last minute Revision

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— Om → ?

— Sm → ?

INTERMEDIATE EXAMINATION

June 2025

P-9(O MSM)
Syllabus 2022

OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

All sections are compulsory. Each section contains instructions regarding the number of questions to be answered within the section.

All working notes must form part of the answer.

Wherever necessary, candidates may make appropriate assumptions and clearly state them in the respective answer.

Section-A

This section contain Question No.1. All parts of this question are compulsory.

1. Choose the correct answer from the given alternatives (You may write only the Roman numeral and the Alphabet chosen for your answer): $2 \times 15 = 30$

- (i) With reference to the operations of a manufacturing company, one of the important decisions is "Are we producing right things"? Which one of the following is related to this?
- (A) Quality Management
 - (B) Inventory Management
 - (C) Maintenance Management
 - (D) Delivery Planning
- (ii) Which one of the following is associated with the question "Where should each centre be located"?
- (A) Process layout
 - (B) Facility layout
 - (C) Product Layout
 - (D) Plant Layout
- (iii) Application of technology or process to the raw material to add use value is known as:
- (A) Product
 - (B) Production
 - (C) Application of Technology
 - (D) Combination of Technology and Process

- (iv) A steel plant has a design capacity of 50000 tons of steel per day, effective capacity of 40000 tons of steel per day and actual output of 36000 tons of steel per day. Compute the efficiency of the plant.

- (A) 90 %
 (B) 72 %
 (C) 80 %
 (D) 110 %

- (v) The following item is being managed using a fixed time period model with safety stock:

Weekly demand (D)	50 units
Review Cycle (T)	3 Weeks
Safety Stock (SS)	30 units

What is the average inventory turn(s) for the item? (1 year = 52 weeks)

- (A) 84.20 turns per year
 (B) 24.76 turns per year
 (C) 80.50 turns per year
 (D) None of the above
- (vi) The Quality Circles and use of work teams or quality improvement teams are the examples of
- (A) Time Reduction
 (B) Lean Production
 (C) Worker Involvement
 (D) Re-Engineering
- (vii) The over capacity is preferred when
- (A) the cost of creating the capacity is prohibitively high.
 (B) fixed cost of the capacity is not very high.
 (C) shortage of products does not affect the company.
 (D) the technology changes fast.
- (viii) _____ is about how people may be motivated to work together in more effective ways.
- (A) Organisational behavior
 (B) Strategic Leadership
 (C) Emotional Intelligence
 (D) Organisational Change

- (ix) A _____ is a business unit in a growing market, but not yet with high market share.
- (A) Cash Cow
 - (B) Dog
 - (C) Question Mark
 - (D) Star
- (x) _____ is a form of paid advertising that allows marketing teams to essentially purchase traffic to their website.
- (A) Influencer Marketing
 - (B) Affiliate Marketing
 - (C) Pay-per-click
 - (D) Content Marketing
- (xi) In which one of the following stages of Design Thinking, the aim is “to identify the best possible solution for each problem found”?
- (A) Prototype
 - (B) Define
 - (C) Test
 - (D) Ideate
- (xii) In the scheduling function, if the Critical Ratio for a job is greater than 1, it implies that
- (A) the job is behind the schedule.
 - (B) the job is ahead of schedule.
 - (C) the job is not started yet.
 - (D) the job is exactly on schedule.
- (xiii) The ISO Standard associated with the “Quality Assurance in Production and Installation” is
- (A) ISO 9001
 - (B) ISO 9002
 - (C) ISO 9003
 - (D) ISO 9004
- (xiv) Which one of the following cannot be called a valid “Type” of Big Data?
- (A) Structured Data
 - (B) Unstructured Data
 - (C) Meta Data
 - (D) Semi-Structured Data

- (xv) The _____ refers to a set of managerial decisions and actions that determines the long-term performance of an organization.
- (A) Organisational culture
 - (B) Strategic management
 - (C) Vision
 - (D) Mission

SECTION - B

Answer any five questions from Question No. 2 to Question No. 8.

Each question carries 14 marks.

14×5=70

2. (a) **Align** the major important decision areas under production and operations management. 7
- (b) **Analyze** the three important tools which are used for increasing productivity in industry. 7
3. (a) "Production planning and Control is a very important aspect of Production Management"— In this context, **append** the basic six types of production control. 7
- (b) RONP Ltd. manufactures two colour televisions "Model 2M3" and "Model 3SP4" in a variety of sizes, colours and component combinations. Identical colour TVs are produced in lots of 100. The projected demand, lot size and time standard are shown in the following table :

Particular	Model 2M3	Model 3SP4
Demand forecast (D)	6000 Units / year	12000 Units / year
Lot Size (Q)	100 Units	100 Units
Standard Processing time (P)	20 Hours / Unit	40 Hours / Unit
Standard Setup time (s)	2 Hours / LOT	3 Hours / LOT

The factory currently works 3 shifts, 8 hours a day, 5 days a week, 50 weeks a year. It operates 100 workstations, each producing one colour TV in the time shown in the above Table. The factory maintains a 19% Capacity cushion (C).
(ignore use of overtime works).

Required :

- (i) **Analyze** and **Assess** how many workstations will be required next year to meet the expected demand without decreasing the Company's current capacity cushion.
- (ii) **Assess** the number of additional workstations to be required to meet expected demand.

[Present calculation (NOs) upto nearest integer]

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Section-A

This section contains Question No. 1. All parts of this question are compulsory.

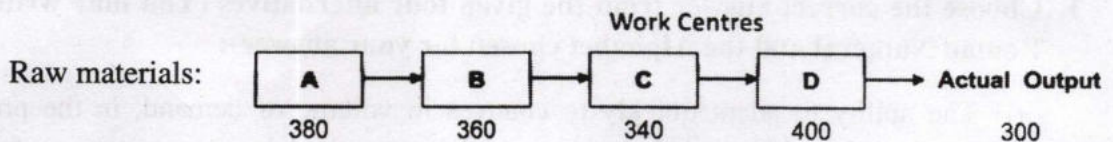
1. Choose the correct answer from the given four alternatives (You may write only the Roman Numeral and the Alphabet chosen for your answer): **2×15=30**

- (i) The ability to adapt quickly to changes in volume of demand, in the product mix demanded, and in product design or in delivery schedules, is sometimes referred to as
- (A) Re-Engineering
 - (B) Business Process Restructuring
 - (C) Agile Manufacturing
 - (D) Right Sizing
- (ii) Which one of the following is associated with the configuration of departments, work centres and equipment and machinery, with focus on the flow of materials or work through the production system?
- (A) Facility Location
 - (B) Facility Layout
 - (C) Capacity Planning
 - (D) Process Design
- (iii) In which one of the following phases of the product life cycle, organisations get engaged in aggressive promotional and pricing program?
- (A) Introduction
 - (B) Growth
 - (C) Maturity
 - (D) Decline

(iv) The Annual Carrying Cost of Material ZB is ₹ 3.60 per unit and its Total Carrying Cost is ₹ 9,000 per annum. If there is no Safety Stock of Material ZB, what will be the Economic Order Quantity (EOQ) for Material ZB?

- (A) 5000 units
- (B) 6000 units
- (C) 6500 units
- (D) 4000 units

(v) ZOOS Ltd., a manufacturing firm, has four Work Centres A, B, C & D in series with individual capacities in units per day shown in the figure below:



What is the System Efficiency?

- (A) 75.25%
- (B) 80.33%
- (C) 99%
- (D) 88.23%

(vi) A cement factory of SITON (C) Ltd., in Madhya Pradesh works 7 days a week in 3 shifts per day having maintenance in the first shift of around 2 hours. It has roughly 100 workers which produces only pozzolanic properties cement better known as PPC. The output per month is around 2500 tonnes of PPC. What will be productivity per worker?

- (A) 20 tonnes
- (B) 30 tonnes
- (C) 25 tonnes
- (D) 15 tonnes

- (vii) For Quality Assurance in Design, Production, Installation and Servicing the _____ Model is used.
- (A) ISO 9002
 - (B) ISO 9001
 - (C) ISO 9003
 - (D) None of the above options
- (viii) This _____ provides the broad "DATA", from which to identify key drivers of change.
- (A) SWOT Analysis
 - (B) BCG Matrix
 - (C) PESTEL Analysis
 - (D) Critical Success Factors
- (ix) Which one of the following cannot be closely associated with the "Red Ocean Strategy"?
- (A) Boat the Competition
 - (B) Make the Value Cost trade-off
 - (C) Make the Competition irrelevant
 - (D) Exploit Existing Demand
- (x) The process of _____ requires co-ordination across the entire organization and involves business culture changes.
- (A) Digital Strategy
 - (B) Digitization
 - (C) Digital Transformation
 - (D) Data Aggregation
- (xi) Forecasting the weather is an example of _____.
- (A) Narrow AI
 - (B) General AI/Human-Level
 - (C) Super AI
 - (D) Deep-Learning

- (xii) Which type of Production Control is most prominently applied in the industries like textiles, and book & magazine printing industries?
- (A) Batch Control
 - (B) Load Control
 - (C) Order Control
 - (D) Block Control
- (xiii) The Work Breakdown Structure is typically developed in which one of the following phases of the project management life cycle?
- (A) Project Initiation Phase
 - (B) Project Planning Phase
 - (C) Project Quality Management Phase
 - (D) Execution Phase
- (xiv) Strategy Formulation is characterized by—
- (A) The focus is on effectiveness.
 - (B) It requires motivation and leadership skills.
 - (C) It involves managing forces during action.
 - (D) It is primarily an operational process.
- (xv) Which one of the following activities involves receiving, storing and distributing inputs to the production process?
- (A) Inbound Logistics
 - (B) Operations
 - (C) Marketing & Sales
 - (D) Outbound Logistics

Section-B

Answer any Five questions from Question No. 2 to Question No. 8.

Each question carries 14 marks.

14×5=70

2. (a) "The Plant Layout selected in conformity with Layout Principles should be an ideal one"— **In this context, align** those Plant Layout Principles. 7
- (b) What is Design Thinking? **Briefly discuss** the five stages of Design Thinking. 7

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Section–A

Operations Management

This section contain Question No.1. All parts of this question are compulsory.

1. Choose the correct answer from the given alternatives (You may write only the Roman numeral and the Alphabet chosen for your answer): **2×15=30**

- (i) Let's consider an example of a product manufacturing company, who is aware that it needs to produce the products. One of the important aspects involved in the operational planning which is related to the question "How much to produce?" is known as :
- (A) Process Selection & Layout
 - (B) Aggregate Planning
 - (C) Demand Forecasting**
 - (D) Quality Management
- (ii) _____ of a plant is the maximum rate of output (goods or services) the plant can produce.
- (A) Production
 - (B) Potential
 - (C) Demand
 - (D) Capacity**

- (iii) Which one of the following basic process types is used when a very highly standardized product is desired in high volumes?
- (A) Batch Process
 - (B) Continuous Process**
 - (C) Job Shop Process
 - (D) Project Process
- (iv) Which one of the following production controls is typically found whenever a particular bottleneck machine exists in the process of Manufacturing?
- (A) Load Control**
 - (B) Batch Control
 - (C) Block Control
 - (D) Flow Control
- (v) Which one of the following ISO Standards evaluates the Management of the entire manufacturing process, from purchasing to design, to training?
- (A) ISO 9004
 - (B) ISO 9003
 - (C) ISO 9000**
 - (D) ISO 9001
- (vi) A Zinc Plant of ZOS Ltd., manufactures product Z of 30 units per shift of 8 hours. If the Standard time per unit is 12 minutes, what is the productivity per shift of 8 hours?
- (A) 60 %
 - (B) 75 %**
 - (C) 80 %
 - (D) 90 %
- (vii) Which one of the following design Tests asks whether a proposed Structure will set up links between parts of the organizations that are important but bound to be strained?
- (A) The People Test
 - (B) The Feasibility Test
 - (C) The difficult Links Test**
 - (D) The Flexibility Test

(viii) RON Ltd., a manufacturer of ball bearings provides the following items that is being managed using a fixed order Quantity Model with Safety Stock :

Annual Demand (D)	:	24000 Units
Order Quantity (QO)	:	3600 Units
Safety Stock (S)	:	400 Units

What is the average Inventory Level ?

- (A) 2500 units
- (B) 2400 Units
- (C) 2200 Units
- (D) None of (A) , (B) and (C)

(ix) The Slack Time of the Tail event and Slack time of Head event of an activity M are 15 days and 2 days respectively. If the total Float of Activity M is 16 days, Free Float will be:

- (A) 13 days
- (B) 14 days
- (C) 15 days
- (D) 18 days

(x) Which one of the following Digital Marketing Strategies is a form of paid Advertising that allows Marketing Teams to essentially purchase traffic to their website?

- (A) Email Marketing
- (B) Mobile Marketing
- (C) Pay-per Click (PPC)
- (D) Affiliate Marketing

(xi) Which of the following is / are true for a Blue Ocean Strategy?

- (A) Create and Capture new demand
- (B) Beat the Competition
- (C) Exploit existing demand
- (D) Compete in existing Markets

(xii) Which one of the following Sorts of Business defined by the Market growth / market share axes of BCG Matrix, is a business unit with high market share in a matured market?

- (A) Cash Cow
- (B) Dog
- (C) Star
- (D) Question Mark (or problem Child)

- (xiii) _____ is the science of using mathematical calculations and logic to generate time effective sequence of task considering any resource and cost constraints.
- (A) Scheduling
(B) Plan
(C) Milestone
(D) Work-in-Progress
- (xiv) Which one of the following announces what the Company is providing to Society; either a Service or a Product?
- (A) Mission
(B) Vision
(C) Values
(D) Objectives
- (xv) Which one of the following types of Cloud Computing, is a distribution model that delivers software applications over the Internet, these applications are often called web services?
- (A) Infrastructure as a Service (IaaS)
(B) Platform as a Service (PaaS)
(C) Software as a Service (SaaS)
(D) Amazon Web Services (AWS)

Section-B

Answer any Five questions from Question No. 2 to Question No. 8.

Each question carries 14 Marks.

14×5=70

2. (a) "The Production Management of To-day presents certain characteristics which make it look totally different from what it was during the past. Specifically, To-day's production system is characterized by at least Four Features". **In this Context Summarize** the Said Features. 7
- (b) "Customers pay for the products that best fulfil their requirements and provide them the desired value". **In this Context append** the characteristics of a good product design. 7
3. (a) "Production Control involves the various functions". **In accordance with this align** these said functions. 7

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Section-A

This section contains Question No. 1. All parts of this question are compulsory. Answer the following questions:

1. Choose the correct answer from the given alternatives. (You may write only the Roman numeral and the Alphabet chosen for your answer): 2×15=30

- (i) With reference to the operations of a manufacturing company, one of the important decisions "How to reach the products to the customers?" Is related to which one?
- (A) Quality Management
 - (B) Inventory Management
 - (C) Maintenance Management
 - (D) Distribution**
- (ii) Which one of the following is associated with the question "How much space and capacity does each economic activity centre need?"
- (A) Facility location
 - (B) Facility layout**
 - (C) Capacity Planning
 - (D) MRP
- (iii) The non-linear iterative process that seeks to understand users needs challenge assumptions, redefine problems and create innovative solutions to prototype and test, is called:
- (A) Product design
 - (B) Product Mix
 - (C) Design thinking**
 - (D) Product Life Cycle

(iv) Any solution that also satisfies the non-negative restrictions of the general linear programming problem is called a :

- (A) Basic Solution
- (B) Feasible Solution
- (C) Basic Feasible solution
- (D) Optimal feasible solution

(v) ISO Standards are reviewed every:

- (A) Year
- (B) 2 Years
- (C) 5 Years
- (D) 10 Years

(vi) ABS Ltd., a manufacturing Company has a production line consisting of five work centers in series with individual capacity in units per shift as are given. The actual output of line is 270 units per shift.

Work Centre	P	Q	R	S	T
Capacity/Shift	350	320	360	325	300

Identify the bottle neck centre

- (A) Work Centre P
- (B) Work Centre R
- (C) Work Centre T
- (D) Work Centre S

(vii) Under Maintenance management, two types of costs and need to be balanced-one is cost of premature replacement, other is cost of:

- (A) Purchase of Raw Materials
- (B) Breakdown
- (C) Purchase of finished goods
- (D) None of the above

(viii) The technique which involves developing a model of real phenomenon and then performing experiments on the model evolved, is referred to as:

- (A) Transportation
- (B) Assignment
- (C) Simulation
- (D) Queuing

- (ix) Which one of the following refers to the job-specific goals of each individual employee?
- (A) Performance Objectives
 - (B) Personal Objectives**
 - (C) Professional Objectives
 - (D) Organization Genomics
- (x) Which one of the following is related to a situation when consumers have a preference for the products of established companies?
- (A) Economics of Scale
 - (B) Brand Loyalty**
 - (C) Customer switching costs
 - (D) Absolute cost advantages
- (xi) The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality, service and speed is called:
- (A) Transformation
 - (B) Reprocessing
 - (C) Total Quality Management
 - (D) Business Process Re-engineering (BPR)**
- (xii) A collection of data that is huge in volume and is growing exponentially with time is called:
- (A) Big data**
 - (B) Huge data
 - (C) Block Chain
 - (D) Cloud data
- (xiii) The expected time for an activity of project B is 7 days. If the optimistic and pessimistic time are 3 days and 15 days respectively, what will be the most likely time of the activity?
- (A) 10 days
 - (B) 6 days**
 - (C) 12 days
 - (D) None of these

- (xiv) In SWOTC Analysis, the Letter 'C' denotes :
- (A) Champions
 - (B) Characteristics
 - (C) Challenges
 - (D) Core Values
- (xv) While developing KRAs (Key Result Areas) following can be the hurdle(s):
- (A) Lack of clarity
 - (B) Distractions
 - (C) Top-Down Imposition Areas
 - (D) All of the above

Section-B

Answer any five questions out of seven questions given. Each question carries 14 marks.

14×5=70

2. (a) "Recent trends in Production and Operations Management related to global competition and the impact it has on manufacturing firms." **In this context**, state in brief the recent trends in production and operations management. (Any seven) 7
- (b) You are working as a Production Manager in a Manufacturing unit. You are required to determine whether resources are to be organized around products or process in order to implement the flow strategy. **In this context, describe** in brief the basic process types to be chosen. (any seven) 7
3. (a) **Summarize** the Basic types of Production Control. 7
- (b) The following table gives the age of cars of SKODA Make and its Annual Maintenance Cost.

Age of Cars in Years (X)	2	4	6	8
Maintenance cost (in thousand of ₹)(Y)	10	20	25	30

Required:

- (a) **Fit a** Linear Regression of Y on X
- (b) **Estimate:** (i) Maintenance Cost for Age of Cars of 10 years
(ii) Age of car in years for Maintenance cost of ₹ 50000

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Section-A

Operations Management

Answer Question No. 1 which is compulsory and any three from Question Nos. 2, 3, 4 and 5.

1. (a) Choose the correct answer from the given alternatives (You may write only the Roman numeral and the Alphabet chosen for your answer): 1×8=8

(i) With reference to the aspects of customer service under Operations Management, if Primary consideration focuses on “Movement of a given, requested or acceptable specification”, it's corresponding Principal function will be:

(A) Manufacture

(B) Transport

(C) Supply

(D) Service

(ii) Which one of the following forecasting is more useful in production planning?

(A) Short-term

(B) Medium-term

(C) Long-term

(D) None of the above

(iii) In which one of the following layouts, similar type of machines and services (i.e. facilities) are located together?

(A) Product or Line layout

(B) Process layout

(C) Group layout

(D) Fixed layout

(iv) Point-rating method is closely associated with

- (A) Transportation
- (B) Simulation
- (C) Queuing system
- (D) Job Evaluation

(v) The ratio of Actual Production to the Standard Production is referred to as:

- (A) Standardization
- (B) Simplification
- (C) Productivity
- (D) Actual Yield

(vi) Which one of the following is the project management software program?

- (A) MS PowerPoint
- (B) MS Excel
- (C) MS Project
- (D) MS Access

(vii) The type of spare parts which although acknowledged to have a long life or a small chance of failure, would cause a long shutdown of equipment because it would take a long time to get a replacement for them, are known as

- (A) Insurance spares
- (B) Rotable spares
- (C) Regular spares
- (D) Capital spares

(viii) Which of the following is not the method used for Operations Research problems?

- (A) Analytical method
- (B) Simulation method
- (C) Trail and error method
- (D) None of the above

(b) State whether the following statements are 'true' or 'false' (You may write only the Roman numeral and whether 'True' or 'False' without copying the statements into the answer books): 1×4=4

- (i) The term Operations Management is more used for a system where tangible goods are produced. **F**
- (ii) Aggregate planning is an Intermediate term planning decision. **T**
- (iii) The first and foremost stage of Design Thinking is Prototype. **F**
- (iv) The ISO Standards are reviewed every 10 years and revised if needed. **F**

(c) **Fill in the blanks:** (You may write only the Roman numeral and the content filling the blank) 1×3=3

- (i) Operations management is concerned essentially with the utilization of **Resources**
- (ii) A **Network** can be considered as a means of graphically depicting all the operations involved in a Project.
- (iii) The two types of maintenance costs need to be balanced: Cost of premature replacement and Cost of **Break Down**

2. (a) **List down** various major decision areas under Production and Operations management. (Any Ten) 5

(b) (i) **Discuss** with appropriate examples, various properties of aggregate planning. 4

(ii) The Sales of CTV (₹ In Million) of SONTON LTD. for the 5 years are given below:

Year	2014	2016	2018	2020	2022
Sales of CTV (₹ In Million)	18	21	23	27	16

Required:

Estimate the Trend values of Sales of CTV for the years of 2021, 2024 and 2026. 6

3. (a) The Design Thinking can be thought of as a five stage process. Are these stages performed in a sequential order?

Examine each stage of Design Thinking. 7

(b) Below table shows the time remaining (number of days until due date) and the work remaining (number of days still required to finish the work) for 5 jobs which were assigned the letters A to E as they arrived to the shop.

Job	Number of days until due date	Number of days of work remaining
A	6	3
B	4	8
C	2	5
D	8	6
E	7	2

Required:

Sequence the jobs according to priority established by

- (i) Early Due Date (EDD) Rule
- (ii) Least Slack (LS) Rule
- (iii) Longest Processing Time (LPT) Rule
- (iv) Critical Ratio Rule

2×4=8

Section-B
(Strategic Management)

Answer Question No. 6 which is compulsory and any two from Question Nos. 7, 8, & 9.

6. (a) **Choose the correct answer from the given four alternatives (You may write only the Roman numeral and Alphabet chosen for your answer)** 1×4=4
- (i) Which one of the following provides the standards for performance appraisal?
- (A) Mission
 - (B) Vision
 - (C) Objectives**
 - (D) Values
- (ii) Which one of the following provides the broad 'data' from which to identify key drivers of change?
- (A) BCG matrix
 - (B) PESTEL analysis**
 - (C) SWOT analysis
 - (D) Critical Success Factors
- (iii) Any metric that measures whether an organization is meeting certain objectives and goals that are set to help the organization succeed is called
- (A) Key Result Areas
 - (B) Key Performance Areas
 - (C) Task Control
 - (D) Key Performance Indicators**
- (iv) A shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network is referred to as
- (A) Artificial Intelligence
 - (B) Virtual Machine
 - (C) Machine Language
 - (D) Blockchain**
6. (b) **State whether the following statements are 'True' or 'False'. (You may write only the roman numeral and whether 'True' or 'False' without copying the statements into the answer books):** 1×3=3
- (i) Organizational behaviour is about how people may be motivated to work together in more effective ways. **T**
 - (ii) The term threats can also be seen as challenges. **T**
 - (iii) The advantages of JIT system is that it enables a company to maintain buffer stock of Inventory. **F**

- (c) **Fill in the blanks (You may write only the Roman numeral and the content filling the blanks):** 1×3=3
- (i) While under Red Ocean Strategy, focus is on current customers, in Blue Ocean Strategy, focus is on non-customers.
- (ii) Brand Loyalty exists when consumers have a preference for the products of established companies.
- (iii) Big Data is a collection of data that is huge in volume and is growing exponentially with time.
7. (a) (i) Define the term 'Strategy'.
(ii) **Explain** the three types of strategy usually considered by a typical business firm. 1+6=7
- (b) With reference to Business Environment, **examine** in detail (i) Various layers and (ii) Characteristics. 4+4=8
8. (a) (i) After assuming an organization of your own choice, **apply** the concept of Portfolio Analysis on it. Now **derive** (1) Various objectives of Portfolio Analysis and (2) Advantages of Portfolio Analysis. 3+4=7
- (b) Visualise as if you are heading a Project-based firm. **Justify** the formation of 'Project-based structure' in your firm. **Evaluate** the advantages and limitation of Project-based structures. 2+4+2=8
9. (a) What do you understand by Business Process Re-engineering? What are the important reasons that lead an organization to undertake re-engineering? 2+3=5
- (b) (i) **Compare and contrast** the two terms: Digitization and Digitalization.
(ii) **Examine** various application areas of Internet of Things (IoT). (any six) 4+6=10
-



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 1 Hour

Full Marks: 100

Answer all questions. Each question carries 2 marks.

SECTION – A (Compulsory)

I. Choose the correct option:

[15 x 2 =30]

- (i) Which one of the following is associated with the configuration of departments, work centres and equipment and machinery, with focus on the flow of materials or work through the production system?
- Facility Location
 - Facility Layout
 - Capacity Planning
 - Process Layout
- (ii) Which ISO defines Quality Assurance in Final Inspection Test:
- ISO 9002
 - ISO 9003
 - ISO 9001
 - ISO 9004
- (iii) In a particular plant there are 12 workers manufacturing a single product and the output per month consisting of 25 days of that particular product is 500. How much is the monthly productivity?
- 20
 - 38
 - 42
 - 50
- (iv) Which phase of product life cycle is characterized by Saturation in the market place?
- Maturity Phase
 - Growth Phase
 - Introduction Phase
 - Decline Phase
- (v) Which among the following is not the limitation of Gantt Chart:
- It does not convey the variability of the task duration, equipment performance, and human potential, any one of which could influence the accuracy of loading the work centres.
 - It clearly indicates the details regarding progress of activities.
 - It does not give a clear indication of the interrelationship between separate activities.
 - The chart is static and must be updated periodically to account for new job arrival and revised time estimates for existing jobs.



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- (vi) Which among the following stands correct for PERT:
- a. Time estimate is deterministic with known time duration. Single time estimate.
 - b. Activity orientation
 - c. Focused on time
 - d. More suitable for repetitive projects
- (vii) Free float is defined as:
- a. Total float by deducting slack time of the head event.
 - b. Total float by deducting slack time of the tail event
 - c. Free float by deducting tail slack
 - d. Free float by adding tail slack
- (viii) 'Z' chart is a chart used in:
- a. Programme control
 - b. Job control
 - c. Cost control
 - d. Quality control.
- (ix) Spares can be classified as per service level:
- a. Rotable spares
 - b. Insurance spares
 - c. Capital spares
 - d. All of the above
- (x) Frequency of breakdown:
- a. Number of break down / Available machine hour
 - b. Available machine hour / Number of break down
 - c. Down time due to maintenance / Number of break down
 - d. Number of break down / Down time due to maintenance
- (xi) Which Ocean strategy focus on making the competition irrelevant:
- a. Red Ocean Strategy
 - b. Blue Ocean Strategy
 - c. Green Ocean Strategy
 - d. Black Ocean Strategy
- (xii) Which among the following are the benefits of having a vision:
- a. Good visions are inspiring and exhilarating
 - b. It represents a discontinuity, a step function and a jump ahead so that the company knows what it is to be.
 - c. Good visions are competitive, original and unique
 - d. All the above



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

(xiii) SMART goal framework does not include:

- a. Strategy
- b. Measurable
- c. Relevant
- d. Time Based

(xiv) The characteristics of Business Environment includes:

- a. Complex Environment
- b. Multi-faceted
- c. Dynamic
- d. All of the above

(xv) In the context of BPR, what does “reengineering” refers to?

- a. Continuously improving existing processes
- b. Completely redesigning and reconstructing processes
- c. Outsourcing business processes
- d. Automating manual tasks

Answer:

i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv
b	b	c	a	b	c	a	c	d	a	b	d	a	d	b

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2. (a) “Recent trends in production and operations management relate to global competition and the impact it has on manufacturing firms.” State the recent trends. [7]
- (b) Below data are collected related to work study for 150 hrs on a floor shop employing 7 labours having a shift of 8 hrs in a day.
- (i) Number of observations documented in total = 3000
 - (ii) Number of observations in which no working activity is observed = 500
 - (iii) Manual to machine ratio = 3:2
 - (iv) Average Rating factor = 120%
 - (v) Number of product produced during the period of study = 7000
- Company has its own policy regarding personal allowance which is pegged at 11% of normal standard time to produce a product.
- The floor shop produces 49000 products per month for 24 working days, it has an absenteeism of around 6%.
- Calculate efficiency of utilisation of Labour and Productive Efficiency of Labour. [7]



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 1 Hour

Full Marks: 100

Answer all questions. Each question carries 2 marks.

SECTION – A (Compulsory)

I. Choose the correct option:

[15 x 2 =30]

- i. One of the requirements of Aggregate Planning is:
- Output and sales should be expressed in a logical overall unit of measuring
 - Appropriate time period
 - List of all resources available
 - List of operations required.
- ii. For Quality Assurance in Production and Installation the _____ model is be used.:
- ISO 9001
 - ISO 9002
 - ISO 9003
 - None of the above
- iii. A cement factory in Madhya Pradesh works 7 days a week in 3 shifts per days having maintenance in the first shift of around 2 hours. It has roughly 100 workers which produces only pozzolanic properties cement better known as PPC. The output per month is around 2500 tonnes of PPC. Find the productivity per worker?
- 20 tonnes
 - 30 tonnes
 - 25 tonnes
 - 15 tonnes
- iv. Which of the following is not project quality management?
- Quality Definition
 - Quality Assurance
 - Quality Control
 - Quality Inspection
- v. The event from where more than one activity starts:
- Merge event
 - Brust Event
 - start event
 - event nodes



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- vi. The critical path analysis is an important tool in production planning and _____ :
- Loading
 - scheduling
 - Routing.
 - All the above
- vii. One of the important charts used in programme control is:
- Material chart
 - Gantt chart
 - Route chart
 - Inspection chart
- viii. Which one of the following is NOT the advantage of Preventive Maintenance?
- Better product quality
 - Greater safety to workers
 - Increased breakdowns and downtime
 - Fewer large-scale repairs
- ix. One of the objectives of maintenance is:
- to prevent obsolescence
 - to ensure spare parts management
 - to satisfy customers
 - to extend the useful life of Plant & Machinery without sacrificing the level of performance
- x. In some case the _____ and inconvenience due to breakdown of equipment is so high that standby equipment is kept:
- Cost
 - Loss
 - Time
 - Interval
- xi. Which of the following is correct about Red Ocean Strategy:
- Exploit existing demand
 - Create and capture new demand
 - Create uncontested markers to serve
 - Align the whole system of a firm's activities in pursuit of differentiation and low cost.
- xii. Which among the following is incorrect lyre of organisational structure?
- Value
 - Beliefs
 - Behaviours
 - Objective



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- xiii. In SMART goal framework 'A' consist of:
- Advanced
 - Ambitious
 - Attainable
 - Assessable
- xiv. A company develops a new recycling process to reduce waste. Which PESTEL factor is it responding to?
- Environmental
 - Technological
 - Economic
 - Political
- xv. Which among the following is true?
- BPR has resulted in major gains in efficiency
 - BPR has resulted in major gains in speed
 - BPR has resulted in major gains in quality
 - BPR has resulted in gains in efficiency, quality and speed

Answer:

i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv
a	b	c	d	b	b	b	c	d	b	a	d	c	a	d

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2. (a) What are the characteristics of Modern Operations Function? [7]
- (b) Explain the different stages of product life cycle. [7]

Answer:

- (a) The production management of today presents certain characteristics which make it look totally different from what it was during the past. Specifically, today's production system is characterised by at least four features.

1. **Manufacturing as Competitive Advantage**

In the past production was considered to be like any other function in the organisation. When demand was high and production capacities were inadequate, the concern was to somehow muster all inputs and use them to produce goods which would be grabbed by market. But today's scenario is contrasting. Plants have excess capacities, competition is mounting and firms look and gain competitive advantage to survive and succeed. Interestingly, production system offers vast scope to



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option: [15 × 2 = 30]
- i. Operations management is applicable:
 - a. Mostly to service sector
 - b. Mostly to manufacturing sector
 - c. To manufacture and service sector
 - d. To services exclusively

 - ii. _____ decision is a systematic process of determining a geographic site for a firm's operations:
 - a. Plant location
 - b. Plant layout
 - c. Product layout
 - d. None of these

 - iii. Which one of the following does not fall under qualitative forecasting method?
 - a. Market research
 - b. Life cycle analogy
 - c. Moving average method
 - d. Delphi method

 - iv. The starting point of Production cycle is:
 - a. Product design
 - b. Production Planning
 - c. Routing
 - d. Market research

 - v. Linear Programming is a technique used for determining:
 - a. Production Programme
 - b. Plant Layout
 - c. Product Mix
 - d. Manufacturing sequence

 - vi. Work study comprises following main techniques:
 - a. Method study & work measurement
 - b. Method study & time study
 - c. Time study & work measurement
 - d. Method study & job evaluation.



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- vii. A tool to measure effective use of resources and usually expressed as the ratio of output to input ratio is known as:
- a. Production ratio
 - b. Productivity
 - c. Reliability
 - d. Operations ratio
- viii. The method used in scheduling a project is: -
- a. A schedule of breakdown of orders
 - b. Outline Master Programme
 - c. PERT & CPM
 - d. Schedule for large and integrated work
- ix. Preventive maintenance is useful in reducing:
- a. Inspection Cost
 - b. Shutdown Cost
 - c. Cost of pre- mature replacement
 - d. Set-up cost of machine
- x. Blue Ocean Strategy suggests companies should focus on creating what instead of competing in existing market spaces?
- a. Brand loyalty
 - b. Customer satisfaction
 - c. Market differentiation
 - d. New market spaces
- xi. How does Porter's Value Chain framework help in strategic management?
- a. By analyzing macroeconomic factors impacting the industry
 - b. By identifying areas where the company can gain a competitive advantage through cost leadership or differentiation
 - c. By focusing solely on financial performance metrics
 - d. By monitoring customer satisfaction levels
- xii. Absolute cost advantages arise from:
- a. superior production operations and processes
 - b. control of particular inputs required for production
 - c. access to cheaper funds
 - d. all of the above



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- xiii. Agency theory primarily deals with the relationship between:
 - a. Businesses and customers
 - b. Shareholders and stakeholders
 - c. Principals and agents
 - d. Employees and employers

- xiv. This test is a catch-all category, indicating that the structure must fit legal, stakeholder, trade union or similar constraint:
 - a. The Feasibility Test
 - b. The People Test
 - c. The Parenting Advantage Test
 - d. The Specialised Cultures Test

- xv. Forecasting the weather is an example of-
 - a. Narrow AI
 - b. General AI/human-level
 - c. Super AI
 - d. Deep- learning

Answer:

i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii	xiv	xv
c	a	c	d	c	a	b	c	b	d	b	d	c	a	a

SECTION – B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

[5 x 14 = 70]

- 2. (a) Define the scope of operations management.
- (b) Identify some recommended tools, which may increase the productivity of an enterprise.

[7 + 7 = 14]

Answer:

- (a) Operations Management concerns with the conversion of inputs into outputs, using physical resources, so as to provide the desired utilities to the customer while meeting the other organizational objectives of effectiveness, efficiency and adoptability. It distinguishes itself from other functions such as personnel, marketing, finance, etc. by its primary concern for ‘conversion by using physical resources’. Following are the activities, which are listed under Production and Operations Management functions:
 - i. Location of facilities.
 - ii. Plant layouts and Material Handling.
 - iii. Product Design.



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option:

[15 × 2 = 30]

i. Efficiency of an operation facility is measured by:

- a) $(\text{Effective Capacity}) / (\text{Design Capacity}) \times 100$
- b) $(\text{Actual Output}) / (\text{Design Capacity}) \times 100$
- c) $(\text{Actual output}) / (\text{Effective Capacity}) \times 100$
- d) $(\text{Design Capacity}) / (\text{Effective Capacity}) \times 100$

ii. The desired objective of Production and Operations Management is:

- a) Optimal utilisation of available resources
- b) Use cheap machinery to produce
- c) To train unskilled workers to manufacture goods perfectly
- d) To earn good profits.

iii. One of the important basic objectives of Inventory management is:

- a) To calculate EOQ for all materials in the organisation
- b) To go in person to the market and purchase the materials
- c) To employ the available capital efficiently so as to yield maximum results
- d) Once materials are issued to the departments, personally check how they are used

iv. Cost reduction can be achieved through:

- a) Work sampling
- b) Value analysis
- c) Quality assurance
- d) Supply chain management.

v. In a linear programming model feasible solution is:

- a) The basic solution to the general L.P problem
- b) Any solution that also satisfies the non-negative restrictions of the general L.P problem
- c) A solution which optimize (maximize or minimize) the objective function of a general L.P problem
- d) A basic solution to the system of equations if one or more of the basic variables become equal to zero



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- vi. Gantt Chart is a principal tool used in :
- a) Scheduling
 - b) Loading
 - c) Planning
 - d) Routing
- vii. Preventive maintenance is useful in reducing:
- a) Inspection Cost
 - b) Shutdown Cost
 - c) Cost of pre- mature replacement
 - d) Set-up cost of machine
- viii. When work centers are used in optimal sequence to do the jobs, we can:
- a) Minimise the set up time
 - b) Minimise the break down of machines
 - c) Minimise the utility of facility.
 - d) None of the above
- ix. The tool used in TQM to identify root causes of problems is:
- a) Bar chart
 - b) Gantt chart
 - c) Fishbone diagram
 - d) Flowchart
- x. The _____ of a company state how managers and employees should conduct themselves.
- a) values
 - b) goals
 - c) objectives
 - d) vison
- xi. This_____ provides the broad ‘data’ from which to identify key drivers of change.
- a) SWOT analysis
 - b) BCG matrix
 - c) PESTEL analysis
 - d) Critical Success Factors
- xii. A _____ is a business unit in a growing market, but not yet with high market share.
- a) cash cow
 - b) dog
 - c) question mark
 - d) star



INTERMEDIATE EXAMINATION

SET 2

MODEL ANSWERS

TERM – JUNE 2025

PAPER – 9

SYLLABUS 2022

OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- xiii. _____ is similar to referral programs
- a) Influencer Marketing
 - b) Affiliate marketing
 - c) Social Media Marketing Platforms
 - d) Content marketing
- xiv. Which among the following is not a component of a block chain?
- a) Distributed ledger technology
 - b) Immutable record
 - c) Smart contracts
 - d) Increased threat
- xv. Business Process Reengineering (BPR) primarily aims to:
- a) Increase the number of employees
 - b) Improve existing processes incrementally
 - c) Reduce the number of business processes
 - d) Radically redesign business processes to achieve significant improvements

Answer:

i.	ii.	iii.	iv.	v.	vi.	vii.	viii.	ix.	x.	xi.	xii.	xiii.	xiv.	xv.
c	a	c	b	b	a	b	a	c	a	c	c	b	d	d

SECTION – B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

[5 x 14 = 70]

2. (a) State the characteristics of modern operation functions. [7]
- (b) Briefly explain the different stages of the product life cycle. [7]

Answer:

- (a) The production management of today presents certain characteristics which make it look totally different from what it was during the past. Specifically, today's production system is characterised by at least four features.

1. Manufacturing as Competitive Advantage

In the past production was considered to be like any other function in the organisation. When demand was high and production capacities were inadequate, the concern was to somehow muster all inputs and use them to produce goods which would be grabbed by market. But today's scenario is contrasting. Plants have excess capacities, competition is mounting and firms look and gain competitive advantage to survive and succeed. Interestingly, production system offers vast scope to gain competitive edge and firms intend to exploit the potential. Total Quality Management (TQM), Time-Based Competition, Business Process Re-engineering (BPRE), Just-in-Time (JIT), Focused Factory, Flexible Manufacturing



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option:

[15 x 2 = 30]

(i) Which of the following best describes operations management?

- a) Planning, organizing and supervising the production of goods and services
- b) Marketing the products to customers
- c) Financial management of the organization
- d) Human resource management

(ii) Just – in- time (JIT) is a philosophy that emphasizes _____.

- a) Holding large amounts of inventory
- b) Reducing waste and improving quality
- c) Increasing the lead time
- d) Enhancing marketing efforts

(iii) Which of the following is a technique used in operations management to assess performance?

- a) SWOT analysis
- b) PERT/CPM
- c) Market segmentation
- d) Financial ratio analysis

(iv) Which layout is most suitable for a factory producing a single product in large volumes?

- a) Process layout
- b) Product layout
- c) Fixed-position layout
- d) Cellular layout

(v) Total Quality Management (TQM) focuses on:

- a) Continuous improvement
- b) Reducing production costs
- c) Increasing the number of products
- d) Expanding market share

(vi) Which of the following is a principle of lean manufacturing?

- a) Maximizing inventory levels
- b) Reducing wastes
- c) Increasing lead times
- d) Focusing on mass production



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- (vii) In operations management, the term 'lead time' refers to:
- Total time taken to complete a production process
 - The time between the initiation and completion of a production process
 - Time taken to market a product
 - Time taken to recruit new employees
- (viii) A steel plant has a design capacity of 70000 tons of steel per day. Effective capacity of 56000 tons of steel per day and an actual output of 47000 tons of steel per day. What is the efficiency of the plant?
- 84%
 - 73%
 - 67%
 - 80%
- (ix) Weekly demand = 100 units, Review cycle = 5 weeks
Safety stock = 25 units. Calculate the inventory turnover for the item.
- 23.8
 - 24.8
 - 18.90
 - 30.24
- (x) Porter's five forces model is used to analyze:
- Internal organizational strengths and weakness
 - Competitive forces within an industry
 - Market segmentation
 - Product life cycles
- (xi) In strategic management, what is the purpose of a mission statement?
- To outline the specific actions, the organization will take
 - To describe the company's reason for existence and core purpose
 - To provide detailed financial goals
 - To list the products and services offered by the company
- (xii) Which type of strategy focuses on gaining a competitive advantage by being the lowest cost producer?
- Differentiation strategy
 - Cost leadership strategy
 - Focus strategy
 - Diversification strategy
- (xiii) Which of the following is a strategic tool used to prioritize a company's products or services to allocate resources effectively?
- SWOT analysis
 - BCG matrix
 - PEST analysis



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

d) Porter's five forces

(xiv) Which type of strategy focuses on serving a specific market niche or segment?

- a) Cost leadership strategy
- b) Differentiation strategy
- c) Focus strategy
- d) Diversification strategy

(xv) Which of the following is not a component of strategic management?

- a) strategy formulation
- b) strategy implementation
- c) strategy evaluation
- d) strategy decentralization

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
a	b	b	b	a	b	b	a	c	b	b	b	b	c	d

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 marks.)

[5 x 14 = 70]

2. (a) Describe the objectives and functions served by Material Requirement Planning (MRP). [7]
- (b) Explain the process of product design and the factors affecting it. [7]

Answer:

(a) MRP Objectives:

1. Inventory reduction: MRP determines how many components are required, when they are required in order to meet the master schedule. It helps to procure the materials/components as and when needed and thus avoid excessive build up of inventory.
2. Reduction in the manufacturing and delivery lead times: MRP identifies materials and component quantities, timings when they are needed, availabilities and procurements and actions required to meet delivery deadlines. MRP helps to avoid delays in production and priorities production activities by putting due dates on customer job orders.
3. Realistic delivery commitments: By using MRP, production can give marketing timely information about likely delivery times to prospective customers.
4. Increased efficiency: MRP provides a close coordination among various work centres and hence helps to achieve an uninterrupted flow of materials through the



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A

1. Multiple Choice Questions:

[15 x 2 = 30]

- (i) The starting point of Production cycle is
- (A) Product design
 - (B) Production planning
 - (C) Routing
 - (D) Market Research
- (ii) Which one of the following is NOT the advantage of Preventive Maintenance?
- (A) Better product quality
 - (B) Greater safety of workers
 - (C) Increased breakdowns and downtime
 - (D) Fewer large-scale repairs
- (iii) Consider the following item that is being managed using a fixed time period model with Safety Stock:
Weekly Demand – 50 units;
Review Cycle – 3 weeks;
Safety Stock – 30 units.
What is the average inventory level?
- (A) 100 units
 - (B) 25 units
 - (C) 105 units
 - (D) None of these.
- (iv) The type of production control which is typically found where a particular bottleneck machines exists in the process of manufacturing is
- (A) Block control
 - (B) Load control
 - (C) Flow control
 - (D) Batch control
- (v) Which one of the following ISO standards concerns minimization of harmful effects to the environment caused by the operations by the organization?
- (A) ISO 9001
 - (B) ISO 14000
 - (C) ISO 9002
 - (D) ISO 9004

**OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT**

- (vi) A Ltd., a large scale industry manufactures Product K of 24 units per shift of 8 hours. The standard time per unit is 15 minutes. What is the productivity of the per shift of 8 hours?
- (A) 50%
(B) 60%
(C) 75%
(D) 80%
- (vii) Arrangement of machine depending on sequence of operations happen in:
- (A) Process Layout
(B) Product Layout
(C) Hybrid Layout
(D) Group Technology Layout
- (viii) Buffer stock is built to cater for
- (A) Fluctuating load
(B) Machine breakdown
(C) Import substitution
(D) Diversification
- (ix) The objective function of a LPP is $Z = 3x_1 + 2x_2$. If $x_1 = 10$ and $x_2 = 5$, then the value of Z is:
- (A) 35
(B) 40
(C) 45
(D) 50
- (x) What describes the categories of activities within and around an organization, which together create a product or service?
- (A) SWOT analysis
(B) BCG framework
(C) Value chain
(D) Brain storming
- (xi) A _____ is a business unit in a growing market, but not yet with high market share.
- (A) cash cow
(B) dog
(C) question mark
(D) star
- (xii) _____ specifies what is to be accomplished by focusing on the end result.
- (A) Output control
(B) Behavior control
(C) Premise control
(D) Implementation control



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

- (xiii) The test is a catch-all category, indicating that the structure must fit legal, stakeholder, trade union or similar constraints.
- (A) The Feasibility Test
- (B) The People Test
- (C) The Parenting Advantage Test
- (D) The Specialised Cultures Test
- (xiv) Which among the following is not a characteristic of Big Data?
- (A) Variety
- (B) Volume
- (C) Velocity
- (D) Invariability
- (xv) _____ is similar to referral programs.
- (A) Influencer marketing
- (B) Affiliate Marketing
- (C) Pay-per-click
- (D) Content marketing

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
D	C	C	B	B	C	B	A	B	C	C	A	A	D	B

SECTION – B

Answer any 3 questions out of 4 questions given. Each question carries 14 marks.

[3 x 14 = 42]

2. (a) Enumerate the characteristics of Modern Operations functions [7]
- (b) Define Process Strategy? The Classical way of Categorizations includes 4 types of layouts – Discuss [3 + 4=7]

Answer:

- (a) Today's production system is characterised by the following features:
- Manufacturing as Competitive Advantage:** Unlike the past, today plants have excess capacities, competition is mounting and firms look and competitive edge and firms intend to exploit the potential. Total Quality Management (TQM), Time- Based Competition, Business Process Re-engineering (BPRE), Just-in-Time (JIT), Focused Factory, Flexible Manufacturing Systems (FMS), Computer Integrated Manufacturing (CIM), and The Virtual Corporation are but only some techniques which the companies are employing to gain competitive advantage.
 - Services Orientation:** Service sector is gaining greater relevance these days. The production system, therefore, needs to be organised keeping in mind the peculiar requirements of the service component. The entire manufacturing needs to be geared to serve (i) intangible and perishable nature of the services, (ii) constant interaction with clients or



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct alternative:

[15 x 2 = 30]

- (i) The lead-time is the time:
- To place holders for materials.
 - Time of receiving materials.
 - Time between receipt of material and using materials.
 - Time between placing the order and receiving the materials.
- (ii) Most suitable layout for Continuous production is:
- Line layout.
 - Process Layout.
 - Group technology.
 - Matrix layout.
- (iii) A department store has one storekeeper. The average number of customers handled by the storekeeper is 30 per hour. If the customer arrives at the store at mean rate of 25 per hour, what will be the average number of customers in the system:
- 2 customers.
 - 3 customers.
 - 5 customers.
 - None of the above.
- (iv) Cost reduction can be achieved through:
- Work sampling.
 - Value analysis.
 - Quality assurance.
 - Supply chain management.
- (v) Which one of the following standards is associated with the "Quality Assurance" in Final Inspection Test"?
- ISO 9001.
 - ISO 9002.
 - ISO 9003.
 - ISO 9004.
- (vi) K Ltd. is the manufacturer of bearings. The inventory holding cost per bearing per month is 20 paise. If its economic batch quantity (EBQ) is 4000 units (bearings) then the minimum inventory holding cost at optimum run size will be:

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- a. ₹ 4320
b. ₹ 4510
c. ₹ 4800
d. None of the above
- (vii) Mckinsey's 7-s framework consists of:
a. Structure, Strategy, Software, Skills, Styles, Staff and Supervision.
b. Structure, Strategy, Systems, Skills, Styles, Syndication and Shared values.
c. Structure, Strategy, Systems, Skills, Steering power, Styles and Shared values.
d. Structure, Strategy, Staff, Skills, Systems, Shared values, Style.
- (viii) Production control concerned with:
a. Passive assessment of plant performance
b. Strict control on labours
c. Good materials management
d. Good product design.
- (ix) Business Process Re-engineering is:
a. eliminating loss-making process.
b. redesigning operational processes.
c. redesigning the product and services.
d. recruiting the process engineers.
- (x) Digital transformation drives change in:
a. customer experience.
b. operational processes.
c. business models.
d. all of the above.
- (xi) Forecasting the weather is an example of:
a. Narrow AI.
b. General AI/human-level.
c. Super AI.
d. Deep- learning.
- (xii) $(\text{Total station time/cycle time} \times \text{Number of work stations}) \times 100$ is known as:
a. Line efficiency.
b. Line smoothness.
c. Balance delay of line.
d. Station efficiency.
- (xiii) 'Z' chart is a chart used in:
a. Programme control.
b. Job control.
c. Cost control.
d. Quality control.

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(xiv) Organisation culture is:

- appreciation for the arts in the organisation.
- ability of the organization to act in a responsible manner to its employees.
- combination of (A) and (B) above.
- deeper level of basic assumptions and beliefs that are shared by the members of the firm.

(xv) Blue Ocean Strategy is concerned with:

- moving into new market with new products.
- creating a new market places where there is no competition.
- developments of products and markets in order to ensure survival.
- making the product unique in terms of attributes.

Answer:

(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)
d	a	c	d	b	c	d	a	c	d	a	a	a	d	b

Working notes:

(iii) (c) $\rightarrow \frac{\lambda}{\mu - \lambda} = \frac{25}{30 - 25} = 5$

(iv) (c) \rightarrow Minimum inventory holding cost = Average inventory \times Annual carrying cost of one unit of inventory = $(4000 \div 2) \times 0.20 \times 12 = 4800$

SECTION – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks.)

2. (a) Explain some recent trends in production and operation management.

(b) Summarize the factors which are affecting to design a Product in Modern Production system.

[7 + 7 = 14]

Answer:

(a) Recent trends in production and operations management relate to global competition and the impact it has on manufacturing firms. Some of the recent trends are:

- Global Market Place: Globalisation of business has compelled many manufacturing firms to have operations in many countries where they have certain economic advantage. This has resulted in a steep increase in the level of competition among manufacturing firms throughout the world.
- Production/Operations Strategy: More and more firms are recognising the importance of production/ operations strategy for the overall success of their business and the necessity for relating it to their overall business strategy.