SHIVAJI UNIVERSITY, KOLHAPUR - 416004,
MAHARASHTRA
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शिवाजी विद्यापीठ, कोल्हापूर -४१६००४,महाराष्ट्र
दूरध्वनी-ईपीएबीएक्स -२६०९०००, अभ्याससमंडळे विभाग दुरध्वनी ०२३१—२६०९०९४

Estd. 1962
"A++" Accredited by NAAC (2021)
With CGPA 3.52

संदर्भ क्र. : शिवाजी वि./अमं /148 दिनांक:- २८/ ०२/ २०२४

प्रति,

मा. संचालक,
दूरशिक्षण व ऑनलाईन शिक्षण केंद्र,
शिवाजी विद्यापीठ, कोल्हापूर

मा.प्राचार्य/संचालक,
सर्व संलग्नित महाविद्यालये/मान्यताप्राप्त संस्था,
शिवाजी विद्यापीठ, कोल्हापूर

विषय :—दूरशिक्षण व ऑनलाईन शिक्षण केंद्राकडें ऑनलाईन मोडव्दारे सुरू असलेल्या एम.बी.ए.(ऑनलाईन) या पाठयक्रमाच्या अभ्यासक्रमातील नियमावली सुधारणेबाबत

संदर्भ :— SU/BOS/Com & Mamt./0067 Date 04/04/2022 रोजीचे पत्र

महोदय/महोदया,

उपरोक्त विषय संदर्भानुसार आपणास कळविण्यात येते की, विद्यापीठ अधिकार मंडळाच्या निर्णयानुसार शैक्षणिक वर्ष 2021—22 पासून दूरशिक्षण केंद्राअंतर्गत ऑनलाईन एम.बी.ए. हा अभ्यासक्रम ऑनलाईन मोडव्दारे सुरू करणेत आला. तसेच अधिकार मंडळाच्या निर्णयानुसार SU/BOS/Com & Mamt./0067 Date 04/04/2022 रोजीच्या पत्रानुसार सदरचा अभ्यासक्रम लागू करण्यात आला आहे.

दूरशिक्षण व ऑनलाईन शिक्षण केंद्राअंतर्गत ऑनलाईन एम.बी.ए. अभ्यासक्रमाकरीता विद्यार्थ्यांची प्रवेश परीक्षा, यु.जी.सी. अथवा ए.आय.सी.टी.ई मार्फत प्रवेश परीक्षेस अनुसरून 4 सप्टेंबर, 2020 चे राजपत्र तसेच शैक्षणिक वर्ष, 2023—24 करिता असणा—या प्रवेशाबाबतच्या मार्गदर्शक सूचना, प्रश्नपत्रिका स्वरूप, प्रवेशाची पात्रता इत्यादी बाबींचा विचार करून विद्यापीठ अधिकार मंडळाने घेतलेल्या निर्णयानुसार एम.बी.ए. ऑनलाईन अभ्यासक्रम व त्याच्या नियमावलीत दुरूस्ती करण्यात आली आहे. (सोबत :सुधारित अभ्यासक्रम व नियमावली जोडली आहे.)

उपरोक्त बाब सर्व संबंधित शिक्षक व विद्यार्थी यांच्या निदर्शनास आणावे. तसेच सुधारित अभ्यासक्रम व नियमावली विद्यापीठ संकेतस्थळावर www.unishivaji.ac.in (Online Syllabus) ठेवण्यात आली आहे.

कळावे,

आपला विश्वासू

(डॉ. एस. एम. कुबल)
उपकुलसचिव

सोबत : वरील प्रमाणे

प्रत :

1. मा. अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, शिवाजी विद्यापीठ, कोल्हापूर
2. मा. संचालक, परीक्षा व मूल्यमापन मंडळ
3. परीक्षक नियुक्ती अ व ब विभाग
4. इतर परीक्षा 1 विभाग
5. आय.टी. सेल

माहितीसाठी व पुढील योग्य त्या कार्यवाहीसाठी

Estd:1962
NAAC "A+ +" Grade with CGPA 3.52

SHIVAJI UNIVERSITY, KOLHAPUR
CENTRE FOR DISTANCE AND ONLINE EDUCATION (CDOE)

Syllabus For

Master of Business Administration (MBA)

Through Online Mode

Part – I (Semester- I & II)

Under the Faculty of Commerce and Management

(To be implemented from 2021-22)

SHIVAJI UNIVERSITY, KOLHAPUR
CENTRE FOR DISTANCE AND ONLINEEDUCATION (CDOE)
MASTER OF BUSINESS ADMINISTRATION (MBA) PROGRAMME
Through Online Mode
(AICTE Approved)
(Introduced from the Academic Year 2021-2022 onwards)

Shivaji University, Kolhapur is one of the oldest, premier, NAAC 'A++' Reaccredited, State University. Centre for Distance and Online Education is offering AICTE Approved Master of Business Administration (MBA) programme through Online Mode from the academic year 2021-2022 under the Faculty of Commerce and Management. It has one thousand intake capacities and the programme is designed by considering the achievements of the following aims:

1. Aims of the Programme:

1. To strengthen conceptual base of executives.
2. To help them improve decision making ability, creative and logical thinking.
3. To improve analytical ability, problem solving skills and judgmental ability.

2. Duration of the Programme:

- The duration of the programme is two years divided into four semesters.
- There will be semester end examination in the winter and summer session for all the semesters, besides that in each semester, a candidate has to complete continuous internal evaluation as prescribed by the Centre for Distance and Online Education.

3. Eligibility Criteria for Admission:

A Learner residing within or outside India may enroll for M.B.A. through Online Mode programme by fulfilling following norms:

- Graduate of minimum 03 years duration from any faculty from any recognized University with minimum 50% marks for General Category and 45% for reserved categories. (for reserve category, candidate has to produce relevant documents that are applicable to concern Reservation Policy from time to time.)

- If Candidate obtained Graduation from any Foreign Institute, then Learner has to produce 'Equivalence Certificate issued by the Association of Indian Universities' for admissions.

4. Entrance Test:

- To get admission to Online MBA Programme; **there will not be any Entrance Exam**. Learners may directly apply for Admission whenever notified by Shivaji University, Kolhapur.

5. Fee Structure

- **Fee Structure for MBA through Online Mode Programme**

Learners have to pay the prescribed fees through Internet Banking, Credit Card/ Debit Card (RuPay/Visa/MasterCard/Maestro), Internet Banking, IMPS, Cash Cards/ Mobile Wallets (additional service charges, as per rules, shall be applicable in addition to the application form processing fees). This fee is non- refundable and non-transferable under any circumstances.

For Learners from India	**₹ 1,20,000 /- (Excluding Examination and Other Fees)** **(For 4 Semesters)**
For Foreign Learners	**US $ 1760 (Excluding Examination and Other Fees)** **(For 4 Semesters)**

6. Documents Required for the Admission

❖ **For Indian Learners**

- Colour Scan Copy of SSC, HSC and Graduation mark sheets.
- Caste Certificate (If applicable).
- Recent passport size photograph Scan copy and Scan signature of the student.
- Any Govt. ID Proof such as Aadhaar Card, PAN Card, Passport etc.

❖ **For Foreign Learners**

If Learner obtained Graduation from any Foreign Institute, then he / she has to produce 'Equivalence Certificate issued by the Association of Indian Universities' for admissions.

7. Pattern of Examination:

Examination of each course will be divided as 20 Marks for Internal Evaluation and 80 Marks for Semester-End-Examination.

1. **Internal Evaluation (of 20 Marks) for each Course will consists of;**

   a. **For Semester-I and II:**

   Home Assignments to be hand written by Learner and to be uploaded on LMS.

b. For Semester- III and IV:

Uploading the Recorded Video on Case Presentation on LMS.

2. Semester End Evaluation (of 80 Marks) for each Course will consists of;

Nature of Question paper and Scheme of marking for all courses are as follows:

1	Nature of Examination	Proctored Online Examination through LMS
2	Nature of Questions	Multiple Choice Questions (MCQs)
3	Number of Questions	80 Multiple Choice Questions (MCQs)
4	Marks for Each Question	01 Mark
5	Marking Scheme	01 Mark for Every Correct Answer. No Negative Marking
6	Specific Nature of Questions	Multiple Choice Questions (MCQs) be asked in the form of- • Case Study followed by MCQs (Long Case followed by 05 MCQs) • Caselet followed by 01 MCQ
7	Difficulty Level	Question Paper must have – • 30 MCQs- Easy Level-Covering Basic Conceptions • 30 MCQs- Moderate Level- Covering Quick Decision-Making abilities. • 20 MCQs- Hard Level- Covering Analytical Thinking and its Applications
8	Time Duration	03 Hours (i.e., 180 Minutes)

8. Standard of Passing

1. Standard of Passing:

1. There will be separate head of passing for internal evaluation and Semester-End-Examination. Such internal evaluation is of the 20 Marks and learner required to earn at least 10 Marks for passing of one course and there are 80 Marks for Semester-End-Examination and learner has to earn at least 40 Marks for one course, that means 50% Marks learner has to earn for passing under each head.
2. No Class / Grade will be awarded to any part of examination. It will be awarded in aggregate; after successfully completion of all the courses.

2. Passing Rules:

1. For admission to MBA Part-II, a Learner has to clear at least 11 courses of Sem-I and II all together.
2. If a Learner fails in any no. of Courses of Sem.-I; shall be allowed to proceed to Sem.-II. Similarly, if a Learner fails in any no. of Courses of Sem.-III; shall be allowed to proceed to Sem.-IV.
3. Learners have to complete MBA Programme within 2+4 years from the date of admission. If Learners fail to complete the programme within the stipulated period, then their registration to the said programme stand cancel.

9. Program Outcomes:

1. Recognize the functioning of business opportunities involvement of business enterprises and exploring the entrepreneurial opportunities.
2. Develop incubation center and entrepreneurship development center for students who intent to take up start up or grow existing business.
3. Develop skills on analyzing the business data application of relevant analysis and problem solving.
4. Demonstrate a global outlook with the ability to identify aspects of the global business and cross-cultural understanding.
5. Identify the contemporary social problems, exploring the opportunities for socialentrepreneurship, designing business solutions and demonstrate ethical standards in organizational decision making.
6. Develop effective and oral communication especially in business applications, with the use of appropriate technology.
7. Collaborate and lead teams across organizational boundaries and demonstrate leadership qualities, maximize the uses of diverse skill of team members in the related context.

10. Syllabus of Master of Business Administration through Online Mode:

The entire MBA through Online Mode programme is of 2900 Marks.

Each paper is of 100 marks. Project Viva Voce is of 200 Marks.

MBA Part-I Semester-I

Paper No.	Course Code	Course Titles	Course credits	Internal Evaluation	University Evaluation	Total Marks
1		Management Philosophy	4	20	80	100
2		Management Accounting	4	20	80	100
3		Business Statistics andAnalytics for Decision Making	4	20	80	100
4		Managerial Economics	4	20	80	100
5		Computer applications for business	4	20	80	100
6		Managerial Skills for Effectiveness	4	20	80	100
7		Organizational Behavior	4	20	80	100
		Total	28	140	560	700

MBA Part-I Semester-II

Paper No.	Course Code	Course Titles	Course credits	Internal Evaluation	University Evaluation	Total Marks
8		Marketing Management	4	20	80	100
9		Financial Management	4	20	80	100
10		Human Resource Management	4	20	80	100
11		Operations Management	4	20	80	100
12		Legal and Business Environment	4	20	80	100
13		Research Methodology	4	20	80	100
14		Strategic Management	4	20	80	100
		Total	28	140	560	700

MBA Part-II Semester-III

Paper No.	Course Code	Course Titles	Course credits	Internal Evaluation	University Evaluation	Total Marks
15		Chh. Shivaji Maharaj -The Management Guru	4	20	80	100
16		Project Report and Viva	8	100	100	200
17		Elective I– Paper I	4	20	80	100
28		Elective I– Paper II	4	20	80	100
19		Elective I– Paper III	4	20	80	100
20		Elective II- Paper I	4	20	80	100
21		Elective II- Paper II	4	20	80	100
22		Elective II- Paper II	4	20	80	100
		Total	**36**	**240**	**660**	**900**

MBA Part-II Semester-IV

Paper No.	Course Code	Course Titles	Course credits	Internal Evaluation	University Evaluation	Total Marks
23		Elective I- Paper IV	4	20	80	100
24		Elective I- Paper V	4	20	80	100
25		Elective I- Paper VI	4	20	80	100
26		Elective II- Paper IV	4	20	80	100
27		Elective II- Paper V	4	20	80	100
28		Elective II- Paper VI	4	20	80	100
		Total	**24**	**120**	**480**	**600**

***27courses of 100 Marks each and 1 course of Project Viva Voce of 200 Marks -Grand Total 2900 Marks. Each course is of 4credits. Total programme is of 116 credits.**

***** Candidates are required to select any Two Electives (Elective I & Elective II) from the lists given below for the two courses separately.

Each elective has 6 papers which are included in–

(i) Semester- III

- Elective-I (Paper I, II and III)
- Elective-II (Paper I, II and III)

(ii) Semester- IV

- Elective-I (Paper IV, V and VI)
- Elective II (Paper IV, V and VI)

Electives:

1. Marketing Management
2. Financial Management
3. Human Resource Management
4. Production & Operations Management
5. International Business
6. Entrepreneurship
7. Business Analytics
8. Hospitality Management
9. Health Care Management

Project Work:

The students have to undergo practical training of 50 days in any manufacturing or service organization and they have to submit their project report up to the fourth semester. The project work must have a Certification from the organization.

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SHIVAJI UNIVERSITY, KOLHAPUR

CENTRE FOR DISTANCE AND ONLINE EDUCATION

Guidelines for Question Paper Setters

MBA through Online Mode

Proctored Online Examination

Introduction

The MBA Programme through Online Mode is designed to provide learners with flexible, technology-enabled education while maintaining academic rigor and integrity. In order to evaluate learners effectively, examinations are conducted in a **proctored online environment** through the Learning Management System (LMS). The question papers must reflect the programme's objectives by assessing not only conceptual understanding but also the analytical, decision-making, and problem-solving abilities of students.

These guidelines are prepared to assist paper setters in designing question papers that are balanced in terms of **difficulty level, coverage of syllabus, and question formats**. By following these instructions, paper setters will ensure uniformity, fairness, and validity in the examination system, thereby upholding the quality standards of the MBA programme.

1. Mode of Examination

- The examination will be conducted through **Proctored Online Mode** using the University LMS.
- Students will attempt the paper remotely under AI-enabled and human proctoring to ensure academic integrity.

2. Structure of Question Paper

- **Total Questions:** 80 MCQs
- **Total Marks:** 80 Marks (1 Mark for each question)
- **Duration:** 3 Hours (180 Minutes)

3. Question Format

Paper setters must design questions in the following formats:

1. **Case Study-based MCQs** – Each long case study will be followed by **5 MCQs** testing comprehension, application, and decision-making.
2. **Caselet-based MCQs** – Each short caselet followed by **1 MCQ** testing quick analysis.

4. Distribution of Difficulty Level

Paper setters should ensure balanced difficulty levels as follows:

Difficulty Level	Number of Questions	Nature of Questions	Expected Competence
Easy	30	Basic conceptual understanding	Recall & recognition of core concepts
Moderate	30	Application & decision-making	Ability to apply concepts and make quick decisions
Hard	20	Analytical & problem-solving	Higher-order thinking and critical reasoning

5. Blueprint for Paper Setting

- **Case Studies:** At least 2–3 long case studies (each with 5 MCQs).
- **Casellets:** Minimum 5 casellets (each with 1 MCQ).
- **Coverage:** All units/modules of the course should be adequately represented.

6. Nature of Questions

- **Easy Level:**
  - Straightforward recall of definitions, theories, frameworks, and basic facts.
- **Moderate Level:**
  - Involve small scenarios requiring quick decision-making.
- **Hard Level:**
  - Require analytical thinking, problem-solving, and application in complex situations.

7. General Instructions for Paper Setters

1. Ensure **clarity, precision, and unambiguity** in question framing.
2. Avoid repetition of questions across different sets.
3. Questions should be **syllabus-aligned** and mapped to **Course Outcomes (COs)**.
4. Options should be **logical** and **mutually exclusive**.
5. Case studies and casellets must be realistic, management-oriented, and industry-relevant.
6. Provide an **answer key with justification/explanation** for each MCQ.
7. Ensure **confidentiality and integrity** of the question paper setting process.

Mahajan

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Shivaji University, Kolhapur
Centre for Distance and Online Education

ONLINE MBA July Batch 2024

Submission of Internal Evaluation Assignment for Online MBA Semester-II

All students of Online MBA Semester-II are hereby informed that the Internal Evaluation for each subject carries 20 marks, and a minimum of 10 marks is required to pass each course.

In this regard, students are required to complete and submit their assignments on the LMS platform on or before **25.09.2025.**

Please follow the instructions below for assignment submission:

1. There are three questions for each subject. Students must attempt any two.
2. Assignments must be handwritten using a blue pen by the student.
3. Make sure your answers **completely cover all the required content** asked in the questions.
4. The handwritten assignments should be scanned and uploaded on the LMS portal.
5. Since there are 7 subjects in Semester-II, students must upload 7 separate PDF files, one for each subject.
6. Be careful while uploading the PDF files. Double-check to ensure the correct and properly scanned file is selected before uploading.
7. A separate guidance session will be conducted soon to explain the procedure for uploading assignments on the LMS platform.

Note: No extension will be granted. Submissions after the last date will not be accepted under any circumstances.

Assignment Questions – Online MBA Part-I/ Semester – II

General Instructions for all subjects.
1. All questions carry 10 marks each.
2. Attempt any two questions for each paper.
3. Maximum total marks are 20 for each paper.

PAPER VIII - Marketing Management

1. Define Consumer Buying Behaviour. Also describe buying decision process along with relevant examples in each step.
2. Define Product and Product Life Cycle. Describe strategies adopted at each level of PLC for a FMCG product of your choice.
3. What is the concept of Neuro marketing. Also explain Green marketing in detail.

PAPER IX - Financial Management

1. Explain in detail Role and Functions of Financial Management.
2. What are the Limitations of Budgetary Control System?
3. Write Short Notes on (Any Two)
    a. NPV
    b. Types of Reports
    c. Financial Leverage

PAPER X - Human Resource Management

1. Define Human Resource Planning (HRP). Explain its objectives, importance, and process. Discuss the barriers to effective HRP.
2. Explain the concept of Maintenance of Manpower with reference to Employee Health and Safety, Occupational Hazards, and Social Security.
3. Write Short Notes (Any Two)
    A. Strategic Human Resource Management
    B. Incentives
    C. Virtual Organization

PAPER XI - Operations Management

1. Explain the differences between intermittent and continuous production systems with suitable examples.
2. What is plant layout? Explain its importance and describe the different types of plant layouts with suitable examples.
3. Write Short Notes (Any Two)
    A. E- Manufacturing
    B. Total Quality Management
    C. ABC Analysis

PAPER XII - Legal and Business Environment

1. Explain the Importance of legal knowledge to managerial personnel and Entrepreneurs.
2. Give a detail note on 'Dissolution of partnership and winding up of company'.
3. Write short notes on any two:
    a. Concept of indemnity and guarantee.
    b. Macro and Micro Indicators of Business environment.
    c. Exchange rate movements.

PAPER XIII - Research Methodology

1. State the meaning of plagiarism. Explain the ways of checking plagiarism.
2. Calculate the mean, mode and median and Standard Deviation of the following data and interpret the results?

River Flow (Thousand Cubic Meter per Minute)	No. of Days
1001 to 1050	7
1051 to 1100	21
1101 to 1150	32
1151 to 1200	49
1201 to 1250	58
1251 to 1300	41
1301 to 1350	27
1351 to 1400	11

3. Write short notes on any two:
    a. Features of good Research Design.
    b. Collection of secondary data.
    c. Procedure for hypothesis testing.

PAPER XIV - Strategic Management

Q.1. Define Strategic Management. Explain in detail the strategic management process, and discuss how strategic intent (vision, mission, goals, and objectives) provides direction for an organization's strategic decisions.

Q.2. What are the different levels at which strategy operates in an organization? Elaborate on the role of environmental scanning, organizational appraisal**,** and the tools like ETOP and Strategic Advantage Profile in the strategic planning process.

Q.3. Write short notes on any **two** of the following:

a) Generic Business Strategies
b) Behavioral Implementation
c) Strategic Evaluation and Control

MBA Through Online Mode

MBA -I, SEM-II

Sample Question Paper

PAPER-XI OPERATIONS MANAGEMENT

(Q. 1 to 5) Case study - ABC Manufacturing Ltd. is a company specializing in consumer electronics. Over the years, the company has faced several challenges in streamlining its production process. Initially, the company relied on traditional manufacturing methods, but as competition increased, they realized the need for more efficient production management.

To improve efficiency, the company adopted modern operations management techniques, including automation, inventory management, and quality control. They also collaborated with other departments such as marketing, finance, and purchasing to ensure a smooth workflow. Additionally, ABC Manufacturing Ltd. integrated advanced technologies like AI-driven forecasting and computer-based operations research to optimize production schedules and minimize waste.

1. What is the primary goal of production management in a manufacturing company?
   a) Increasing the number of employees
   b) Enhancing customer service
   c) Producing goods efficiently and cost-effectively
   d) Expanding into international markets
2. Which of the following functional areas does production management closely interact with?
   a) Only Marketing
   b) Only Finance
   c) Finance, Marketing, Purchasing, and R&D
   d) None of the above
3. How has ABC Manufacturing Ltd. improved its production process?
   a) By reducing the workforce significantly
   b) By implementing automation and quality control measures
   c) By eliminating all manual processes
   d) By increasing production without considering efficiency

4. What is the role of Operations Research in production management?
   a) It helps in making strategic decisions using data and mathematical models
   b) It focuses only on employee motivation
   c) It replaces the need for marketing strategies
   d) It is unrelated to production management
5. How can advanced technology benefit production management?
   a) By increasing inefficiencies in production
   b) By optimizing production schedules and reducing waste
   c) By making manual processes more complicated
   d) By removing the need for skilled labor.

(Q. 6 to 10) Case study - Tesla, a global leader in electric vehicles, operates one of the most advanced manufacturing plants in the world—the Gigafactory. As demand for Tesla vehicles surged, the company faced significant challenges in its assembly line balancing process. Production bottlenecks led to inefficiencies, delays, and increased costs.

To address these challenges, Tesla implemented automation, robotics, and AI-driven assembly line balancing techniques. By redistributing tasks among robotic and human workers, they optimized the production flow, reducing cycle times and minimizing idle time at various stations. The company also integrated real-time data analytics to continuously monitor production speed and workforce efficiency.

As a result, Tesla was able to enhance its production capacity, achieving a record-breaking vehicle output while maintaining high quality standards. However, with increasing automation, Tesla had to retrain its workforce to work alongside AI-driven systems, creating both opportunities and challenges in the production process.

6. What was the main challenge Tesla faced in its assembly line?
   a) Lack of demand for its vehicles
   b) Bottlenecks and inefficiencies in production flow
   c) Overproduction of electric vehicles
   d) Shortage of raw materials
7. How did Tesla improve its assembly line balancing?
   a) By increasing the number of workers without automation
   b) By shutting down production to reorganize workflows

c) By implementing robotics, automation, and AI-driven balancing techniques

d) By reducing production speed to match worker efficiency

8. What is the primary objective of assembly line balancing?

   a) To increase worker fatigue

   b) To maximize idle time at workstations

   c) To distribute tasks evenly and optimize production flow

   d) To reduce the number of workers required

9. Which technological advancement played a key role in Tesla's assembly line improvement?

   a) Blockchain technology

   b) AI-driven real-time data analytics

   c) Manual record-keeping

   d) Traditional craftsmanship techniques

10. What challenge arose from Tesla's increased automation in the assembly line?

    a) Reduced vehicle demand

    b) Difficulty in maintaining product quality

    c) The need to retrain workers to adapt to AI-driven systems

    d) Increased manual labor requirements

(Q. 11 to 15) Case study - Omega Industries, a global leader in precision engineering, faced intense competition from emerging players in the market. Traditional manufacturing methods were no longer sufficient to keep up with fluctuating demand, mass customization, and the need for real-time process monitoring. The company decided to shift to E-Manufacturing—a digitally integrated production system leveraging IoT, AI, cloud computing, and cyber-physical systems.

To begin, Omega implemented smart sensors across its production lines, allowing real-time tracking of machine performance and predictive maintenance. Over time, AI-powered analytics helped reduce material waste and optimize energy consumption. Additionally, by integrating cloud-based digital twins, Omega could simulate different production scenarios before implementation, reducing errors and improving flexibility.

However, the transition was not without challenges. Skilled workers had to be retrained to operate in a data-driven environment, and the initial investment in digital infrastructure was

substantial. Moreover, the choice of manufacturing technology depended on various factors, including scalability, customization needs, and data security.

Despite these challenges, Omega Industries successfully increased efficiency by 30%, reduced downtime by 40%, and improved overall product quality. However, the question remains—will full automation lead to a reduction in workforce requirements, or will it create new job roles requiring specialized skills?

11. What was one of the key drivers behind Omega Industries' transition to E-Manufacturing?
    a) To replace all human workers with AI
    b) To address inefficiencies in traditional manufacturing and increase flexibility
    c) To focus only on increasing production speed without cost considerations
    d) To return to conventional manual production methods
12. Which technological advancement helped Omega Industries reduce material waste and optimize energy consumption?
    a) Augmented reality-based training modules
    b) AI-powered analytics and predictive maintenance
    c) Blockchain-based payment systems
    d) Traditional quality inspection techniques
13. What challenge did Omega Industries face in adopting E-Manufacturing?
    a) Difficulty in acquiring raw materials
    b) Resistance to automation from customers
    c) High initial investment and workforce retraining requirements
    d) Increased time required for product assembly
14. How did cloud-based digital twins contribute to Omega's E-Manufacturing success?
    a) By enabling real-time production simulations and reducing implementation errors
    b) By eliminating the need for human decision-making in production
    c) By increasing the complexity of production management
    d) By reducing the company's need for cybersecurity
15. What long-term question remains regarding the future of Omega Industries' E-Manufacturing approach?
    a) Will full automation reduce human workforce requirements or create new specialized roles?

b) Will the company transition back to traditional manufacturing?
c) Will AI completely eliminate the need for production planning?
d) Will Omega abandon smart manufacturing due to excessive costs?

16. Artisan Creations is a company that specializes in handcrafted luxury furniture. Each piece is made according to customer specifications, requiring skilled craftsmanship and unique designs. Due to the high level of customization, the company produces furniture one at a time, ensuring quality and uniqueness.

    Which type of production system does Artisan Creations follow?
    a) Mass production
    b) Continuous production
    c) Job production
    d) Batch production

17. Speed Motors operates a large-scale factory where thousands of cars are assembled daily. The production process is highly automated, with vehicles moving through a series of workstations on a conveyor system. Each station completes a specific task before passing the vehicle to the next stage, ensuring a continuous flow of production.

    What type of production system is used in Speed Motors' factory?
    a) Job production
    b) Batch production
    c) Mass production
    d) Project production

18. Elite Designs is a luxury fashion boutique that produces exclusive designer clothing. Since trends change frequently and customers demand unique styles, the company manufactures clothes in small batches. Production is not continuous; instead, it happens in cycles based on seasonal demand and custom orders.
    Which type of production system does Elite Designs follow?
    a) Continuous production
    b) Intermittent production
    c) Mass production
    d) Assembly line production

19. Pure Refresh Beverages operates a factory that produces bottled soft drinks. The production lines run 24/7, with machines continuously mixing ingredients, filling bottles, and sealing them at high speed. Since demand is high and the process requires minimal variation, the company ensures an uninterrupted flow of production.

    Which type of production system does Pure Refresh Beverages follow?
    a) Job production
    b) Batch production
    c) Intermittent production
    d) Continuous production
20. NovaTech Electronics is a company that manufactures high-end consumer gadgets. To stay competitive, the company ensures seamless coordination between different functional areas. The Marketing team analyzes customer trends to suggest new features, while R&D develops innovative designs. The Finance department manages budgeting for raw materials, and the Purchasing team ensures timely procurement. Additionally, the Maintenance team keeps production machinery in optimal condition to prevent delays. Despite this collaboration, occasional misalignment between departments leads to bottlenecks in production.

    What is the primary benefit of integrating different functional areas in NovaTech's production system?
    a) It eliminates the need for marketing research
    b) It ensures a smooth production flow and reduces inefficiencies
    c) It allows each department to work independently without coordination
    d) It increases production costs without improving efficiency

(Q.21 to 25) Case study - Alpha Furniture Ltd. is a mid-sized company specializing in wooden furniture. Due to increasing demand, the company has faced challenges in managing its production efficiently. To ensure on-time delivery, cost control, and optimal resource utilization, the company implemented a Production Planning and Control (PPC) system.

The PPC team is responsible for scheduling production, managing raw materials, and ensuring smooth workflow across departments. They use Aggregate Planning to balance demand and

capacity, deciding whether to hire additional workers or increase inventory to meet seasonal demand fluctuations.

With an effective PPC system, Alpha Furniture Ltd. has reduced lead times, minimized waste, and improved customer satisfaction. However, unforeseen supply chain disruptions sometimes create challenges, requiring flexible planning strategies.

21. What is the primary objective of Production Planning and Control (PPC) at Alpha Furniture Ltd.?
    a) To increase production costs
    b) To ensure timely production, cost efficiency, and resource optimization
    c) To focus only on marketing and sales
    d) To eliminate the need for raw materials
22. Which of the following is a key function of PPC?
    a) Advertising and promotions
    b) Production scheduling and inventory management
    c) Customer service and sales negotiations
    d) Employee payroll processing
23. What is Aggregate Planning used for in PPC?
    a) To create detailed engineering designs
    b) To balance demand and capacity over a given period
    c) To eliminate seasonal fluctuations in customer demand
    d) To track employee attendance
24. How did PPC improve operations at Alpha Furniture Ltd.?
    a) By increasing production delays
    b) By reducing lead times, minimizing waste, and improving efficiency
    c) By making production unpredictable
    d) By focusing only on short-term planning
25. What challenge does Alpha Furniture Ltd. still face in its PPC process?
    a) Overproduction of goods with no market demand
    b) Unforeseen supply chain disruptions
    c) Lack of customer interest in their products
    d) No need for inventory management

(Q.26 to 30) Titan Auto Parts is a company that manufactures and supplies engine components to automobile manufacturers. As demand increased, the company faced challenges in scheduling production efficiently, leading to delays, excess inventory, and machine downtime. To tackle these issues, Titan implemented a Master Production Schedule (MPS) to plan production based on demand forecasts. However, due to limited machine availability, Facility Loading became a challenge, requiring better resource allocation.

Additionally, the company faced sequencing problems, where urgent orders sometimes had to wait due to pre-scheduled lower-priority tasks. To solve this, Titan introduced priority planning techniques, ensuring that high-demand components were scheduled first.

To improve Production Control, Titan adopted Control Techniques such as real-time monitoring and feedback systems. These changes reduced production bottlenecks, improved efficiency, and optimized scheduling. However, occasional machine breakdowns and fluctuating demand still pose challenges.

26. What was the primary reason Titan Auto Parts faced production scheduling issues?
    a) Lack of demand for products
    b) Inefficient scheduling leading to delays and excess inventory
    c) Overuse of manual labor
    d) Elimination of production control techniques
27. How did the Master Production Schedule (MPS) help Titan Auto Parts?
    a) It helped forecast demand and plan production accordingly
    b) It eliminated the need for facility loading
    c) It removed the need for scheduling altogether
    d) It only focused on reducing costs without improving efficiency
28. Which production scheduling issue required Titan to improve its priority planning?
    a) Frequent power outages in the factory
    b) Inefficiencies in inventory management
    c) Sequencing problems where urgent orders were delayed
    d) Lack of interest in product development

29. What role did Production Control techniques play in Titan Auto Parts' improvement?
    a) They helped in real-time monitoring and reducing bottlenecks
    b) They increased production delays
    c) They focused only on marketing strategies
    d) They removed the need for scheduling and planning
30. What challenge still remains in Titan Auto Parts' scheduling process?
    a) No competition in the market
    b) Occasional machine breakdowns and fluctuating demand
    c) Excess resources without utilization problems
    d) Elimination of production facilities

(Q.31 to 35) Case study - Titan Motors, a growing automobile manufacturer, needed to set up a new plant to meet increasing production demand. The management had to carefully choose the best location while considering factors like logistics, raw materials, labor availability, and future expansion possibilities. After shortlisting potential locations, they realized that each site had advantages and drawbacks, such as high operational costs in developed areas and transportation issues in remote locations.

Once the location was finalized, Titan Motors focused on plant layout design. They needed a layout that would optimize workflow, reduce material handling time, and improve production efficiency. The management debated between different layouts before selecting the one that best suited their high-volume production needs. However, after implementation, they faced unexpected challenges, requiring adjustments to maintain efficiency.

31. Which key factor should Titan Motors consider while selecting a plant location?
    a) The number of competitors in the area
    b) Availability of skilled labor and logistics infrastructure
    c) The popularity of the city among tourists
    d) The number of office spaces in the region
32. What is one major challenge companies often face when selecting a plant location?
    a) Managing employee social events
    b) Balancing cost, infrastructure, and accessibility
    c) Finding a location near company headquarters
    d) Deciding the brand color of the factory building

33. Which type of plant layout is best suited for high-volume, standardized production?
    a) Process Layout
    b) Fixed Position Layout
    c) Product Layout
    d) Cellular Layout
34. Why is plant layout planning important?
    a) It increases office space for executives
    b) It ensures better workflow and operational efficiency
    c) It helps in employee entertainment programs
    d) It is only required for small-scale businesses
35. What is a common issue that can arise after implementing a plant layout?
    a) No need for inventory management
    b) Unexpected workflow inefficiencies and bottlenecks
    c) Complete elimination of logistics costs
    d) Reduced need for trained labor
36. SmartTech Electronics, a mid-sized company, produces smart home devices. To meet growing demand, they implemented Production Planning and Control (PPC) to schedule production, manage inventory, and reduce waste. However, during peak seasons, they often faced delays due to unexpected machine breakdowns and raw material shortages.
    What is the main purpose of PPC at SmartTech Electronics?
    a) To improve marketing strategies
    b) To ensure smooth production flow and reduce inefficiencies
    c) To increase production costs
    d) To focus only on employee benefits
37. Alpha Furniture manufactures custom wooden furniture. Due to inconsistent order volumes, the company struggled with scheduling, sometimes overproducing and other times failing to meet deadlines. To solve this, they implemented a priority-based scheduling system to balance production according to demand. While this improved efficiency, unexpected rush orders still caused occasional production bottlenecks.
    What method did Alpha Furniture use to improve production scheduling?
    a) Ignoring production issues
    b) Implementing a priority-based scheduling system
    c) Reducing production to cut costs
    d) Relying only on manual tracking

38. TechGear Manufacturing, a company producing electronic gadgets, needed to select a new plant location. The management considered factors such as proximity to suppliers, labor availability, transportation facilities, and government incentives. After careful evaluation, they chose a location near a major industrial hub to ensure easy access to raw materials and skilled workers.
    What was a key factor in TechGear Manufacturing's plant location decision?
    a) The availability of skilled labor and transportation facilities
    b) The number of shopping malls nearby
    c) The popularity of the city among tourists
    d) The personal preference of the CEO
39. Stellar Automobiles, an emerging car manufacturer, planned a factory layout to optimize production efficiency. They considered various types of layouts, including process layout, product layout, and fixed-position layout. Since they focused on mass production with an assembly line, they implemented a product layout to ensure smooth workflow and minimal material handling.
    Which type of plant layout did Stellar Automobiles choose for mass production?
    a) Process Layout
    b) Product Layout
    c) Fixed-Position Layout
    d) Cellular Layout
40. Green Foods, a packaged food company, designed its new factory layout focusing on workflow efficiency, safety, and space utilization. They ensured that the storage area was close to production units, reducing material handling time. Additionally, proper ventilation and safety measures were included to create a comfortable work environment.
    What is one key criterion for a good plant layout in Green Foods' factory?
    a) Efficient workflow and space utilization
    b) Increasing office space for executives
    c) Placing machines randomly without a plan
    d) Expanding the factory without considering worker movement

(Q.41 to 45) Case study - XYZ Manufacturing produces automobile components. Recently, the company faced an increase in customer complaints regarding defective parts. To address this, the company implemented a Total Quality Management (TQM) approach. They

introduced quality checks at each production stage, provided employee training, and encouraged a culture of continuous improvement.

After six months, the defect rate decreased by 40%, and customer satisfaction improved. However, some employees resisted the new process, considering it time-consuming. The management conducted additional training sessions to help them understand the benefits of quality control.

41. What was the main issue faced by XYZ Manufacturing?
    a) Low employee productivity
    b) High customer complaints due to defective parts
    c) High production cost
    d) Delayed delivery
42. Which quality management approach did the company adopt?
    a) Six Sigma
    b) Just-In-Time (JIT)
    c) Total Quality Management (TQM)
    d) Kaizen
43. What was the result of implementing quality checks and training?
    a) Defect rate increased
    b) No change in quality
    c) Defect rate decreased by 40%
    d) Customer complaints increased
44. Why did some employees resist the new quality process?
    a) They thought it was expensive
    b) They found it time-consuming
    c) They lacked technical skills
    d) They preferred outsourcing
45. How did the management handle employee resistance?
    a) Fired the employees
    b) Ignored their concerns
    c) Conducted additional training sessions
    d) Stopped the quality management initiative

(Q. 46 to 50) Case study - ABC Electronics is a mid-sized company that manufactures consumer electronic goods. The company has been growing rapidly, but recently, major clients started demanding proof of standardized quality processes. To stay competitive, the management decided to obtain ISO 9001 certification.

The first challenge was aligning existing processes with ISO standards. A team was formed to analyze quality control measures, document workflows, and implement corrective actions. Some employees questioned the need for so much documentation, but the management explained that it ensures consistent product quality and process improvement.

After six months of effort, ABC Electronics underwent an ISO audit. The auditor found that while most processes met standards, record-keeping needed improvement. The company quickly addressed the issue, and after a follow-up audit, it successfully achieved ISO 9001 certification. Following certification, the company saw a 20% increase in new business inquiries. However, maintaining certification required continuous monitoring and periodic audits, which some managers initially overlooked. The company later introduced internal audits to ensure compliance.

46. Why did ABC Electronics decide to obtain ISO 9001 certification?
    a) To increase production speed
    b) To meet client requirements and improve quality control
    c) To reduce labor costs
    d) To enter a new business segment
47. What was the first challenge faced during ISO certification?
    a) Lack of employee skills
    b) Aligning existing processes with ISO standards
    c) High cost of implementation
    d) Finding a certification body
48. What issue did the auditor find during the initial audit?
    a) Poor product design
    b) Inefficient supply chain
    c) Weak record-keeping
    d) Excessive production waste
49. What was the outcome of achieving ISO 9001 certification?
    a) No significant change

b) 20% increase in new business inquiries

c) Increased employee turnover

d) Reduced production capacity

50. What mistake did some managers make after certification?

a) Ignoring the importance of continuous monitoring and internal audits

b) Not hiring new employees

c) Expanding production too quickly

d) Reducing product variety

(Q. 51 to 55) Case study - Orion Motors, a leading automobile component manufacturer, faced unexpected machine failures despite following a Preventive Maintenance (PM) schedule. Their production line suffered from delays due to missing critical spare parts, even though their warehouse had an excess stock of less-used components.

To address this, the company adopted a Predictive Maintenance (PdM) system using IoT sensors and AI-based forecasting for spare parts. However, the maintenance team resisted the new system, preferring the old PM method. Additionally, historical inventory data was inaccurate, leading to incorrect demand forecasting for spare parts.

Within six months, PdM reduced breakdowns by 50%, but inventory costs remained high. The company then optimized its Material Requirement Planning (MRP) system, which finally balanced inventory levels and machine uptime. However, managers still had to ensure real-time data accuracy to maintain these improvements.

51. Why did machine failures continue despite following Preventive Maintenance (PM)?

a) Machines were outdated

b) Spare parts were not available

c) PM did not accurately predict failures

d) Maintenance staff lacked skills

52. What was a major reason for spare parts shortages despite excess inventory?

a) Slow supplier deliveries

b) Excess stock of less-used components

c) Increased production demand

d) Poor warehouse conditions

53. Why did the maintenance team resist Predictive Maintenance (PdM)?
    a) They preferred the familiar PM method
    b) PdM required expensive equipment
    c) Management did not explain PdM properly
    d) It led to an increased workload
54. What additional step helped control inventory costs?
    a) Increasing storage capacity
    b) Using bulk purchasing
    c) Optimizing the Material Requirement Planning (MRP) system
    d) Reducing maintenance frequency
55. What challenge remained even after PdM and MRP improvements?
    a) Ensuring real-time data accuracy
    b) Supplier reliability issues
    c) High maintenance staff turnover
    d) Overuse of spare parts
56. A textile factory introduced a final inspection process to check fabric quality before shipping. Despite using random sampling, some defective products still reached customers, leading to complaints. The management considered shifting to in-process inspections to catch defects earlier.
    What improvement could help reduce defective products reaching customers?
    a) Increase batch size for final inspection
    b) Shift to in-process inspections
    c) Reduce the number of inspections
    d) Focus only on customer feedback
57. A food packaging company faced inconsistent product weights due to machine calibration issues. Operators manually adjusted settings, but variations persisted. The company decided to implement Statistical Process Control (SPC) to monitor production trends and maintain consistency.
    Which method can help the company maintain consistent product quality?
    a) Rely on manual adjustments
    b) Ignore minor weight variations
    c) Implement Statistical Process Control (SPC)
    d) Increase production speed

58. A steel plant experienced unexpected breakdowns despite following a Preventive Maintenance (PM) schedule. A root cause analysis showed that certain critical components degraded faster than expected due to extreme operational conditions. The maintenance team debated whether to increase PM frequency, implement Predictive Maintenance (PdM), or stockpile extra spare parts to avoid disruptions.

    What is the most effective long-term solution to prevent unexpected failures?
    a) Increase the frequency of Preventive Maintenance (PM)
    b) Shift to Predictive Maintenance (PdM) for critical components
    c) Stockpile extra spare parts for immediate replacement
    d) Reduce machine operating hours
59. A manufacturing firm struggled with frequent stockouts of high-demand raw materials, causing production delays, while low-demand items piled up in inventory. The company used historical purchase data for restocking, but it failed to match real-time demand fluctuations. Management debated whether to adopt a Just-In-Time (JIT) approach, upgrade its ERP system, or increase safety stock levels.
    Which strategy would best optimize inventory levels without increasing storage costs?
    a) Increase safety stock levels for all materials
    b) Upgrade to an advanced ERP system with demand forecasting
    c) Reduce overall inventory to cut costs
    d) Place bulk orders to avoid shortages
60. A leading electronics manufacturer adopted Total Quality Management (TQM) to enhance product reliability and customer satisfaction. The company encouraged employee involvement, root cause analysis, and continuous process improvements. However, some senior employees resisted the new culture, believing that existing quality checks were sufficient. This led to inconsistent adoption of TQM principles across departments, affecting overall quality gains.
    What is the best approach to ensure successful implementation of TQM?
    a) Enforce strict compliance with TQM rules
    b) Focus only on final product inspections
    c) Provide continuous training and emphasize employee involvement
    d) Reduce employee participation in quality decisions

(Q. 61 to 65) Nova Manufacturing, a leading automotive parts supplier, faced increasing production costs and delays in raw material deliveries. The company's new Purchase Manager, Mr. Arjun, was responsible for optimizing procurement, reducing costs, and ensuring a smooth supply chain. Upon reviewing supplier contracts, he noticed that some vendors had long lead times and inconsistent quality standards. Additionally, poor coordination between purchase, production, and inventory teams led to either excess stock or material shortages.

To resolve these issues, Arjun:

a. Negotiated better pricing and delivery terms with key suppliers.
b. Implemented a Vendor Rating System to evaluate supplier performance.
c. Introduced a Just-In-Time (JIT) procurement model for fast-moving materials.
d. Strengthened internal coordination between departments to align purchases with real-time demand.

After six months, material shortages dropped by 40%, and procurement costs decreased by 15%. However, he still faced challenges in handling fluctuations in raw material prices and ensuring long-term supplier reliability.

61. What was the primary issue Nova Manufacturing faced before the new Purchase Manager took charge?
    a) High labor costs
    b) Delays in raw material deliveries and rising production costs
    c) Lack of skilled employees
    d) Poor product design
62. Which strategy did Arjun implement to evaluate supplier performance?
    a) Increased order quantity
    b) Vendor Rating System
    c) Random supplier selection
    d) Reduced the number of suppliers
63. How did Arjun improve material availability while reducing excess inventory?
    a) Increased safety stock levels for all materials
    b) Implemented a Just-In-Time (JIT) procurement model
    c) Outsourced the purchasing process
    d) Purchased materials in bulk

64. What was one key improvement achieved after six months of implementing changes?
    a) Material shortages dropped by 40%
    b) Labor efficiency increased by 50%
    c) Supplier base was reduced to one vendor
    d) Marketing costs were reduced
65. What challenge did the Purchase Manager continue to face?
    a) Managing fluctuations in raw material prices and ensuring supplier reliability
    b) Increasing workforce size
    c) Reducing the variety of raw materials used
    d) Expanding the supplier base without any criteria

(Q.66 to 70) Case study - Vega Industries, a manufacturer of industrial components, faced persistent issues in its store management system. Frequent stock mismatches led to unexpected material shortages, delaying production schedules. A store audit revealed that manual inventory tracking was prone to human error, and materials were stored without proper categorization, making retrieval time-consuming. Additionally, slow-moving items occupied prime storage locations, while critical fast-moving parts were difficult to access.

To resolve these issues, the Store Manager implemented a Warehouse Management System (WMS) with barcode tracking and restructured storage based on material usage frequency. After six months, stock accuracy improved by 35%, and retrieval times were reduced by 40%. However, the company still struggled with supplier lead time variability and ensuring real-time stock updates.

66. What was the primary issue affecting store management at Vega Industries?
    a) Overstocking of raw materials
    b) Frequent stock mismatches causing material shortages
    c) Lack of trained warehouse workers
    d) High employee turnover in the store department
67. Why did inventory records often show incorrect stock levels?
    a) Materials were stolen frequently
    b) Manual inventory tracking led to human errors

c) Suppliers did not provide accurate data

d) Too many employees handled stock records

68. What mistake in material storage made retrieval inefficient?

a) Storing fast-moving items in hard-to-reach locations

b) Keeping all items in a single large storage area

c) Placing all critical items in a separate building

d) Frequently changing item storage locations

69. Which solution helped improve stock accuracy at Vega Industries?

a) Implementing a Warehouse Management System (WMS) with barcode tracking

b) Hiring additional store staff to monitor stock manually

c) Reducing the number of suppliers

d) Limiting store access to only senior managers

70. What challenge remained even after improvements in store management?

a) Variability in supplier lead times and real-time stock updates

b) Lack of warehouse space for future expansion

c) High cost of maintaining barcode scanners

d) Reduced demand for stored materials

(Q. 71 to 75) Case study - Zenith Auto Parts, a supplier of precision automotive components, faced serious inventory management challenges. Despite having an advanced ERP system, the company frequently encountered stock shortages for high-demand parts while simultaneously holding excess stock of slow-moving items. This imbalance led to production delays, higher holding costs, and cash flow issues.

A detailed analysis revealed that, Demand forecasting was based on outdated historical data, failing to account for recent market trends, the reorder points were fixed and did not adjust dynamically, causing overstocking of some items and shortages of others, Safety stock levels were set too high for low-demand items, taking up valuable warehouse space, the purchasing team relied too much on bulk ordering discounts, leading to excessive inventory for certain materials.

To tackle these issues, the Inventory Manager implemented an AI-based demand forecasting system and introduced a dynamic reorder point mechanism. While these changes improved stock accuracy, the company still struggled with supplier lead time fluctuations and real-time inventory tracking during sudden demand spikes.

71. What was the main problem faced by Zenith Auto Parts in inventory management?
    a) Too many suppliers causing confusion
    b) Frequent stock shortages and excess inventory at the same time
    c) High employee turnover in the warehouse
    d) Poor product quality affecting sales
72. Why did the demand forecasting system fail initially?
    a) It was based only on outdated historical data
    b) It relied too much on real-time demand signals
    c) It used AI-based predictive analytics from the beginning
    d) It focused only on safety stock levels
73. How did fixed reorder points contribute to inventory issues?
    a) They automatically adjusted to demand fluctuations
    b) They led to overstocking of some items and shortages of others
    c) They reduced overall holding costs
    d) They ensured perfect inventory control
74. What key solution was implemented to improve inventory management?
    a) Increasing safety stock levels for all items
    b) Using an AI-based demand forecasting system and dynamic reorder points
    c) Reducing the number of suppliers to only one
    d) Stopping bulk purchases completely
75. What challenge remained even after the improvements?
    a) Supplier lead time fluctuations and real-time tracking issues during demand spikes
    b) Lack of storage space for excess inventory
    c) Employees resisting the new AI system
    d) Overstocking of all materials
76. Precision Electronics faced frequent delays in material retrieval due to a poorly planned store layout. High-demand components were stored far from the assembly line, while rarely used items occupied easily accessible locations. This inefficiency led to longer production lead times and increased labor efforts. To resolve this, the Store Manager redesigned the layout by placing frequently used materials near workstations and organizing shelves systematically.

What was the key issue caused by the poor store layout at Precision Electronics?

a) Overstocking of raw materials

b) Delays in material retrieval and production inefficiencies
c) Shortage of skilled store staff
d) Excessive purchasing of unnecessary items

77. A pharmaceutical company used a Fixed Order Quantity system to restock critical raw materials. However, fluctuating demand caused frequent stockouts for fast-moving drugs and excess inventory for slow-moving ones. The company considered switching to a Periodic Review System to review stock at fixed intervals and adjust orders accordingly.

Which issue did the company face with the Fixed Order Quantity system?
a) Excess inventory and frequent stockouts due to demand fluctuations
b) Inability to track supplier performance
c) Overuse of warehouse space
d) Lack of trained staff for inventory management

78. A retail chain applied ABC Analysis to optimize inventory costs. Category A items (high-value, low-quantity) were tightly controlled, while Category C items (low-value, high-quantity) had minimal monitoring. However, a high-value item (Category A) was frequently misplaced, causing unexpected shortages. The company realized that while ABC analysis is useful, it requires strong tracking mechanisms for critical items.

    What weakness did the company discover in its ABC analysis approach?
    a) Lack of control over high-value items, leading to stock shortages
    b) Misclassification of items based on sales volume
    c) Overstocking of all items
    d) Excessive storage costs for Category C items

79. A hospital used ABC Analysis for managing medical inventory but faced problems with life-saving drugs and critical surgical tools. Some high-cost equipment was classified as Category A, but low-cost but critical medicines (like emergency injections) were ignored under Category C. Realizing this flaw, the hospital introduced VED Analysis (Vital, Essential, Desirable) to ensure life-saving items were always in stock, regardless of cost.

Why did the hospital need to implement VED Analysis alongside ABC Analysis?
a) To prioritize critical medical supplies over cost-based classification
b) To reduce overall inventory costs

c) To focus only on expensive medical equipment
d) To eliminate stock monitoring of non-critical medicines

80. A defense manufacturing unit implemented VED Analysis to manage spare parts for its aircraft fleet. Vital components were stocked in large quantities, but fluctuating demand made forecasting difficult. Some Essential parts faced stockouts, while Desirable parts were overstocked due to misjudged demand patterns. The company struggled to balance cost efficiency and operational readiness.

What was a major challenge in using VED Analysis for spare parts management?
a) Difficulty in demand forecasting for essential components
b) Overstocking of all items equally
c) Eliminating the need for a reorder system
d) Ignoring supplier lead times

Answer Key

1. c) Producing goods efficiently and cost-effectively
2. c) Finance, Marketing, Purchasing, and R&D
3. b) By implementing automation and quality control measures
4. a) It helps in making strategic decisions using data and mathematical models
5. b) By optimizing production schedules and reducing waste
6. b) Bottlenecks and inefficiencies in production flow
7. c) By implementing robotics, automation, and AI-driven balancing techniques
8. c) To distribute tasks evenly and optimize production flow
9. b) AI-driven real-time data analytics
10. c) The need to retrain workers to adapt to AI-driven systems
11. b) To address inefficiencies in traditional manufacturing and increase flexibility
12. b) AI-powered analytics and predictive maintenance
13. c) High initial investment and workforce retraining requirements

14. a) By enabling real-time production simulations and reducing implementation errors
15. a) Will full automation reduce human workforce requirements or create new specialized roles?
16. c) Job production
17. c) Mass production
18. b) Intermittent production
19. d) Continuous production
20. b) It ensures a smooth production flow and reduces inefficiencies
21. b) To ensure timely production, cost efficiency, and resource optimization
22. b) Production scheduling and inventory management
23. b) To balance demand and capacity over a given period
24. b) By reducing lead times, minimizing waste, and improving efficiency
25. b) Unforeseen supply chain disruptions
26. b) Inefficient scheduling leading to delays and excess inventory
27. a) It helped forecast demand and plan production accordingly
28. c) Sequencing problems where urgent orders were delayed
29. a) They helped in real-time monitoring and reducing bottlenecks
30. b) Occasional machine breakdowns and fluctuating demand
31. b) Availability of skilled labor and logistics infrastructure
32. b) Balancing cost, infrastructure, and accessibility
33. c) Product Layout
34. b) It ensures better workflow and operational efficiency
35. b) Unexpected workflow inefficiencies and bottlenecks
36. b) To ensure smooth production flow and reduce inefficiencies
37. b) Implementing a priority-based scheduling system
38. a) The availability of skilled labor and transportation facilities
39. b) Product Layout
40. a) Efficient workflow and space utilization
41. b) High customer complaints due to defective parts
42. c) Total Quality Management (TQM)
43. c) Defect rate decreased by 40%
44. b) They found it time-consuming
45. c) Conducted additional training sessions
46. b) To meet client requirements and improve quality control

47. b) Aligning existing processes with ISO standards
48. c) Weak record-keeping
49. b) 20% increase in new business inquiries
50. a) Ignoring the importance of continuous monitoring and internal audits
51. c) PM did not accurately predict failures
52. b) Excess stock of less-used components
53. a) They preferred the familiar PM method
54. c) Optimizing the Material Requirement Planning (MRP) system
55. a) Ensuring real-time data accuracy
56. b) Shift to in-process inspections
57. c) Implement Statistical Process Control (SPC)
58. b) Shift to Predictive Maintenance (PdM) for critical components
59. b) Upgrade to an advanced ERP system with demand forecasting
60. c) Provide continuous training and emphasize employee involvement
61. b) Delays in raw material deliveries and rising production costs
62. b) Vendor Rating System
63. b) Implemented a Just-In-Time (JIT) procurement model
64. a) Material shortages dropped by 40%
65. a) Managing fluctuations in raw material prices and ensuring supplier reliability
66. b) Frequent stock mismatches causing material shortages
67. b) Manual inventory tracking led to human errors
68. a) Storing fast-moving items in hard-to-reach locations
69. a) Implementing a Warehouse Management System (WMS) with barcode tracking
70. a) Variability in supplier lead times and real-time stock updates
71. b) Frequent stock shortages and excess inventory at the same time
72. a) It was based only on outdated historical data
73. b) They led to overstocking of some items and shortages of others
74. b) Using an AI-based demand forecasting system and dynamic reorder points
75. a) Supplier lead time fluctuations and real-time tracking issues during demand spikes
76. b) Delays in material retrieval and production inefficiencies
77. a) Excess inventory and frequent stockouts due to demand fluctuations
78. a) Lack of control over high-value items, leading to stock shortages
79. a) To prioritize critical medical supplies over cost-based classification
80. a) Difficulty in demand forecasting for essential components