

DURATION: 2 HOURS

MAXIMUM

MARKS: 70

INSTRUCTIONS:

QUESTION ONE

Read the Case Study below carefully and answer the questions a, b and c:

Global Case Study: GlobalTech Manufacturing and Logistics Corporation

GlobalTech Manufacturing and Logistics Corporation is a multinational company operating in Africa, Europe, and Asia. The company produces smart home appliances and provides after-sales maintenance services to millions of customers. Over the past three years, GlobalTech has experienced intense competition due to rapid technological advancement, fluctuating customer demand, and disruptions in the global supply chain.

To remain competitive, the company recently adopted a new operations strategy that emphasizes automation, flexible production systems, demand forecasting, and Total Quality Management (TQM). It also introduced advanced information technology systems linking suppliers, warehouses, and retail outlets in real time. However, management has encountered several challenges including inaccurate sales forecasts, rising maintenance costs, low employee morale after process re-engineering, and delays in product delivery.

The company's production department currently uses a combination of batch and line production systems. Some managers advocate for increased outsourcing to specialized suppliers, while others insist on maintaining high vertical integration to ensure quality control. At the same time, the organization seeks to improve productivity, reduce operational waste, and strengthen customer satisfaction across international markets.

Senior management has appointed a strategic operations committee to redesign the production and operations system. The committee is expected to recommend forecasting methods, process improvement approaches, quality management practices, technology adoption strategies, and maintenance systems that will improve operational efficiency and long-term competitiveness.

Required:

- a) Evaluate the operations strategy adopted by GlobalTech and explain how it aligns with corporate strategy and competitive priorities. **(10 Marks)**
- b) Examine five roles of forecasting and process management in improving GlobalTech's operational performance. **(10 marks)**
- c) Recommend five suitable quality management and productivity improvement strategies that GlobalTech should implement to achieve sustainable competitive advantage. **(5 marks)**

QUESTION TWO

- a) Explain the historical evolution of Production and Operations Management and assess the contribution of Scientific Management to modern organizations. **(10 marks)**
- b) Production involves the creation of goods and services. Differentiate between manufacturing operations and service operations. Illustrate your answer with relevant examples. **(5 marks)**

QUESTION THREE

- a) Efficiency in Production is achieved through forecasting. Discuss five importance of forecasting in Production and Operations Management. Illustrate your answer with practical industry examples. **(10 marks)**
- b) Forecasting is considered as both an art and science. Compare qualitative forecasting methods with quantitative forecasting methods evaluating their suitability in different business situations.

(5

marks)

QUESTION FOUR

- a) A good knowledge of production process is critical in manufacturing. Analyze five major types of production processes and explain the circumstances under which each process is appropriate. **(10 marks)**

- b) Process re-engineering is essential in successful operations management. Evaluate five importance of process re-engineering and process improvement in modern organizations. **(5 marks)**

QUESTION FIVE

- a) Information technology is an integral part of management in the 21st century. Examine five roles of technology and Information Technology (IT) in Production and Operations Management. **(10 marks)**

- b) Robotics and automation should be adopted in large scale manufacturing. Discuss the advantages and challenges associated with automation in modern production systems. **(5 marks)**

QUESTION SIX

- a) Total Quality Management entails “doing it right, first time and always”. Discuss five principles of Total Quality Management (TQM) and evaluate their contribution to organizational performance. **(10 marks)**

- b) Maintenance of production systems is a critical element in performance enhancement. Examine five roles of maintenance

management and productivity improvement in achieving operational excellence. **(5 marks)**