

IAT 1 Question Paper & Solution

Sub: **Technology and Operational Strategy**

Code: **20MBA302**

Date: **16-12-2021**

Duration: 90 mins

Max
Marks: 50

Sem: III

Branch: MBA

OBE

Marks CO RBT

Part A -Answer Any Two Full Questions (20*02=40 Marks)			
1(a)	<p>Define operations management.</p> <p>Defined as the Design, Operation and improvement of the systems that create and deliver the firm's primary products and services.</p>	[03]	CO1 L1
(b)	<p>Describe of the need of process map.</p> <p>Pictures guide better than words.</p> <p>The use of graphs, charts, tables and images guides better than a big compiled report with lot of data fixation issues in it.</p> <p>Process maps facilitate improvements in the process, since it becomes easy to pin point the specific areas that need changes, like bottlenecks, delays, capacity constraints etc. in the light of efficiency and effectiveness of the process.</p> <p>Decision making becomes fast as it deals with the 'show me' aspect and not the 'tell me' aspect of the process and the problem areas.</p>	[07]	CO2 L2
(c)	<p>Explain the scope and functions of operations management.</p> <p>1. Locations of facilities: The initial planning stage involves selecting the region or general area in which then plant or facility should be located. Facility Location is the right location for the manufacturing facility, it will have sufficient access to the customers, workers, transportation, etc</p> <p>2. Plant layouts and material handling Plant layout is a plan for effective utilisation of facilities for the manufacture of products; involving a most efficient and economical arrangement of machines, materials, personnel, storage space and all supporting services, within available floor space. Material handling is the movement, protection, storage and control of materials and products throughout manufacturing, warehousing, distribution, consumption and disposal.</p> <p>3. Product design Product design as a verb is to create a new product to be sold by a business to its customers. A very broad coefficient and effective generation and development of ideas through a process that leads to new products.</p> <p>4. Process design Process design is the process of creating a workflow diagram that maps out a process.</p> <p>5. Production and Planning control</p>	[10]	CO1 L2

For efficient, effective and economical operation in a manufacturing unit of an organization, it is essential to integrate the production planning and control system. Production planning and subsequent production control follow adaption of product design and finalization of a production process.

Production planning and control address a fundamental problem of low productivity, inventory management and resource utilization.

Production planning is required for scheduling, dispatch, inspection, quality management, inventory management, supply management and equipment management. Production control ensures that production team can achieve required production target, optimum utilization of resources, quality management and cost savings.

6. Quality Control

Quality control (QC) is a **process through which a business seeks to ensure that product quality is maintained or improved**. Quality control involves testing units and determining if they are within the specifications for the final product.

7. **Materials management** is a core function of supply chain management, involving the planning and execution of supply chains to meet the material requirements

8. Maintenance

Maintenance management is defined as the **process of maintaining the assets and resources of a company**, which has as main objective to control and reduce costs, times, and resources. It goes through the regular monitoring of the functioning of machines, equipment, facilities, and tools.

Increase Productivity: It manages all aspects of production activities to achieve highest efficiency possible. They ensure that all inputs used by organisations are efficiently transformed into outputs that is products or services. It is crucial for all business for properly managing their day to day activities and efficient utilisation of all its resources which helps in raising productivity.

Raises Revenue: It works on reducing the cost of operations to business by reducing the wastage of resources. Operations managers monitor every production activity and take all necessary steps for maintaining efficiency in the organisation.

They try to maintain an appropriate balance between cost and revenue. Maintenance of quality of products and delivering them as per customer needs is another function played by these operation managers.

It helps in attracting more and more customers which increase the overall revenue of business.

Achievement Of Organisation Goals:

Operation management ensures that all operations of business are going in desired direction.

It regularly monitors every activity and takes all corrective measures as required according to prevailing situations.

Proper functioning of business as per strategic plans helps in achievement of desired goals.

Improve Customer Satisfaction: It helps them in retaining them for the long term.

Operation management monitors the quality of products manufactured by

	<p>organisations.</p> <p>It ensures that high-quality products are produced in accordance with the requirements of customers.</p> <p>When products manufactured by business completely fulfil the needs of customers, their satisfaction level will improve.</p> <p>Reduce Investment Need: It ensures that all capital employed in the business are efficiently used.</p> <p>Management of operations ensures that all production activities go uninterrupted without any shortage of capital.</p> <p>By increasing the efficiency and avoiding the wastage of employed resources, it avoids any deficiency of capital in business. Businesses are not required to invest more in their production activities.</p> <p>Enhance Goodwill: Operation management focuses on improving the position of the organisation in the market.</p> <p>It ensures that business works for providing better services to its customers.</p> <p>Business should manufacture durable and high-quality products that may provide better satisfaction to users.</p> <p>Customers will gain confidence in their products which will improve their market image.</p> <p>Improve Innovation: All decision regarding production planning is taken by operation managers by doing research and analysis of prevailing market situations.</p> <p>It takes into account all technological changes and builds a strong base of knowledge and operations.</p> <p>This helps in bringing various innovations in operations of the business.</p> <p>Functions of OM</p> <p>Finance- Finance plays a main function in operations management. The operation manager should not waste finance in unproductive tasks. He should ensure that all finance of the organization is utilized for the manufacturing of useful goods or services which may satisfy consumer wants.</p> <p>Operation– The function of operation management is basically concerned with planning, organizing, directing and controlling of daily routine operations of an organization. The operation manager ensures that all activities are going effectively and efficiently.</p> <p>Strategy– The strategy formulation is also the main function of operation management. The operation manager should have pre-planned tasks. Formulation of plans and tactics helps the organization in optimizing their resources and developing a competitive edge over competitors.</p> <p>Product Design– It is the duty of operations manager to design the product according to the market trends and demands. He should ensure that innovative techniques are incorporated within the product and its quality is maintained.</p> <p>Maintaining Quality– Operations managers should ensure a better quality of products. The manager should not compromise with the quality of Products. They should work on quality management and should supervise all tasks. If any defects are found they should take steps to rectify such defects</p>							
2(a)	<p>Define process map.</p> <p>Process mapping is the graphical representation with illustrative descriptions of how things get done.</p> <p>It helps the participants to visualize the details of the process closely and guides decision making</p>	[03]	CO2	L1				
(b)	<p>Explain contribution of any two management Guru's to operations management.</p> <table border="1" data-bbox="165 2011 1002 2083"> <thead> <tr> <th data-bbox="165 2011 523 2049">Quality Guru</th> <th data-bbox="523 2011 1002 2049">Main Contribution</th> </tr> </thead> <tbody> <tr> <td data-bbox="165 2049 523 2083">Walter A. Shewhart</td> <td data-bbox="523 2049 1002 2083">Contributed to understanding of</td> </tr> </tbody> </table>	Quality Guru	Main Contribution	Walter A. Shewhart	Contributed to understanding of	[07]	CO1	L2
Quality Guru	Main Contribution							
Walter A. Shewhart	Contributed to understanding of							

		process variability. Developed concept of statistical control charts			
	W. Edwards Deming	Stressed management's responsibility for quality Developed "Pons" to guide compnies in quality improvement.			
	Joseph M. Juran	Defined quality as 'fitness for use.' Developed concept of cost of quality			
	Armand V. Feigenbaum	Introduced concept of total quality control			
	Philip B. Crosby	Coined phrase "quality is free." Introduced concept of zero defects.			
	Kaoru Ishikawa	Developed cuase-and-effect diagrams. Identified concept of "internal customer."			
	Genichi Taguchi	Focused on product design quality Developed Taguchi loss function.			
(c)	Explain fish diagram with suitable example.		[10]	CO2	L2
3(a)	What do you mean by voice of customer. Voice of the customer is a term used in business and information technology to describe the in-depth process of capturing customer's expectations, preferences and aversions.		[03]	CO1	L1
(b)	Explain the Pareto rule. Named after esteemed economist Vilfredo Pareto, specifies that 80% of consequences come from 20% of the causes, proving an unequal relationship between inputs and outputs. <ul style="list-style-type: none"> The 80/20 Rule (also known as the Pareto principle or the law of the vital few & trivial many) states that, for many events, roughly 80% of the effects come from 20% of the causes. The 80-20 rule maintains that 80% of outcomes (outputs) come from 20% of causes (inputs). In the 80-20 rule, you prioritize the 20% of factors that will produce the best results. A principle of the 80-20 rule is to identify an entity's best assets and use 		[07]	CO1	L2

	them efficiently to create maximum value.			
(c)	<p>Explain 5S methodology with suitable example.</p> <ul style="list-style-type: none"> • Seiri (sort) means to put things in order. • Seiton (systematise) means proper arrangement. • Seiso (clean) implies keeping things clean and polished in the workplace. • Seiketsu (Standardise) implies purity and focuses on maintaining cleanliness and perpetual cleaning. • Shitsuke (Self-discipline) is commitment. 	[10]	CO2	L2
	Part B - Compulsory (01*10=10marks)			
4	<p>Let us assume 100 year old organization looking forward to innovate their approach towards handling their human asset. As a consultant Use the Theory Z approach and guide organization to innovate.</p> <p style="text-align: center;">Theory Z</p> <p>The diagram illustrates the Theory Z approach, which synthesizes the characteristics of Type A (American) and Type J (Japanese) organizations into a modified American Type Z organization. Type A characteristics include short-term employment, individual decision-making, individual responsibility, rapid promotion, explicit formal control, specialized career paths, and segmented concern for employment. Type J characteristics include life-time employment, group decision-making, collective responsibility, slow promotion, implicit formal control, non-specialized career paths, and holistic concern for employees. Type Z characteristics include long-term employment, collective decision-making, individual responsibility, slow promotion, explicit formalized control and implicit informal control, moderately specialized career paths, and holistic concern for employees (including family).</p> <p style="text-align: right; font-size: small;">pmlonomy.com</p>	[10]	CO2	L3

Course Outcomes		P	O	T	P	O	P	O	P	O
CO1	Students should get clear idea about the concept of Strategic Management, its relevance, Characteristics, process nature and purpose.	1a, 1c, 2b, 3a, 3b								
CO2	Student to acquire an understanding of how firms successfully institutionalize a strategy and create an organizational structure for domestic and overseas operations and gain competitive advantage.		1b, 2a, 2c, 3c							
CO3	To give the students an insight on strategy at different levels of an organization to gain competitive advantage.									
CO4	To help students understand the strategic drive in multinational firms and their decisions in different markets.									
CO5	To enable the students to gain knowledge of strategy									

	implementation and the control measures for effective decision-making.					
Cognitive level	KEYWORDS					
L1	list, define, tell, describe, recite, recall, identify, show, label, tabulate, quote, name, who, when, where, etc.					
L2	describe, explain, paraphrase, restate, associate, contrast, summarize, differentiate interpret, discuss					
L3	calculate, predict, apply, solve, illustrate, use, demonstrate, determine, model, experiment, show, examine, modify					
L4	classify, outline, break down, categorize, analyze, diagram, illustrate, infer, select					
L5	grade, test, measure, defend, recommend, convince, select, judge, support, conclude, argue, justify, compare, summarize, evaluate					
L6	design, formulate, build, invent, create, compose, generate, derive, modify, develop, integrate					
PO1–Theoretical Knowledge; PO2–Effective Communication Skills; PO3–Leadership Qualities; PO4 –Sustained Research Orientation; PO5 –Self-Sustaining Entrepreneurship						

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