

**MBA 2ND SEMESTER
OPERATION MANAGEMENT
KMB 205
SOLUTION
SECTION – A**

1. Attempt all questions in brief.

Q N	QUESTION	Marks	CO	BL
a.	What do you understand by operation management? Operations management is the administration of business practices to create the highest level of efficiency possible within an organization. It is concerned with converting materials and labor into goods and services as efficiently as possible to maximize the profit of an organization.	1	1	K2
b.	What are the symbols of operation, transportation, inspection & delay?	1	1	K1
c.	What is manufacturing process? Management of the process that transforms resources into products., then, consists of all the activities involved in transforming a product idea into a finished product, as well as those involved in planning and controlling the systems that produce goods and services.	1	1	K2
d.	Name the various recording techniques in method study. 1.Charts 2.Daigrams 3.Photography	1	1	K1
e.	What is SIMO? “SIMO” stands for simultaneous-Motion Cycle chart. It is one of micro motion study devised by Gilbreth and it presents graphically the separable steps of each pertinent limb of the operator under study. It is an extremely detailed left and right hand operation chart.	1	1	K1

SECTION - B

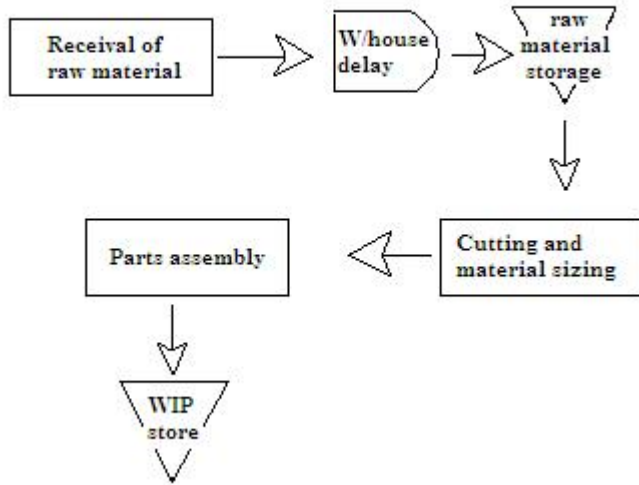
2. Attempt any TWO of the following.

(2*5=10)









Q N	QUESTION	Marks	CO	BL
a.	Explain process charts. Briefly describe its types with a suitable examples and charts. A process flow chart is a <u>process analysis</u> tool which maps out a process and its steps through a set of <u>standardized</u> flow chart symbols. The process flow chart is an initial step in process re-engineering and <u>continuous improvement/kaizen initiatives</u> that help understand the different process steps, the sub-steps within these and the nature of these steps. It is a similar approach to <u>value stream mapping</u> where the <u>value stream</u> of a product or service is mapped from raw materials to customer distribution. Some process flow charts can be very complex and used in engineering design and plant designs, these are usually known as schematic diagrams	5	1	K1

and use a different set of symbols and provide more detail of the process.

Process Flowchart for car bumper sub assembly



<p>b.</p>	<p>What is a work measurement and work measurement technique? Work measurement can be defined as the implementation of a series of techniques which are designed to find out the work content, of a particular task or activity, by ascertaining the actual amount of time necessary for a qualified worker, to perform the task, at a predetermined performance level.</p>	<p>5</p>	<p>1</p>	<p>K2</p>
<p>c.</p>	<p>Define the term ‘Therbligs’. List out the 18 therbligs used in motion study</p> <p>Therbligs primarily refer to motion of human body at the workplace and to the mental activities associated with it. They permit much more precise and detailed description of the work than any other recording techniques.</p> <p>Therbligs were suggested by Frank B. Gilberth the founder of motion study who differentiated 17 fundamental hand or hand and eye motions to which an eighteenth has been added.</p> <p>Each therblig has a specific color, symbol and letter for recording purposes.</p>	<p>5</p>	<p>1</p>	<p>K1</p>

	<i>SYMBOL</i>	<i>CODE</i>	<i>NAME</i>	<i>DESCRIPTION</i>	<i>COLOUR</i>			
		SH	SEARCH	Locate an article	BLACK			
		F	FIND	Mental reaction at end of search	GRAY			
		ST	SELECT	Selection from a number	LIGHT GRAY			
		G	GRASP	Taking hold	RED			
		H	HOLD	Prolonged grasp	GOLD OCHRE			
		TL	TRASPORT LOADED	Moving an article	GREEN			
		P	POSITION	Placing in a definite location	BLUE			
		A	ASSEMBLE	Putting parts together	VIOLET			
d.	<p>What is Productivity? What is its importance? Productivity is a measure of the efficiency of production. It is a ratio of actual output (production) to what is required to produce it (inputs). Productivity is measured as a total output per one unit of a total input. Control managers in a given organization are concerned with maximizing productivity through process-oriented observations and improvements.</p>					5	1	K1

SECTION - C

3. Attempt any ONE part of the following :

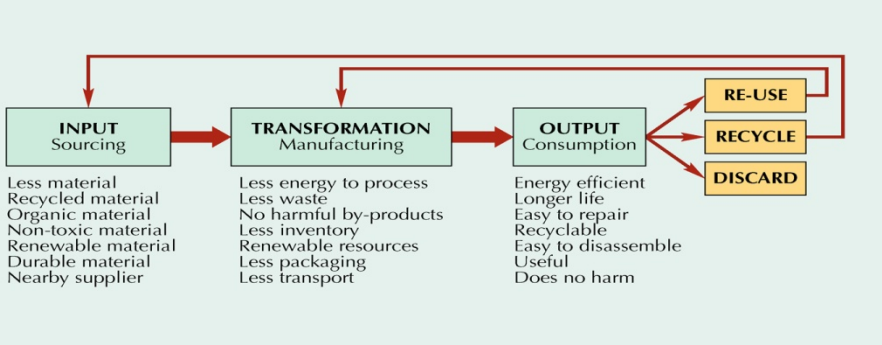
(1*5 =5)

Q N	QUESTION	Marks	CO	BL
a.	<p>What do understand by method study? What steps would be require do to method study? Method study is basically conducted to simplify the work or working methods and must go towards higher productivity. It is always desirable to perform the requisite function with desired goal minimum consumption of resources.</p>	5	1	K1
b.	<p>Explain SERVQUAL model of measuring service quality The Service Quality Model or SERVQUAL Model was developed and implemented by the American marketing gurus <u>Valarie Zeithaml</u>, <u>A. Parasuraman</u> and <u>Leonard Berry</u> in 1988. It is a method to capture and measure the service quality experienced by customers.</p> <p>Initially, emphasis was on the development of quality systems in the field product quality. Over time, it became more and more important to improve the quality of related services. Improved service quality could</p>	5	4	K5

	<p>give organisations a competitive edge. In addition, service in general became more important, and as a result, the SERVQUAL Model had a serious impact in the eighties. Back then, measuring service was abstract and not easily quantifiable.</p> <p>The SERVQUAL Model is primarily a qualitative analysis. If a satisfaction survey mainly depends on the transactions between supplier and buyer, the observed quality is measured through generic, environmental factors.</p>		
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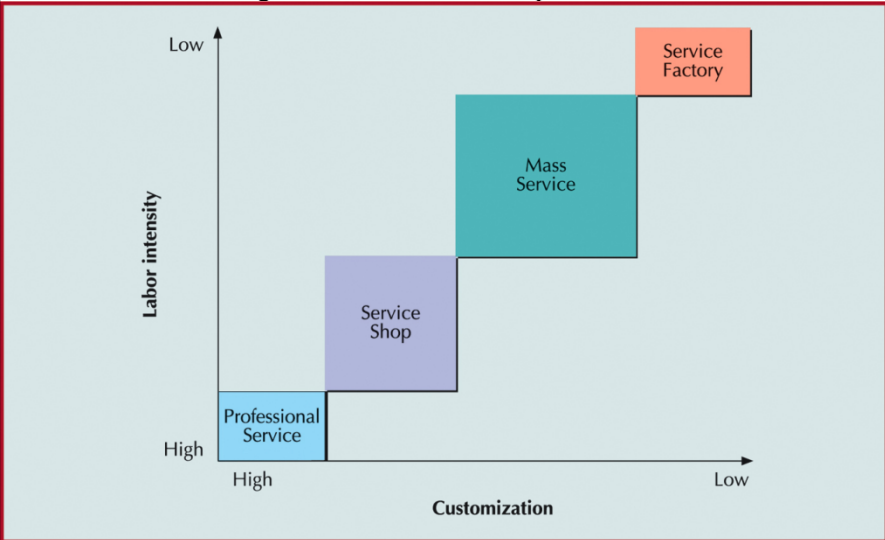
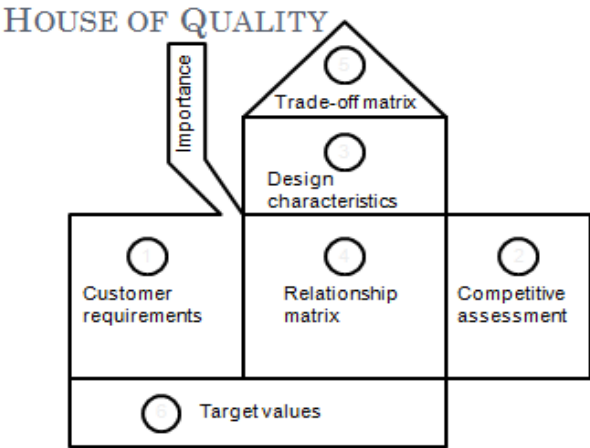
4. Attempt any ONE part of the following:

(1*5 =5)

Q N	QUESTION	Marks	CO	BL									
<p>a.</p>	<p>A production manager should keep in mind green designing while transformation of input-output. Comment</p>  <p>INPUT Sourcing</p> <ul style="list-style-type: none"> Less material Recycled material Organic material Non-toxic material Renewable material Durable material Nearby supplier <p>TRANSFORMATION Manufacturing</p> <ul style="list-style-type: none"> Less energy to process Less waste No harmful by-products Less inventory Renewable resources Less packaging Less transport <p>OUTPUT Consumption</p> <ul style="list-style-type: none"> Energy efficient Longer life Easy to repair Recyclable Easy to disassemble Useful Does no harm <p>RE-USE RECYCLE DISCARD</p>	5	4	K5									
<p>b.</p>	<p>Give the classification of service with suitable example.</p> <table border="1" data-bbox="418 1192 1105 1759"> <thead> <tr> <th></th> <th data-bbox="516 1192 760 1224">People</th> <th data-bbox="873 1192 1105 1224">Things</th> </tr> </thead> <tbody> <tr> <td data-bbox="215 1360 354 1413">Tangible Actions</td> <td data-bbox="418 1255 760 1507"> <p>Services directed at people's bodies. (People Processing)</p> <ul style="list-style-type: none"> • Health Care • Beauty Salons • Restaurants • Public Transportation </td> <td data-bbox="768 1255 1105 1507"> <p>Services directed at goods and other physical possessions (Possession Processing)</p> <ul style="list-style-type: none"> • Freight Transportation • Repair / Maintenance • Dry Cleaning </td> </tr> <tr> <td data-bbox="215 1581 354 1633">Intangible Actions</td> <td data-bbox="418 1518 760 1759"> <p>Services directed at people's minds. (Mental Stimulus Processing)</p> <ul style="list-style-type: none"> • Education • Theaters • Information Services </td> <td data-bbox="768 1518 1105 1759"> <p>Services directed at intangible assets. (Information Processing)</p> <ul style="list-style-type: none"> • Banking • Legal Services • Insurance </td> </tr> </tbody> </table>		People	Things	Tangible Actions	<p>Services directed at people's bodies. (People Processing)</p> <ul style="list-style-type: none"> • Health Care • Beauty Salons • Restaurants • Public Transportation 	<p>Services directed at goods and other physical possessions (Possession Processing)</p> <ul style="list-style-type: none"> • Freight Transportation • Repair / Maintenance • Dry Cleaning 	Intangible Actions	<p>Services directed at people's minds. (Mental Stimulus Processing)</p> <ul style="list-style-type: none"> • Education • Theaters • Information Services 	<p>Services directed at intangible assets. (Information Processing)</p> <ul style="list-style-type: none"> • Banking • Legal Services • Insurance 	5	1	K2
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5. Attempt any ONE part of the following:

(1*5 =5)

Q N	QUESTION	Marks	CO	BL
a.	<p>Elaborate service design matrix with an example</p>  <p>The graph plots Labor intensity on the y-axis (High at bottom, Low at top) and Customization on the x-axis (High on left, Low on right). Four service types are shown as colored boxes: Professional Service (blue, high customization, high labor), Service Shop (purple, medium customization, medium labor), Mass Service (teal, low customization, low labor), and Service Factory (orange, very low customization, very low labor).</p>	5	1	K2
b.	<p>How does the QFD approach help with example?</p>  <p>The House of Quality diagram is shaped like a house. The roof is labeled 'Trade-off matrix'. The main body is labeled 'Design characteristics'. The left side is 'Customer requirements', the right side is 'Competitive assessment', and the bottom is 'Target values'. A central box is labeled 'Relationship matrix'. A callout box labeled 'Importance' points to the 'Design characteristics' section.</p>	5	4	K5