BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI

First Semester 2022-23 Manufacturing Management ME F316

Max. Marks: 50 Duration: 90 minutes

Date: 03-11-2022

Part - I	
Q.1 Encircle/fill the most appropriate answer (Mark your answer in the question paper only):	F43
(i) The point of indifference is a measure ofa) Total cost	[1]
b) Total revenue	
c) Number of units produced	
d) Profit	
(ii). Mass production systems tend to employ	[1]
a) Specialized equipment and limited labor skills	
b) Specialized equipment and specialized labor skills	
c) General purpose equipment and limited labor skills	
d) General purpose equipment and specialized labor skills	
(iii). The sequence, generally, followed in developing an HOQ is	[1]
a) Need, competitor evaluation, technical requirements, relationship matrix, target values	
b) Need, relationship matrix, competitor evaluation, target values, technical requirements	
c) Need, competitor evaluation, technical requirements, target values, relationship matrix	
d) Need, technical requirements, competitor evaluation, relationship matrix, target values	
e) Need, target values, competitor evaluation, technical requirements, relationship matrix	
 f) Need, competitor evaluation, relationship matrix, target values, technical requirements (iv). In location planning, environmental regulations, cost and availability of utilities, and taxes are 	[1]
a) Global factors	[+]
b) Country factors	
c) Regional/community factors	
d) Site-related factors	
e) None of the above	
(v). What type of layout(s) would be appropriate for: (Answer correctly at least 2)	[1]
a) Electric scooter plan t?	
b) Home construction? c) A university?	
(vi). Which of the followings is evaluated using balanced scorecard	[1]
a) Finances, customers, processes, learning	L-J
b) Finances, product, processes, learning	
c) Finances, customers, processes, top management commitment	
d) Finances, customers, suppliers, learning	
(vii). All of the following are responsibilities of operations managers except	[1]
a) Acquiring financial resources	[I]
b) Managing inventories	
c) Planning production	
d) Scheduling production	
(viii). All of the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following are ways that companies can get ideas and products from competitors exceeds the following the following are ways that companies can get ideas and products from competitors exceeds the following the followi	20 2 [1]
	sept [1]
c) Concurrent engineering	
d) Perceptual maps	

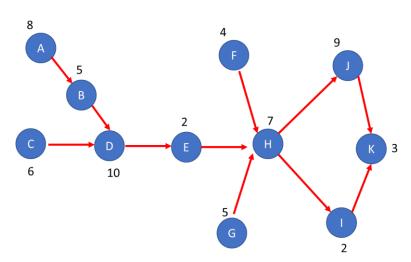
- Q2. Draw a process map for a hospital dealing with COVID-19 infected/suspected patients?
- Q3. Illustrate how the house of quality of a product satisfies all the shop floor operational requirements for its manufacturing? [6]
- **Q4.** What are the types of demand behaviour explain graphically with suitable examples? [5]

Part- II Q5. The company has had monthly sales for the past 24 months as follows:

Month	Demand	Month	Demand
1	8200	13	10300
2	7500	14	10500
3	8100	15	11700
4	9300	16	9800
5	9100	17	10800
6	9500	18	11300
7	10400	19	12600
8	9700	20	11500
9	10200	21	10800
10	10600	22	11700
11	8200	23	12500
12	9900	24	12800

- (i) Develop forecasts using Linear trend line method, 3 month moving average, and adjusted exponential smoothing ($\alpha = 0.3 \& \beta = 0.5$) [4+2+4]
- (ii) Justify your selection using MAD.

Q6. The precedence diagram and task times (in minutes) for assembling for a production system are shown here. Set up an assembly line to produce 125 units in a 40-hour week. Balance the line and calculate its efficiency. Also compare your answer with other possible alternatives and their efficiency [10]



. + 4_. [5]

[6]