CBCS SCHEME

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17AU831

Eighth Semester B.E. Degree Examination, July/August 2021
Total Quality Management

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

1 a. Define Total Quality Management and discuss briefly the various dimensions of quality. **(10 Marks)**

b. With a neat block diagram, explain the TQM framework. **(10 Marks)**

2 a. Describe the various steps involved in customer satisfaction process. **(10 Marks)**

b. Discuss in detail 12 behaviour or characteristics of a successful quality leaders. **(10 Marks)**

3 a. Explain the following :
i) PDCA cycle
ii) Benefits of 5's. **(10 Marks)**

b. With an examples, explain the Failure Mode And Effect Analysis (FMEA) process. **(10 Marks)**

4 a. Elaborate with an necessary graph how six sigma will benefits the productivity of process. **(10 Marks)**

b. Discuss in detail the benefits of Reengineering process in TQM. **(10 Marks)**

5 a. How would you explain the methodology of constructing an affinity diagram by using an illustration. **(10 Marks)**

b. Compare between the tree diagram and matrix diagram. **(05 Marks)**

c. Explain the usage of nominal group techniques. **(05 Marks)**

6 a. With an example, explain how activity network diagram helps to solve problems. **(10 Marks)**

b. Write a note on fundamental concept of why–why forced filled analysis with an examples. **(10 Marks)**

7 a. What do you understand by human resource management? Why is it needed? **(06 Marks)**

b. List out the various advantages of employee involvement. **(06 Marks)**

c. Discuss in brief job rotation and mention its merits and demerits. **(08 Marks)**

8 a. What are principles of job design? Discuss in brief various methods of job design. **(10 Marks)**

b. Distinguish between training and development. **(05 Marks)**

c. Explain the advantages and drawbacks of performance appraisal. **(05 Marks)**

9 a. What are control charts? Explain the procedure for preparing control charts for attributes.

(08 Marks)

b. A machine set to deliver packets of a given weight. 10 sample of size 5 each were recorded. Below a given relevant data. Calculate the central line and the control limit for mean chart and the range chart also draw the charts and then comment state of control given data $A_2 = 0.5$, $D_3 = 0$, $D_4 = 2.115$.

Sample number	1	2	3	4	5	6	7	8	9	10
Mean ($\overline{X}$)	15	17	15	18	17	14	18	15	17	16
Range (R)	7	7	4	9	8	7	12	4	11	5

(12 Marks)

10 a. James a manager of a 500 room. Hotel he wants to achieve highest level of service. For 7 days, you collect data on readiness of 200 rooms. Is this process in control? Draw the P charts. (P – charts).

Day	1	2	3	4	5	6	7
Rooms	200	200	200	200	200	200	200
Not ready	16	7	21	17	25	19	16
Proportion	0.080	0.035	0.105	0.085	0.125	0.095	0.080

(12 Marks)

b. Describe the difference between an attributes control chart and variable control chart.

(08 Marks)

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