Roll No											

PRESIDENCY UNIVERSITY
BENGALURU

SET A

SCHOOL OF MANAGEMENT
END TERM EXAMINATION - JAN 2024

Semester : Semester III - 2022
Course Code : MBA2031
Course Name : Total Quality Management
Program : MBA

Date : 17-JAN-2024
Time : 10:00AM - 1:00 PM
Max Marks : 100
Weightage : 50%

Instructions:
(i) Read all questions carefully and answer accordingly.
(ii) Question paper consists of 3 parts.
(iii) Scientific and non-programmable calculator are permitted.
(iv) Do not write any information on the question paper other than Roll Number.

PART A

ANSWER ALL THE QUESTIONS **10 X 3M = 30M**

1. Japanese have given 5-S to be followed in the production to increase the efficiency. List the 5 Japanese terms.
(CO1) [Knowledge]
2. A quality implementation for a process involves understanding 3 aspects. List the 3 aspects.
(CO1) [Knowledge]
3. Quality Circle in Japan and Quality Council of India (QCI) in India were established in different years. List the years and indicate after how many years was the QCI setup in India.
(CO1) [Knowledge]
4. Indicate by means of a single statement the definition of Six Sigma
(CO2) [Knowledge]
5. QMS through ISO 9001 was published and revised over a period of time. List those years of revision.
(CO2) [Knowledge]
6. List the proportional areas corresponding to upper control limit represented by Z1=+1.55, Z2= -0.85 and Z3=+2.9.
(CO3) [Knowledge]
7. If there are 200 samples of a tool normally distributed, identify the number of samples satisfying a criteria of Z1>1.58 and for Z2<-2.2
(CO3) [Knowledge]
8. The upper control limit is represented by Zu= -0.65 and lower control limit is represented by Zl= -2.15. From the ND-Z table, list the areas corresponding to the upper limit and the lower limit and indicate the total proportion lying between the two limits.
(CO3) [Knowledge]
9. Describe the importance of Voice of Customer. List any 2 questions to be asked under this category.
(CO4) [Knowledge]

10. Describe the meaning of Voice of Business.

(CO4) [Knowledge]

PART B

ANSWER ALL THE QUESTIONS **6 X 7M = 42M**

11. A firm believes in implementing Six-Sigma at various process levels. It wants its employees to be certified with Six-Sigma Belts. Explain the various types of Belts considered for the certification in Six-Sigma. Explain the purpose of each Belt.

(CO2) [Comprehension]

12. Mr Kumar, a Quality Control Manager uses a Cause and Effect diagram whenever a problem is anticipated. Cause and Effect diagrams are used for analysing causes and effects of a problem. With a neat diagram explain the importance.

(CO3) [Comprehension]

13. Histograms and Bar charts are commonly used by a Quality Manager. Explain the differences between the two charts with suitable diagrams.

(CO3) [Comprehension]

14. There were frequent report of problems in a assembly unit of a factory.. The operators were facing problems with one of the new machines installed recently. The Quality Manager uses FMEA approach to deal with failures. Discuss FMEA and explain the various types of FMEA.

(CO2) [Comprehension]

15. Pareto charts are a commonly used to describe and categorize items of various types. Explain the significance of Pareto Chart Analysis. Draw suitable sketch to illustrate the Pareto Chart.

(CO3) [Comprehension]

16. Quality Deployment Function (QFD) is used to plan various processes and resources aimed at quality objectives. Explain QFD process. List out the steps in QFD process. Draw a template for the QFD representing House of Quality and its benefits.

(CO4) [Comprehension]

PART C

ANSWER ALL THE QUESTIONS **2 X 14M = 28M**

17. Company XYZ has been conducting FMEA for every failure minor or major reported by the Operations Manager in their production process. XYZ has been frequently reviewing a failure related to one of their PFMEA. Explain the Seven steps of conducting FMEA and the details of FEAM planning. . Illustrate a sample FMEA template with a neatly drawn table.

(CO2) [Application]

18. A control chart is used for the purpose of setting a control line for monitoring the upper and lower limits of a process output. Illustrate the details of a control chart with an example. A range test was conducted on a sample set of 10 components for its failure. The results range readings at failure were 43, 50, 55, 65, 65, 46, 70, 60, 50 and 60. Write the formula to compute the value of Z.

(i) Compute the value of Z if the upper control limit X=64. Determine the proportion corresponding to this value of Z using Z-table.

(ii) If confidence interval for upper control limit is 85% then determine the value of X for upper limit.

(CO3) [Application]