BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: MBA **SEMESTER : III**
BRANCH: MBA **SESSION : MO/2022**

SUBJECT: MT537 TQM AND SIX SIGMA

TIME: 3:00 Hours **FULL MARKS: 50**

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
***4*. Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a) Distinguish between '*Quality*', '*Quality Management' and 'Total Quality Management'* with any suitable example. [5]

Q.1(b) 'Strategic quality management has eight dimensions: Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics, and Perceived Quality' - explain this with any practical problem. [5]

Q.2 Define the 'GAP' model under service quality and discuss each aspect. Do you believe the GAP model analysis will enhance Quality? Give your recommendations, preferably with any real-life problem [5+5]

Q.3(a) Discuss how a Quality management program can affect Productivity? [5]

Q.3(b) Discuss the following about Quality management (Any ONE) [5]
1. '5S' Principle. 2. Customer Satisfaction Model

Q.4(a) The following data relate to the life (in hours) of 15 samples of 6 electric bulbs each, drawn at intervals of one hour from the production process. [10]

- Draw the Mean and Range chart.
- Comment on the state of control.

Sample No. / Lifetime (in Hrs.)	Bulb-1	Bulb-2	Bulb-3	Bulb-4	Bulb-5	Bulb-6
1	620	687	666	769	839	686
2	501	585	524	585	655	668
3	673	701	636	567	622	660
4	646	626	572	628	632	743
5	494	984	659	643	660	640
6	634	755	625	582	685	555
7	619	710	664	693	773	534
8	631	723	614	535	551	570
9	482	791	533	612	497	499
10	706	524	626	503	662	754
11	530	432	379	690	724	536
12	485	497	608	393	648	729
13	585	535	762	588	625	737
14	462	490	635	587	554	673
15	722	608	665	587	531	705

(Data provided from the Quality control table: for n= 6, A_2 = 0.483, D_3 = 0; D_4= 2.004)

Q.5 Discuss the followings (*Any TWO*) [5x2=10]

A. Juran Trilogy for Continuous Quality Improvement
B. Six Sigma
C. Basic steps for implementing TQM.
D. Statistical Process Control
E. Service Quality

PTO

Alignment of CO and Bloom's Taxonomy (Hierarchical ordering of Cognitive skills)

Question No.	Alignment of CO and Bloom's Taxonomy
1	Develop a clear understanding of Quality and Quality management concepts and their usefulness in the real business world. [(1) knowledge]
2	Given the Problem, comprehend suitable service quality for quality improvement. [(2) comprehension]
3	Explain the mechanism for better quality management techniques/productivity management [(3) synthesis]
4	Given the Problem, comprehend a suitable control chart for quality control and better comprehension [(4) analysis]
5	Discuss advanced methods of Quality and their application to Engineering and Management Science. [(5) Evaluation]

:::::29/11/2022:::::E