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B.E / B.TECH. DEGREE EXAMINATION, MAY 2023

Sixth Semester

BT18603 – TOTAL QUALITY MANAGEMENT FOR BIOTECHNOLOGISTS*(Biotechnology)***(Regulation 2018 / Regulation 2018A)****TIME: 3 HOURS****MAX. MARKS: 100**

- CO 1** Illustrate the fundamental principles and practices of quality and performance excellence.
- CO 2** Examine the prominent philosophies of quality management, such as those of Deming and Juran, which provide a basis for today's quality and performance excellence.
- CO 3** Compare statistical techniques and choose appropriate techniques for improving processes.
- CO 4** Analyze the various tools and techniques in elimination of wastages and reduction of defects.
- CO 5** Apply the various quality systems in implementation of Total quality management.

PART- A (10 x 2 = 20 Marks)

(Answer all Questions)

	CO	RBT LEVEL
1. Mention the names of some major contributors to the quality movement.	1	1
2. State the dimensions of product quality for a washing machine.	1	3
3. Distinguish between internal vs external customer in an educational institution.	2	3
4. State the important elements of customer service.	2	2
5. In an industry categorize few processes to be followed to achieve 'Seiketsu'.	3	4
6. Design matrix data analysis diagrams in FMEA.	3	5
7. Sketch the benefits of applying QFD in product development.	4	3
8. What is meant by motivation? Discuss various type of motivating people.	4	2
9. Classify the ISO standard approved for our institute and its validity.	5	3
10. As a student what are the rewards and recognition you expect to get motivated?	5	4

PART- B (5 x 14 = 70 Marks)

	Marks	CO	RBT LEVEL
11. (a) Write a detailed note on Juran's ten steps for quality improvements?	(14)	1	2
(OR)			
(b) (i) Explain the dimensions of product quality for a wireless Bluetooth head phone.	(7)	1	2
(ii) Discuss Crosby's quality vaccine and also mention the 14 steps for quality improvement.	(7)	1	2

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| 12. (a) | Imagine you are aspiring student who wants to clear the civil service in first attempt. Implement the PDSA cycle of problem- solving method to achieve your goal. | (14) | 2 | 3 |
| (OR) | | | | |
| (b) | Elaborate on the following: i) customer perception of quality, ii) Customer complaints and iii) customer retention. | (14) | 2 | 3 |
| 13. (a) | Illustrate how benchmarking can be done in an ice-cream production company that has been launched new in market in a step-wise manner. | (14) | 3 | 4 |
| (OR) | | | | |
| (b) | Imply the problem-solving methods of six sigma in designing a new model mobile that is a failure model in market. | (14) | 3 | 4 |
| 14. (a) | Draw the basic structure of house of quality and explain the stepwise process in detail. | (14) | 4 | 4 |
| (OR) | | | | |
| (b) | In a biotechnology start up, form different teams and assign their individual duties for successful achievement of the goals set up. | (14) | 4 | 4 |
| 15. (a) | Explain the different purposes of quality audits? Discuss the various types of quality audits. | (14) | 5 | 2 |
| (OR) | | | | |
| (b) | What are the different ways of classifying maintenance activities? Explain in detail. | (14) | 5 | 2 |

PART- C (1 x 10 = 10 Marks)

(Q.No.16 is compulsory)

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LEVEL |
|------------|---|--------------|-----------|----------------------|
| 16. | Evaluate new strategies for improving the employee involvement in government sectors (public service) to achieve employee empowerment ultimately leading to the nations growth in terms of GDP. | (10) | 5 | 5 |
