

PART B — (5 × 16 = 80 marks)

11. (a) "Total quality management is too important to be taken up in organization. Specifically, it should not be subsidiary to profit or productivity". Do you agree to the assertion? Justify your view points with suitable case study.

Or

- (b) "The applicability of TQM has limitations". Do you agree with this statement? Can TQM be implemented for service sectors? Discuss with suitable case study.

12. (a) Explain the seven phases of PDSA cycle for problem solving.

Or

- (b) Explain on Juran's ten steps to quality improvement.

13. (a) The following data are obtained from an automatic filling process of a certain chemical delivered into each container. The specification of the mass delivered is 50 ± 4 grams. Samples of 5 are taken from 10 successive samples as shown in Table :

	Samples									
	1	2	3	4	5	6	7	8	9	10
Observations	51	52	51	48	53	51	52	54	53	50
	50	53	52	49	49	49	53	52	53	52
	52	52	52	52	49	49	47	51	52	52
	49	54	51	49	54	50	52	53	54	53

- (i) Determine the control limits for X and R charts. (4)
- (ii) Plot the charts and comment on the process. (4)
- (iii) Does it appear that the machine is capable of meeting the specification requirements? (4)
- (iv) Calculate the present defective. (4)

Or

- (b) In the manufacture of armatures for electric motors, inspection results of 20 samples of each having 100 units of armature is given in the following table. Calculate the average fraction defective and the control limits. Construct p chart and comment on the process.

Sample No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Average Defect in each sample	8	4	7	9	11	4	5	3	8	9	12	14	6	9	5	8	4	10	7	11

14. (a) Write the short notes for the following :

- (i) Force field analysis. (8)
(ii) Affinity Diagram. (8)

Or

- (b) Mr X is a student of an engineering college doing first year B.E. He stays in the college hostel. In the first semester, he was a regular student but could not score good marks. In the second semester, the college introduced 'shift' system for classes, with the good intention of providing about 4 to 5 hours of time at a stretch for studies and other useful purposes. It was expected that he would improve his studies and score good marks. On the contrary, he has failed in a couple of subjects!

Discuss:

Analyze and draw a fish bone diagram.

15. (a) Explain about Quality Function Deployment with examples.

Or

- (b) Explain about ISO 9001:2000 (Certificate Processing).