

[7X2=14 Marks]

**Question: 1**

- (i) What is benchmarking?
- (ii) How BPR is related to quality?
- (iii) Define the term reliability.
- (iv) State the significance of internal quality audits.
- (v) Write short note on house of quality.
- (vi) What is quality loss according to Taguchi?
- (vii) Define six sigma concepts.

**Question: 2.** Explain in detail about various elements and principles of Total Quality Management and discuss the role of leadership in TQM. (14 Marks)

**Or**

**Question: -2. (a)** Describe the purpose and the intent of the ISO 9000:2000 program. What are the advantages of becoming an ISO 9000:2000 certified companies? Are there any disadvantages? (7 Marks)

**Question: -2. (b)** "Customer and Consumer both are same." Discuss your views. (7 Marks)

**Question: -3.** What is meant by motivation? Discuss various type of motivation theory in detail. (14 Marks)

**Or**

**Question: -3.** What is performance appraisal? Explain its various types in detail. (14 Marks)

**Question: -4. (a)** A Products is made up of 20 components in a series. Ten of the components have a 1/10,000 chance of failure. Five have a 3/10,000 chance for failure. Four have a 4/10,000 chance for failure. One component has a 1/100 chance for failure. What is the overall reliability of the products? (7 Marks)

**Question: -4. (b)** An industrial product was subject to inspection with a batch size of 500 for 10 consecutive days. The number of defective pieces found are 33, 42, 44, 56, 60, 43, 55, 42, 28, and 70. Draw a P-Chart and discuss. (7 Marks)

Or

**Question: -4. (a)** Define Quality. Explain Juran's ten steps of continuous quality improvement. (7 Marks)

**Question: -4. (b)**

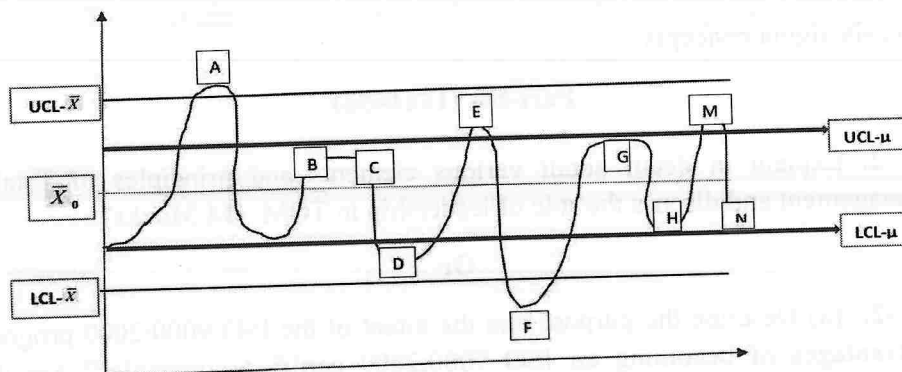
- Write short note on TPM Vs TQM (4 Marks)
- How does the conceptual approach to ISO 14001 differ from ISO 9001? (3 Marks)

**Question: -5**

- Elaborate on the process of building a house of quality. (4 Marks)
- Discuss the various stages in FMEA. (4 Marks)
- Explain 5'S. (3 Marks)
- What is total productive maintenance? (3 Marks)

Or

**Question: -5 -----Case Study: - (14 Marks)**



The manufacturer intends to target two distinct markets for its products: the South Asian Market and the European Market. To achieve this, we have the following two products central limits: **(Limit-1)** called  $UCL-\bar{x}$  &  $LCL-\bar{x}$ , and **(Limit-2)** called  $UCL-\mu$  &  $LCL-\mu$ , as shown in the chart above.

Answer the following:

- Define outlier. (4 Marks)
- Name the outliers are lying as per **(Limit-1)** called  $UCL-\bar{x}$  &  $LCL-\bar{x}$ , and **(Limit-2)** called  $UCL-\mu$  &  $LCL-\mu$ . (2 Marks)
- Which control limit would be more suitable for the European Market, and why? (4 Marks)
- Which control limit would be more suitable for the South Asian Market, and why? (4 Marks)

**\*\*Best of Luck\*\***