

No. of Printed Pages : 3

Roll No.

W852

**B. Tech. (Weekend)
EXAMINATION, May 2019**

(Eighth Semester)

(Main & Re-appear)

MEW452

QUALITY ENGINEERING

Time : 3 Hours]

[Maximum Marks : 100

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt any *Five* questions. All questions carry equal marks.

1. (a) Explain the various types of quality costs and economics of quality. **10**
- (b) Explain the concept of quality assurance and ISO 9000 quality system standards. **10**

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2. Define variation and differentiate between assignable and common causes of variations. Explain the different types of control charts.

20

3. (a) Discuss some important characteristics of Binomial distribution. **10**

- (b) In the manufacturing of sheets to be used by a punch press plant, it has been found that mean thickness is 25.222 mm and standard deviation 0.6 mm. How much of these sheets would be out of limits when the specifications of 25 ± 1 to be established. **10**

4. Discuss the principle of acceptance sampling and explain acceptance sampling by attributes and acceptance sampling by variables. **20**

5. Explain different elements, implementation aspects and benefits of TQM. **20**

6. Explain any *two* concepts :

(a) JIT system and lean manufacturing

(b) Total Productive Maintenance

(c) Process Decision Charts **10×2=20**

7. Explain any *two* concepts :

(a) Process Capability

(b) Operating Characteristic Curve

(c) Quality Function Deployment **10×2=20**

8. Discuss the utility of seven old tools of quality in industries. **20**