

Total No. of Questions: 6

Total No. of Printed Pages:3

Enrollment No.....



Faculty of Engineering
End Sem (Odd) Examination Dec-2022
ME3EI07 TQM & SQC

Programme: B.Tech.

Branch/Specialisation: ME

Duration: 3 Hrs.

Maximum Marks: 60

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

- Q.1 i. In a process, the transformation involves creation of value in which aspects? 1
(a) Time (b) Space (c) Form (d) All of these
- ii. Which of the following is not a target of TQM? 1
(a) Customer satisfaction
(b) Reducing manpower
(c) Continuous cost reduction
(d) Continuous operational improvement
- iii. According to Deming, quality problems are due to- 1
(a) Due of management (b) Due to method
(c) Due of machine (d) Due to material
- iv. TQM focuses on- 1
(a) Employee (b) Customer
(c) Both (a) and (b) (d) None of these
- v. Control chart is a- 1
(a) Process monitoring tool (b) Process control tool
(c) Both (a) and (b) (d) None of these
- vi. Which of the following is a control chart for attributes? 1
(a) p Chart (b) np Chart
(c) c Chart (d) All of these
- vii. Which of the following is NOT a quality improvement tool? 1
(a) 5S-diagram (b) Pareto chart
(c) Ishikawa diagram (d) Scatter diagram

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[2]

[3]

- viii. Ishikawa diagram is also known as- **1**
 (a) Scatter diagram (b) Fishbone diagram
 (c) Histogram (d) All of these
- ix. The objective of ISO-9000 family of quality management system- **1**
 (a) Customer satisfaction (b) Employee satisfaction
 (c) Skill enhancement (d) Environmental issues
- x. Which of the following for environmental management? **1**
 (a) ISO-9000 (b) ISO-14000
 (c) ISO-26000 (d) ISO-31000

- Q.2 Attempt any two:
- i. Define TQM. Explain need of quality management. **5**
 ii. Explain Goal post view of quality and Kaizen view of quality. **5**
 iii. Explain different types of quality with example. **5**


- Q.3 Attempt any two:
- i. What are key principles of TQM? Explain benefits associated with TQM. **5**
 ii. Write Deming's 14-point philosophy. **5**
 iii. Write short notes on the following- **5**
 (a) Paradigms of Deming's theory of management
 (b) Components of Deming's theory of management.

- Q.4 Attempt any two:
- i. Explain the funnel marble experiment with its rules for adjustment. **5**
 ii. Write various rules which indicate that process is out of control. **5**
 iii. Write short notes on the following- **5**
 (a) Attributes control charts (b) Variables control chart.

- Q.5 Attempt any two:
- i. Explain Ishikawa diagram with an example. What are various steps in constructing an Ishikawa diagram? **5**
 ii. What is Benchmarking? Explain its various types. **5**
 iii. Explain the concept of house of quality (QFD). Discuss the steps used in building the house of quality. **5**

- Q.6 Attempt any two:
- i. Explain acceptance sampling. Discuss its various types. **5**
 ii. Define quality circle. Discuss the steps for establishing the quality circle. **5**
 iii. Define quality audit. Discuss different types of quality audits. **5**

MARKING SCHEME

Total No. of Questions: 6		Total No. of Printed Pages: 2	
Enrollment No.....			
 Knowledge Is Power	Faculty of Engineering		
	End Sem (Odd) Examination Dec-2019		
	ME3E106 TQM & SQC		
Programme: B.Tech.		Branch/Specialisation: ME	
Duration: 3 Hrs.		Maximum Marks: 60	

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1	i.	(d) All of the above	1
	ii.	(a) Loss curve (b) Reducing manpower	1
	iii.	(c) Due to management	1
	iv.	(b) Customer	1
	v.	(c) Both (a) and (b)	1
	vi.	(d) All of the above	1
	vii.	(a) 5S-diagram	1
	viii.	(b) Fishbone diagram	1
	ix.	(a) Customer satisfaction	1
	x.	(b) ISO-14000	1
Q.2	i.	Process definition (1marks), each variation (2 marks)	5
	ii.	Goal post view of quality (2 marks), Kaizen view of quality (3 marks)	5
OR	iii.	Quality of design (3 marks), quality of conformance (1 marks) and quality of performance (1 marks)	5
Q.3	i.	Principles (2 marks), benefits (3 marks)	5
	ii.	Deming's 14-point philosophy (5 marks)	5
OR	iii.	Paradigms (3 marks), components (2 marks)	5

Q.4	i.	Funnel marble experiment (1 mark), 4 rules (4 marks)	5
	ii.	First 4 rules (2 marks), last 3 rules (3 marks)	5
OR	iii.	Attributes control charts (3 marks), variables control chart (2 marks)	5
Q.5	i.	Ishikawa diagram explanation (2 marks), steps of construction (3 marks)	5
	ii.	Definition of Benchmarking (1 marks), various types (4 marks)	5
OR	iii.	Concept of house of quality (2 marks), steps (3 marks)	5
Q.6	Attempt any two:		
	i.	Acceptance sampling (2 marks), types (3 marks)	5
	ii.	Definition of Quality Circle (2 marks), steps (3 marks)	5
	iii.	Definition of quality audit (1 marks), types (4 marks)	5
