

Enrollment No.....



Faculty of Engineering
End Sem (Odd) Examination Dec-2019
CE3EC06 Construction Quality Control & Management
Programme: B.Tech. Branch/Specialisation: CE

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. The process mapping is a _____ diagram. 1
 (a) Data flow (b) Work flow
 (c) Cash flow (d) Audit
- ii. Which one is not the basic feature of TQM? 1
 (a) Management commitment
 (b) Focus on customer (both external and internal),
 (c) Exclusion of Employee involvement, form quality aspect
 (d) Continuous improvement
- iii. What is defined as a set of development and quality assurance efforts performed to achieve a common goal, based on the release timeline? 1
 (a) Test Set (b) Requirement
 (c) Test Plan (d) Cycle
- iv. The concepts of quality planning, quality control, quality improvement known as 'Trilogy of quality' was introduced by _____ 1
 (a) Philip (b) Crosby (c) Dr. Juran (d) Edward Deming
- v. According to Deming, Quality problems are 1
 (a) Due to management (b) Due to method
 (c) Due to machine (d) Due to material
- vi. Which of the following is responsible for quality objective? 1
 (a) Top level management (b) Middle level management
 (c) Frontline management (d) All of these

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[2]

- vii. Control chart is a **1**
 (a) Process monitoring tool (b) Process control tool
 (c) Both (a) and (b) (d) None of these
- viii. Quality control helps to _____ the risks of overdesign that _____ the overall cost. **1**
 (a) Maximize, Increase (b) Minimize, Increase
 (c) Maximize, Decrease (d) Minimize, Decrease
- ix. High cost, low volume items requires **1**
 (a) No inspection (b) Little inspection
 (c) Intensive inspection (d) 100% inspection
- x. As per the CPWD guide lines material should be tested at laboratory of. **1**
 (a) Contractor (b) CPWD Headquarter
 (c) Third party laboratories (d) None of these
- Q.2 i. Explain Quality control. **4**
 ii. What is meant by quality management system and what are the methods of quality management system? **6**
- OR iii. Discuss the importance of monitoring and control phase during the execution of a construction project. **6**
- Q.3 Attempt any two:
 i. Explain Drawing and Quality Audit. **5**
 ii. Explain Quality System approach in building design & construction. **5**
 iii. Explain Quality system in Architectural Design. **5**
- Q.4 Attempt any two:
 i. Explain the aspects of Quality audit in construction works as per ISO: 9000 **5**
 ii. What are some major obstacles to TQM implementation? **5**
 iii. Define total quality control. What are the statistical methods for quality control? **5**
- Q.5 i. What are the requirements of TQM system in building maintenance? **4**

[3]

- ii. Explain benefits and item-wise checklist for quality control. **6**
- OR iii. Explain quality checking as per CPWD specification. **6**
- Q.6 i. What are the objectives of quality assurance? **4**
 ii. Explain quality control of service line water supply and drainage system. **6**
- OR iii. Explain how you will improve quality through mechanization? **6**

Marking Scheme

CE3EC06 Construction Quality Control & Management

Q.1	i.	The process mapping is a _____ diagram.		1
		(b) Work flow		
	ii.	Which one is not the basic feature of TQM?		1
		(c) Exclusion of Employee involvement, form quality aspect		
	iii.	What is defined as a set of development and quality assurance efforts performed to achieve a common goal, based on the release timeline?		1
		(d) Cycle		
	iv.	The concepts of quality planning, quality control, quality improvement known as 'Trilogy of quality' was introduced by _____		1
		(c) Dr. Juran		
	v.	According to Deming, Quality problems are		1
		(a) Due to management		
	vi.	Which of the following is responsible for quality objective?		1
		(d) All of these		
	vii.	Control chart is a		1
		(c) Both (a) and (b)		
	viii.	Quality control helps to _____ the risks of overdesign that _____ the overall cost.		1
		(d) Minimize, Decrease		
	ix.	High cost, low volume items requires		1
		(c) Intensive inspection		
	x.	As per the CPWD guide lines material should be tasted at laboratory of.		1
		(c) Third party laboratories		
Q.2	i.	Quality control.		4
		Definition	1 mark	
		Explanation	3 marks	
	ii.	Quality management system	2 marks	6
		Methods of quality management system		
		2 marks for each method (2 marks * 2)	4 marks	
OR	iii.	Importance of monitoring	3 marks	6
		Importance of control phase	3 marks	

Q.3	Attempt any two:		
	i.	Correct explanation of Drawing and Quality Audit.	5
	ii.	Quality System approach in building design & construction.	5
		Stepwise marking	
	iii.	Quality system in Architectural Design.	5
		2.5 marks for each	(2.5 marks *2)
Q.4	Attempt any two:		
	i.	Aspects of Quality audit in construction works as per ISO: 9000	5
		2.5 marks for each aspect	(2.5 marks *2)
	ii.	Obstacles to TQM implementation	5
		1 mark for each obstacle	(1 mark * 5)
	iii.	Definition total quality control	1 mark
		Statistical methods for quality control	
		2 marks for each method (2 marks * 2)	4 marks
Q.5	i.	Requirements of TQM system in building maintenance	4
		1 mark for each requirement	(1 mark *4)
	ii.	Benefits for quality control	6
		1 mark for each (1 mark * 3)	3 marks
		Item-wise checklist for quality control	3 marks
OR	iii.	Quality checking as per CPWD specification	6
		1 mark for each specification	(1 mark * 6)
Q.6	i.	Objectives of quality assurance	4
		1 mark for each objective	(1 mark * 4)
	ii.	Quality control of service line water supply	6
		Quality control of drainage system	3 marks
OR	iii.	Improve quality through mechanization	6
		1 mark for each reason for improvement	(1 mark * 6)
