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**P.E.S. College of Engineering, Mandya - 571 401***(An Autonomous Institution affiliated to VTU, Belagavi)***Fifth Semester, B.E. - Civil Engineering****Semester End Examination; February / March - 2023****Construction Quality and Safety Management***Time: 3 hrs**Max. Marks: 100***Course Outcomes***The Students will be able to:**CO1: Describe the quality management principles, & control processes related to construction projects.**CO2: Demonstrate the knowledge of Total Quality Management for quality certification of construction projects.**CO3: Define the safety concepts pertaining to safety management in construction industry.**CO4: Illustrate the safety practices to mitigate common hazards in construction site.***Note: I) PART - A** is compulsory. **Two** marks for each question.**II) PART - B:** Answer any **Two** sub questions (from a, b, c) for Maximum of **18 marks** from each unit.

Q. No.	Questions	Marks	BLs	COs	POs
I : PART - A		10			
1 a.	Define the term 'Quality'.	2	L1	CO1	PO2
b.	Name the types of TQM models.	2	L1	CO1	PO2
c.	Define 'Quality control'.	2	L1	CO2	PO1
d.	Define safety programme in construction.	2	L1	CO3	PO1
e.	List any two reasons for construction accidents.	2	L1	CO4	PO1
II : PART - B		90			
UNIT - I		18			
2 a.	Explain the principles of Quality management.	9	L2	CO1	PO2
b.	Define term Quality cost and explain its components.	9	L1	CO1	PO2
c.	List the impact of quality management in business and commerce.	9	L1	CO1	PO2
UNIT - II		18			
3 a.	Explain the building blocks of TQM.	9	L2	CO2	PO1
b.	What is a quality manual of any organization? Illustrate the quality procedures.	9	L1	CO2	PO1
c.	Explain the five main elements of ISO 9001:2008 and how those elements are related?	9	L2	CO2	PO1
UNIT - III		18			
4 a.	Write a note on quality control in;				
	i) Concreting	9	L1	CO2	PO1
	ii) Brick work				
	iii) Stone masonry				
b.	Explain the term quality control in form work and foundation.	9	L2	CO1	PO2
c.	Explain the necessity of OC in construction projects.	9	L2	CO1	PO2

UNIT - IV**18**

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| 5 a. Write and elaborate salient features of safety programs. | 9 | L1 | CO3 | PO1 |
| b. List and explain the safety clauses in contract documents. | 9 | L1 | CO3 | PO1 |
| c. Write a note on: | | | | |
| i) Safety policy | 9 | L1 | CO3 | PO1 |
| ii) Safety training | | | | |
| iii) Safety records | | | | |

UNIT - V**18**

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| 6 a. Explain the causes of accidents and safety measures of construction accidents. | 9 | L1 | CO4 | PO1 |
| b. What are the legal requirements and responsibility of employers in construction accidents? | 9 | L1 | CO4 | PO1 |
| c. List the actions to be taken by the site-in-charge in case of accidents. | 9 | L1 | CO4 | PO1 |

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