

Total No. of Questions : 12]

SEAT No. :

P3034

[Total No. of Pages : 3

B.E. (CIVIL) (Semester - I)
TQM AND MIS IN CIVIL ENGINEERING
(2008 Pattern) (Elective - II)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer to the two sections should be written in separate answer books.
- 2) Answer Q1 or Q2, Q3 or Q4, Q5 or Q6 from Section - I, and Q7 or Q8, Q9 or Q10, Q11 or Q12 from section - II
- 3) Neat diagrams must be drawn wherever necessary.
- 4) Figures to the right side indicate full marks.
- 5) Use of logarithmic tables slide rule. Mollier charts, electronic pocket calculator and steam tables is allowed.
- 6) Assume Suitable data if necessary.

SECTION - I

- Q1)** a) Explain with example the definition of quality given by Juran, Deming Crosby, applicable in the context of civil construction. In your opinion, are these definitions implemented on project sites? Elaborate **[10]**
- b) Explain in brief any 4 important parameters arising as a result of the multinational construction companies entering the Indian Construction market, which have forced project managers to be quality oriented. **[8]**

OR

- Q2)** Explain in brief 9 parameters which affect the attainment of quality of a bituminous pavement road construction **[18]**
- Q3)** a) Enumerate 16 parameters which are to be checked for achieving the quality of formwork used for RCC slab construction **[8]**
- b) Explain in brief any 4, ISO 9001 : 2000 Quality Management System standards requirements with examples from a construction organization. **[8]**

OR

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- Q4)** a) Example 16 parameters which are to be checked for achieving the, quality of concreting done for RCC column [8]
- b) Differentiate with example, between [8]
- i) Quality and TQC.
 - ii) QC and QA
 - iii) Conformity and NC
 - iv) Quality Management as against management of quality.
- Q5)** Discuss the 7 types of construction defects and suggest a preventive strategy to overcome them. Discuss cost of poor quality with examples. [10+6]

OR

- Q6)** Explain in detail [16]
- a) TQM
 - b) Six Sigma
 - c) Kaizen
 - d) SCM

SECTION - II

- Q7)** What is MIS? Explain any 4 decision support systems which along with an MIS are very useful in managing construction projects. [16]
- OR**
- Q8)** With a flow diagram explain in detail how various types of data and information need to be encoded and decoded in order to obtain a complete database, while preparing an MIS. [16]

Q9) You are the CEO of an infrastructure company dealing with mega projects being executed on a PPP scheme. Elaborate on :- **[16]**

- i) Operational control
- ii) Management Control
- iii) Strategic planning

Which will enable you to keep a track of all projects being executed in various parts of the country.

OR

Q10) You are the IT head of an MNC dealing with construction materials import-export business, focused on business in the Asia-Pacific region. Detail out the data and information necessary for you so as to obtain:- **[16]**

- i) Strategic Control
- ii) Operational Control
- iii) Management Control

Q11) Explain in detail **[18]**

- a) Information Systems Technology
- b) Communications Technology
- c) Data Processing Softwares

OR

Q12) Explain in detail **[18]**

- a) Hardware backup support for intelligent transport system
- b) GIS and ERP
- c) Information based support system.

