

FIFTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY—OCTOBER, 2012.

CONSTRUCTION MANAGEMENT AND SAFETY ENGINEERING

(Common for CE, AR, EN, QS and WR)

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I Answer *all* questions in one or two sentences. Each question carries 2 marks.

1. What is feasibility report ?
2. Define the term 'Critical path'.
3. Define 'Contract'.
4. What is demurrage charge ?
5. Define 'Entrepreneurship'.

(5x2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* questions. Each question carries 6 marks.

1. What are the short comings of bar charts ?
2. Explain the terms 'administrative approval' and 'Technical sanction'.
3. List the common irregularities that may occur in muster rolls.
4. Explain the procedure to be followed for write off of stores.
5. What are the disadvantages of internal recruitment ?
6. List the functions of salesmanship.
7. List any six steps to be taken to prevent accidents.

(5x6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each question carries 15 marks.)

UNIT – I

- III (a) What is a project report ? What information should a project report furnish ? (any seven).

7

- (b) Consider a project comprising the activities A, B, C, D, E, F and G. The activities have the following relationships :

A is initial activity, A precedes B, C and D.

B precedes E; C precedes F; D precedes E ;

E precedes F ; F precedes G.

G is the terminal activity.

The following table indicates the relationships and also activity duration :

| Activity | Preceding | Succeeding | Duration |
|----------|-----------|------------|----------|
| A        | None      | B, C, D    | 3        |
| B        | A         | E          | 6        |
| C        | A         | F          | 16       |
| D        | A         | G          | 10       |
| E        | B         | F          | 8        |
| F        | C, E      | G          | 5        |
| G        | D, F      | None       | 3        |

Construct the CPM network for the project. Identify the critical path and calculate the completion time of the project.

8

OR

- IV (a) Describe the advantages of CPM network in the execution of a project. (any seven) 7
- (b) What is the need to divide a project into number of constructional stages ? Write the constructional stages for a road construction project (any eight). 8

UNIT - II

- V (a) What are the essential features of :
- (i) Piece work system. 7
- (ii) Item-rate system. 7
- (b) What are the particulars to be furnished in a tender document ? 8

OR

- VI (a) Explain pre-measurement and check measurement and in which cases pre-measurements are made. 7
- (b) What are the deductions to be made from the bills ? 8

UNIT - III

- VII (a) Describe the method of maintaining materials at site account. 7
- (b) Describe the operation of the following earth moving equipments :
- (i) Power shovels
- (ii) Drag lines
- (iii) Hoes
- (iv) Bull dozer. 8

OR

|   | Marks |
|---|-------|
| VIII (a) What are the advantages of Training programme ? (any seven). | 7     |
| (b) How the interviews are classified ?                               | 8     |

## UNIT – IV

|   |   |
|---|---|
| IX (a) What are the steps to be followed to prevent accidents in construction ?<br>(Seven points) | 7 |
| (b) List the functions of management.   | 8 |

OR

|  |   |
|--|---|
| X (a) List the basic guidelines to be followed for safety in construction industry. (any seven). | 7 |
| (b) Explain the various elements of 'Quality system'. (any eight)                                | 8 |

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