

Diploma in Civil Engineering

Term-End Examination

June, 2010

01825

BCE-051 : CONSTRUCTION MANAGEMENT

Time : 3 hours

Maximum Marks : 70

Note : *Question No. 1 is compulsory. Attempt any four questions from the remaining. All questions carry equal marks. Give neat and labelled sketches wherever necessary.*

1. (a) State the most appropriate answer from the options given in the following questions : **4x2=8**
- (i) Which of the following is the main feature of construction industry :
- (A) Complexity
 - (B) Mobility of facility
 - (C) Multiplicity of agencies
 - (D) All of the above
- (ii) Cement is usually delivered to the construction site in the bag of :
- (A) 48 kg
 - (B) 50 kg
 - (C) 53 kg
 - (D) 40 kg

- (iii) In CPM network, activities are connected to the :
- (A) finish - to - finish logic
 - (B) start - to - finish logic
 - (C) finish - to - start logic
 - (D) start - to - start logic
- (iv) Crashing potential of an activity is :
- (A) Normal time - Crash time
 - (B) Crash time - Normal time
 - (C) $\frac{\text{Normal time}}{\text{Crash time}}$
 - (D) None of the above

(b) Match the column :

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|---------------------------------------|---|
| (i) Project planning and design phase | (A) Guard tower |
| (ii) Contour map | (B) Project procurement process |
| (iii) Site protection | (C) Repetitive works |
| (iv) PERT | (D) Site characteristics |
| (v) Line of balance (LOB) | (E) Valid consideration |
| (vi) Element of a contract | (F) Three - time probabilistic approach |

2. (a) "The number of bankruptcies in construction is almost equal to new entrants to in its fold". Explain in brief. 7
- (b) Discuss Fast Track Approach of construction management process. Describe its advantages over conventional sequential approach. 7
3. (a) Describe the methods normally employed for site selection. What are the factors affecting site selection ? 7
- (b) Discuss the importance of storage methodology employed for different material at site. List the precautions to be taken to prevent scaling and rusting of structural steel. 7
4. (a) What is work breakdown structure ? Give broad classification of work breakdown levels while discussing two of them in brief. 7
- (b) What do you understand by pre - qualification of contractors ? Give its advantages and disadvantages. 7
5. (a) Why are sub - contractors needed on a major construction project ? What type of agreement is entered into between a prime contractor and a sub - contractor ? 7
- (b) What do you understand by lump sum contract ? Discuss its relative merits and demerits. 7

6. (a) A project consists of 6 activities. Activities A, C and E start concurrently in the beginning of the project. Activity B succeeds A whereas activity D follows A, C and E. Activity E is preceded by F. The project finishes with completion of activities B, D and F. Draw the network. 7
- (b) Describe 'construction drawings' and 'as executed drawing'. Who prepares them? 7
7. Write short notes on *any four* of the following : $4 \times 3\frac{1}{2} = 14$
- (a) Project life cycle
 - (b) Site drainage
 - (c) Precedence network analysis
 - (d) Time - cost trade off
 - (e) Types of contract
 - (f) Retention money
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