

DIPLOMA IN CIVIL ENGINEERING
DCLE(G)

00652 **Term-End Examination**
June, 2019

BCE-051 : CONSTRUCTION MANAGEMENT

Time : 2 hours

Maximum Marks : 70

Note : *Question No. 1 is compulsory. Answer any four questions out of the remaining questions.*

1. An R&D project has a list of tasks to be performed whose time estimates are as given below. Draw the project network diagram and find the critical path. $8+6=14$

| Activity | Activity Name | In days | | |
|----------|---------------|---------------------------|----------------------------|----------------------------|
| | | Optimistic Time (t_0) | Most Likely Time (t_m) | Pessimistic Time (t_p) |
| 1 - 2 | A | 4 | 6 | 8 |
| 1 - 3 | B | 2 | 3 | 10 |
| 1 - 4 | C | 6 | 8 | 16 |
| 2 - 4 | D | 1 | 2 | 3 |
| 3 - 4 | E | 6 | 7 | 8 |
| 3 - 5 | F | 6 | 7 | 14 |
| 4 - 6 | G | 3 | 5 | 7 |
| 4 - 7 | H | 4 | 11 | 12 |
| 5 - 7 | I | 3 | 4 | 6 |
| 6 - 7 | J | | 9 | 10 |

2. (a) Define Earnest Money Deposit (EMD) and Security Deposit (SD) related to tenders.
- (b) Write names of different types of tenders.
Explain any one type briefly. $7+7=14$
3. (a) Discuss the importance of safety in Construction Projects.
- (b) What safety measures should be taken in high rise multi-storied building construction ? List out the Personal Protective Equipment (PPE) required by a worker. $7+7=14$
4. (a) What is Risk Management ? Explain in detail, various risks associated with construction projects.
- (b) How can you control and reduce environment pollution and wastage in a construction project ? $7+7=14$

5. Explain any **four** of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Workmen Compensation Act, 1923
- (b) Working Capital
- (c) Productivity
- (d) Quality Control at Site
- (e) Duties of a Supervisor

6. Write short notes on any **four** of the following :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Schedule of Rates
- (b) Lump Sum Contracts
- (c) Arbitration Agreement
- (d) Site Investigation
- (e) Bar Chart

7. (a) How will you assess a worker brought in by a sub-contractor at project site for his trade competency ?

(b) What are the three classifications of workers from wage fixation point of view by the government as per the Minimum Wages Act ?

(c) Can you plan the training of workers at site ? If yes, then how would you plan and execute ?

$$4+4+6=14$$

8. Differentiate between any **four** of the following terms :

$$4 \times 3 \frac{1}{2} = 14$$

- (a) Mediation and Arbitration
- (b) PERT and CPM
- (c) Court and Tribunal
- (d) Direct and Indirect Cost
- (e) Wages and Compensation
