

**B.Tech. Civil (Construction Management) /
B.Tech. Civil (Water Resources Engineering)**

Term-End Examination

00313

June, 2018

ET-524(B) : CONSTRUCTION MANAGEMENT – I

Time : 3 hours

Maximum Marks : 70

Note : *Attempt any five questions. All question carry equal marks. Use of scientific calculator is permitted.*

1. (a) What are the characteristics of a construction project ? How do they differ from other routine projects ? 7
- (b) What are the major benefits of planning, scheduling and controlling ? 7
2. Discuss various types of contracts and the circumstances under which each of the contracts is useful. State their merits and demerits. 14

3. Draw the network diagram of a project comprising 9 tasks. Tasks A, C and D commence at the same time. Task B follows completion of A. Task G succeeds B and D. Task E depends upon the completion of D and is succeeded by F. Task H begins after C and A are completed. Task J follows completion of B. Tasks H, G, J and F are final tasks.

14

4. Explain the following with the help of neat sketches :

$2 \times 7 = 14$

- (a) Budgeted cost of work scheduled
- (b) Budgeted cost of work performed
- (c) Actual cost of work performed
- (d) Positive and negative cost variance
- (e) Positive and negative schedule variance
- (f) Cost performance index
- (g) Schedule performance index

5. Disputes in contract are unavoidable due to many reasons, resulting in arbitration and litigation. State the common reasons for such disputes and how to mitigate them.

14

6. Discuss the following aspects of site organisation : $4 \times 3 \frac{1}{2} = 14$

- (a) Storage of materials
- (b) Protection and security of site
- (c) Water for construction
- (d) Site drainage

7. Write short notes on any **four** of the following : $4 \times 3 \frac{1}{2} = 14$

- (a) Depreciation
 - (b) Bid bonds and Performance bonds
 - (c) Advantage of CADD system over manual system
 - (d) Storage of reinforcing and structural steel
 - (e) Liquidated Damages
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