



MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code : CE(PC)601 Construction Engineering & Management

UPID : 006731

Time Allotted : 3 Hours

Full Marks : 70

The Figures in the margin indicate full marks.

Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

1. Answer *any ten* of the following :

[1 x 10 = 10]

- (I) Tractor are either _____ tractor or wheel tractor.
- (II) _____ tendering is used when all the information necessary to calculate a realistic price is available when tendering commences.
- (III) For any tender NIT stands for _____ .
- (IV) Define an Indirect cost related to tender.
- (V) Define Aspect.
- (VI) The salient feature of functional organization is _____ .
- (VII) Site order book is used for recording of _____ .
- (VIII) Critical Path Network helps an engineer : _____ .
- (IX) Define Shallow foundation.
- (X) The Overall in-charge of an organization at the site responsible for the execution of the works, is _____ .
- (XI) Define a Milestone chart in project analysis.
- (XII) The first stage of construction is _____ .

Group-B (Short Answer Type Question)

Answer *any three* of the following :

[5 x 3 = 15]

2. State the various aspect governed by building bye laws. [5]
3. Explain emergency lightning and escape lightning. [5]
4. Discuss briefly activity and event of network analysis. [5]
5. Explain the objectives of monitoring and controlling of a project. [5]
6. Discuss about dumper and conveyor. [5]

Group-C (Long Answer Type Question)

Answer *any three* of the following :

[15 x 3 = 45]

7. (a) Explain the general rules for bathroom and water closet. [8]
(b) Describe the basic requirements for fitments for office building. [7]
8. The three estimates t_0 , t_m and t_p of each activities of a project are given below:- [4+4+3+4]

Activity	t_0	t_m	t_p
1-2	2	5	14
1-3	3	12	21
2-4	5	14	17
3-4	2	5	8
4-5	1	4	7
3-5	6	15	30

- a) Draw the network diagram
- b) Find the expected duration and variance of each activity.
- c) Calculate the early and latest occurrence time of each activity.
- d) Calculate the expected duration.
9. (a) Explain modular construction building types. [8]
(b) Short Note on-Advantages and Disadvantages of Precast Concrete [7]
10. (a) A dozer with a blade capacity of 3 m² has to strip soil that has a swelling factor of 25% in thin horizontal layers for a distance of 50 m. The dozer's forward speed is 2 km/hr and return speed is 5 [8]

km/hr. In each cycle it consumes a fixed time of 0.4 mins. For shifting gears, adjusting blade etc. Compute the output of the dozer.

(b) State the difference between Power Shovel and backhoe.

[7]

11. Describe short note on any three of the following:-

[5+5+5]

- a) Roller
- b) Hauling equipment
- c) Right and responsibility of owner, contractor and engineer.
- d) Means of access
- e) Fire protection provisions in tall building.

*** END OF PAPER ***