

**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) What is the full form of PERT?
- (II) What is deep foundation?
- (III) What is rolling resistance?
- (IV) What is a Tender?
- (V) What is item rate contract?
- (VI) What are the documents for the tender form to be submitted?
- (VII) What are the minimum requirements of a residential building?
- (VIII) What is the rear open space of a corner plot whose area is less than 300 sq.m ?
- (IX) What is a fire barrier?
- (X) What is the role of a dummy activity in a network?
- (XI) What will happen if there is no provision for circulation in a building plan?
- (XII) Is a ventilation shaft required for fully air-conditioned residential buildings? provide necessary justifications.

Group-B (Short Answer Type Question)

Answer any three of the following :

[5 x 3 = 15]

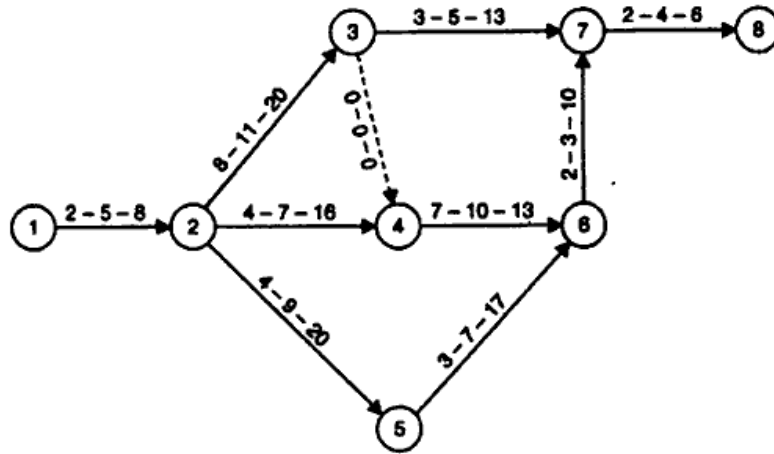
2. Write a short note on different compaction equipment for concrete? [5]
3. Briefly state the duties and liabilities of an Engineer. [5]
4. What is FAR? How to calculate FAR? [5]
5. Briefly state the fire safety requirements in a building. [5]
6. Name the components Manually Operated Electronic Fire Alarm (MOEFA) System, and state the working principle of it. [5]

Group-C (Long Answer Type Question)

Answer any three of the following :

[15 x 3 = 45]

7. (a) Briefly discuss the procedure of settlement of dispute in a Civil Engineering contract by Arbitration. [8]
(b) Discuss the duties and responsibilities of an Assistant Engineer/ Sub-divisional Officer in Public Works Department (PWD). [4]
(c) Why is it necessary to include the tender notice in the contract document? [3]
8. (a) What are the different types of precast systems? [10]
(b) Describe the method of laying bricks in walls. [5]
9. (a) Classify different types of buildings. [5]
(b) What is meant by grouping? How grouping is important for a good building plan? [7]
(c) Why use of natural lighting must be emphasized in planning a building as far as possible? [3]
10. (a) What do you mean by building bylaws? [3]
(b) What are the objectives of framing building bylaws? [3]
(c) Write a short note on components of building automation systems. [9]
11. (a) The following figure shows the network for a construction project, with the three-time estimates of each activity marked. Determine: [5]
Critical path and its standard deviation



(b) Probability of completion of project in 40 days

[5]

[Z (+) = +1.7, Probability (P_r) = 95.54%

Z (+) = +1.8, Probability (P_r) = 96.41%]

(c) Time duration that will provide a 95% probability of its completion in time

[5]

[Probability (P_r) = 94.52%, Z (+) = +1.6,

Probability (P_r) = 95.54%, Z (+) = +1.7,]

*** END OF PAPER ***

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