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(Pages : 3)

Reg. No.....

Name.....

**B.TECH. DEGREE EXAMINATION, MAY 2014**

**Fourth Semester**

Branch : Civil Engineering

**CE 010 402—CONSTRUCTION ENGINEERING AND MANAGEMENT**

(New Scheme—2010 Admission onwards)

[Regular/Improvement—Supplementary]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.  
Each question carries 3 marks.*

Write short notes on the following :—

1. Distempering.
2. Building automation.
3. Time estimates.
4. Floats.
5. Industrial safety.

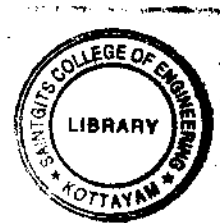
(5 × 3 = 15 marks)

**Part B**

*Answer all questions.  
Each question carries 5 marks.*

Write notes on :

6. Scaffolding and formwork.
7. Earthwork computation.
8. Mile-stone charts.
9. Crashed critical paths.
10. Labour welfare and social security.



(5 × 5 = 25 marks)

**Turn over**

## Part C

Answer all questions.

Each question carries 12 marks.

11. With neat sketches, explain the important features of (i) expansion joints ; (ii) Contraction joints ; and (iii) Sliding joints.

(3 × 4 = 12 marks)

Or

12. Explain clearly the procedure to be adopted in laying (i) mosaic flooring ; and (ii) granite flooring.

(2 × 6 = 12 marks)

13. What is meant by orientation of buildings ? Explain with neat sketches, the effects of orientation of buildings.

Or

14. Explain clearly the principles and performances of the pneumatic and hoisting equipments.

15. (a) How do you plan and control a project ? (4 marks)

- (b) What are the purposes of CPM ? (4 marks)

- (c) Define network analysis. Bring out the similarities and dissimilarities between PERT and CPM.

(4 marks)

Or

16. The activities of a project with their time estimates are given below :

Activity	Time estimates (days)		
	Optimistic	Most likely	Pessimistic
10-20	2	5	14
10-30	3	10	20
10-40	2	5	8
20-40	5	14	14
20-50	6	15	30
30-50	1	4	7
30-60	3	6	20
40-60	3	6	9
50-60	5	8	17

Draw the network. Find the expected length of the project, standard deviation and variance of the project.

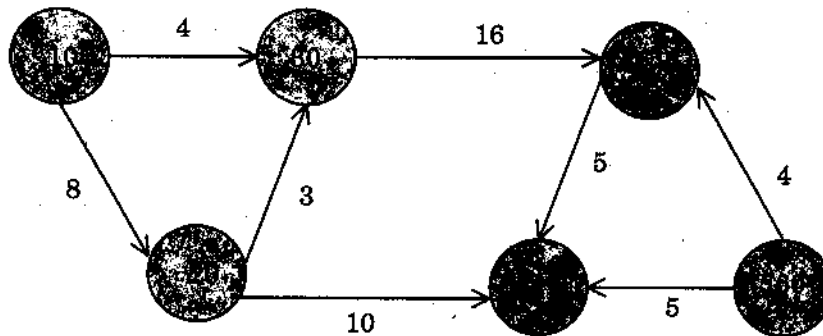


17. (a) Explain with illustration (i) free float ; and (ii) independent float.  
 (b) Explain the characteristics of cost versus time curve.  
 (c) What is network compression ? How it is achieved ?

(3 × 4 = 12 marks)

Or

18. For the network given below, calculate the floats for each activity in tabular form and find the critical path :



19. Discuss payment of wages act and minimum wages act. Comment on both as is perceived by the labourer.

Or

20. Clearly explain the role of state in labour welfare and social security.

[5 × 12 = 60 marks]