

**EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
DECEMBER 2008**

CE 04 802—CONSTRUCTION ENGINEERING AND MANAGEMENT

(2004 Admissions)

Time : Three Hours

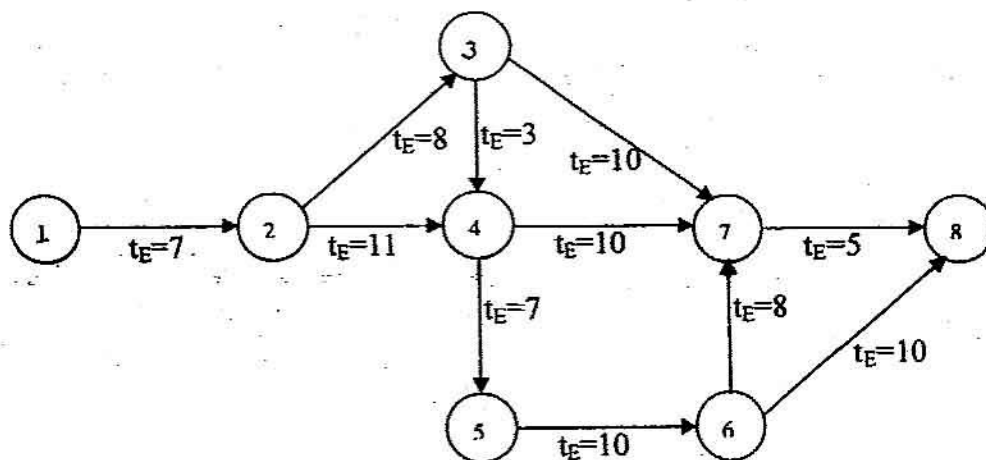
Maximum : 100 Marks

Answer all questions.

1. (a) What is a Gantt bar chart ? Explain, with the help of a suitable example, the method of preparing a bar chart.
- (b) Differentiate between PERT network and CPM network.
- (c) With the help of an illustrative example, explain the resources smoothing method.
- (d) What are the factors to be considered in the selection of construction equipments?
- (e) What constitute tender documents and what general information should be furnished in such documents?
- (f) Explain the general features of the lump-sum contract agreement that is in practice in Kerala.
- (g) What is ABC analysis? How do you do the analysis ?
- (h) How do you ensure the safety in the road construction ?

(8 × 5 = 40 marks)

2. For the network shown in figure, determine the slack for various events, if the schedule date of completion of the project is 45 days. Present the computations in tabular form.



(15 marks)

Or

Turn over

- (i) Explain how you determine the probability of meeting the scheduled date of completion of a project. (8 marks)
- (ii) On a network, PERT calculations yield a project length of 60 days with a variance of 9 days. Estimate the number of days required to complete the project with a probability of 98%. (7 marks)
3. (i) What are the functions of hoisting equipments ? (6 marks)
- (ii) List out the equipments used for excavation and explain them briefly. (9 marks)
- Or*
- (i) Explain the functions of a ready mixed concrete plant. (8 marks)
- (ii) What are the advantages of single and double acting stem/air hammers compared with drop hammer ? (7 marks)
4. (i) What are the different types of contracts ? Explain each one of them briefly. (8 marks)
- (ii) Why and when the earnest money deposit and security deposit are collected ? (7 marks)
- Or*
- (i) State briefly the methods to achieve quality control on concrete. (6 marks)
- (ii) What is a measurement book? (3 marks)
- (iii) What do you mean by pre-measurements and state the occasions when pre-measurements are taken ? (6 marks)
5. (i) What is ABC analysis ? How do you do the analysis ? (7 marks)
- (ii) Explain in details about the concept of materials management. (8 marks)
- Or*
- (i) How do you implement the safety programme in the construction field ? (5 marks)
- (ii) What is the concept of ethics ? (5 marks)
- (iii) What is the role of professional bodies ? (5 marks)

[4 × 15 = 60 marks]