G 565   (Pages : 4)   Reg. No.................................

Name...............,...............

B.TECH. DEGREE EXAMINATION, MAY 2014

Fourth Semester

Branch : Civil Engineering

ENGINEERING ECONOMICS AND CONSTRUCTION MANAGEMENT (C)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours   Maximum : 100 Marks

*Answer Part A and Part B in **separate** answer-books.*
Each part carries 50 marks.

Part A (Engineering Economics)

SECTION A

*Answer **all** questions.*
Each question carries 4 marks.

1. Define and distinguish between inflation and deflation.

2. Distinguish between Public and Private limited companies.

3. Discuss the objectives of book-keeping.

4. State the functions of financial management.

5. What are the functions of Commercial banks ?

(5 × 4 = 20 marks)

SECTION B

*Answer **all** questions.*
Each full question carries 10 marks.

6. (a) What are the inadequacies of the programme of industrialization in India ? Suggest your remedies.

Or

(b) Explain the demand-pull and cost-push effects of inflation.

7. (a) Explain the preparation of balance sheet account of an organisation. What are the documents for balance sheet preparation and how they are utilised ?

Or

(b) (i) Explain the advantages of double entry system over single entry system in accounting.

(ii) Differentiate between P and L account and Balance Sheet.

Turn over

8. (a) (i) "A normally functioning stock market is a good indicator of economic development of a country". Explain.

      (ii) Can we consider Indian stock markets as true indicators of economic developments ?

Or

(b) Explain the role and significance of profitability and liquidity principles in Commercial Banking ?

(3 × 10 = 30 marks)

Part B (Construction Management)

SECTION A

Answer all questions.
Each question carries 4 marks.

1. What are dummy variables ? What purpose they serve in network analysis ?

2. How do you plan and control a project ?

3. Explain (i) slack ; (ii) latest time allowable ; and (iii) **event.**

4. Explain resource allocation and resource leveling.

5. What are the major types of wage payment ? Explain.
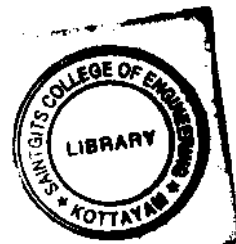
(5 × 4 = 20 marks)

SECTION B

Answer all questions.
Each full question carries 10 marks.

6. (a) A project contains the following activities with the time estimates (in weeks) :

Activity	t_o	t_m	t_p
1 – 2	1	1	7
1 – 3	1	3	7
1 – 4	2	2	8
2 – 5	1	1	1
3 – 5	2	6	15
4 – 6	2	6	8
5 – 6	3	6	17

(i) Draw the project network and identify the critical path.

(ii) Find the expected time and variance of each activity.

(iii) What is the probability that the project will be completed at least three weeks earlier than expected ?

Or

(b) A project has the following time schedule. Construct the **PERT** network and compute the critical path and its duration :

Activity	Time (weeks)	Activity	Time (weeks)
1 – 2	4	5 – 7	7
1 – 3	1	6 – 8	1
2 – 4	1	7 – 8	2
3 – 4	1	8 – 9	1
3 – 5	6	8 – 10	8
4 – 9	5	9 – 10	7
5 – 6	4		

7. (a) The following project carries a penalty cost of Rs. 200 per day (Rs. 1,400 per week) for any delay in completion beyond 26 weeks. Any task can be accelerated by upto 3 weeks at a cost of Rs. 1,000 per week reduction :

(i) Draw an arrow network diagram.

(ii) Identify the critical path and duration.

(iii) Determine which task, if any, you will crash, and by how much, to minimize the project cost ?

Task	Follows Task	Duration (week)
A	start	6
B	A	20
C	B	10
D	D	30
E	START	16

Or

Turn over

(b) A project contains the following activities :

Activity	Normal time	Crash time	Normal cost	Crash cost	Cost slope
1 – 2	3	2	1600	1800	200
1 – 3	7	5	1400	2000	300
2 – 3	5	3	2500	3000	250
3 – 4	4	3	500	800	300
3 – 5	2	1	4200	4400	200
4 – 5	8	6	1600	2200	500

(i) Draw the network for the activities.

(ii) Find the critical path.

(iii) What is the total project duration and associated cost ?

(iv) If the duration of the project is to be reduced by 1 week, which activity duration is to be reduced ?

8. (a) Discuss the impacts of worker's participation in management ? How it can be effectively used in the progress of the organisation ?

Or

(b) What are the different safety measures to be taken in an industry ? What is the role of the management and welfare officers.

(3 × 10 = 30 marks)