Group – D

6. (a) Risk management is important for success of a Project - justify.

(b) Distinguish Balanced and Unbalanced projects and state their impact in the business.

6 + 6 =12

7. (a) How to schedule a Project with unlimited resources?

(b) A manufacturer of hand drills sells a drill for Rs 2200. The various annual expenses are as follows:
Material Cost: Rs 50000
Labour Cost: Rs 25000
Cost of motor for each drill: Rs 1000
The factory over head: 40% of prime cost
Total office expenses: 10% of factory cost
Calculate the profit on each drill if annual production is 5000 units.

6 + 6 =12

Group – E

8. What is the role of a leader in a Quality Circle? A Q.C. was formed in Machine Shop. In the first meeting an effective brainstorming was conducted and the circle identified a problem pertaining to the same work area. In a next meeting the members identified 20 causes of the selected problem under four sub-heads. Considering you to be the leader of the circle present this case study and draw an Ishikawa diagram.

2 + 10=12

9. Discuss the FIFO and LIFO methods of Materials Management. Establish a mathematical relationship of Economic Order Quantity (EOQ).

4 + 4 + 4=12

B.TECH/BT/ME/7TH SEM/CHEN 4182/2019

PROJECT MANAGEMENT
(CHEN 4182)

Time Allotted : 3 hrs **Full Marks : 70**

Figures out of the right margin indicate full marks.

Candidates are required to answer Group A and any 5 (five) from Group B to E, taking at least one from each group.

Candidates are required to give answer in their own words as far as practicable.

Group – A
(Multiple Choice Type Questions)

1. Choose the correct alternative for the following: **10 × 1 = 10**

(i) Book value of a property
(a) is the worth of the property in the market
(b) is the worth of the property as shown in the owner's accounting records
(c) is independent of time
(d) cannot be predicted, without experimental determination.

(ii) Communication between same status of people is regarded as
(a) Vertical communication (b) Consensus
(c) Horizontal communication (d) Cross communication.

(iii) Asset value of a property
(a) is the worth of the property in the market
(b) is the worth of the property as shown in the owner's accounting records
(c) is independent of time
(d) cannot be predicted, without experimental determination.

(iv) In a Chemical Process Plant 15 ton product is obtained from 100 ton of raw-material. Such a plant should be located:
(a) Near raw-material source (b) Near an Airport
(c) Half-way between raw-material source and metropolitan city
(d) Near a port.

(v) The CPM network is invented by
(a) US Navy (b) Diamond Alkali Co.
(c) NASA (d) Du pont international.

(vi) In TQM Kaizen means
(a) deplorable condition (b) corporate planning
(c) continuous improvement (d) charitable movement.

(vii) At break-even capacity the annual manufacturing cost is
(a) Greater than annual sales revenue
(b) Less than annual sales revenue
(c) Equal to annual sales revenue.
(d) Equal to annual sales revenue minus taxable amount.

(viii) The β – distribution is
(a) a discrete distribution
(b) a synonym of normal distribution
(c) a skewed distribution
(d) a virtual distribution.

(ix) The 5% level of significance means ____ % confidence interval
(a)1 (b)95 (c)10 (d)0.

(x) Identify the standard related to Environmental Aspects of a project
(a) ISO 9000 (b) SA 8000
(c) OHSAS 18000 (d) ISO 14000

Group – B

2. (a) Mention the importance of Project Management. Describe the various phases of Project Life Cycle. What is Project Control?

(b) Discuss the role and responsibilities of a Project Manager.

(3+ 3 + 2) + 4= 12

3. As a team member of a Project Management group, you are to prepare a Feasibility Report for an endeavour of your discipline.

Please present your report in form of a case study highlighting the following sections:

(i) Introduction and Literature Survey
(ii) Aims & Objectives
(iii) MSDS, if any
(iv) Design Aspects
(v) Techno-Economic Feasibility
(vi) Conclusion

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Group – C

4. The following table gives data on normal time-cost and crash time-cost for a project

Activity	Normal		Crash	
	Time (days)	Cost (Rs.)	Time (days)	Cost (Rs.)
10--20	6	600	4	1000
10--30	4	600	2	2000
20--40	5	500	3	1500
20--50	3	450	1	650
30--40	6	900	4	2000
40--60	8	800	4	3000
50--60	4	400	2	1000
60--70	3	450	2	800

The indirect cost per day is Rs. 100. Drawing the Network, Crash the relevant activities systematically and determine the optimum project completion time and cost.

12

5. The following table gives various activities of a project and their time-estimates.

Activity	Estimated duration of activity in weeks		
	Optimistic Time	Most likely time	Pessimistic time
10--20	2	5	8
10--30	4	19	28
20--40	5	11	17
20--50	3	9	27
30--40	2	5	14
40--60	3	6	15
50--60	1	4	7
60--70	6	12	30
70--80	2	5	8

Draw the PERT network diagram. Determine expected time and standard deviation in each activity. Find out critical path of the project and project duration.

4 + 2 + 2+ 2 + 2= 12