Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

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B.Tech. (Ind. Engg. & Mgt.) (Spl. in TQM) (Sem.–5)

MAINTENANCE & PROJECT MANAGEMENT

Subject Code : IEM-503

M.Code : 70994

Time : 3 Hrs. Max. Marks : 40

INSTRUCTIONS TO CANDIDATES :

1. Attempt All EIGHT questions from SECTION-A carrying TWO marks each.
2. Attempt any SIX questions out of EIGHT from SECTION-B carrying FOUR marks each.

SECTION-A

1. **Answer the following :**

   a. Define maintenance. Explain the need of maintenance management in manufacturing organizations.

   b. Discuss the steps involved in maintenance planning in an organization.

   c. How do organizations evolve standards for maintenance tasks?

   d. Describe the objectives and organization structures for maintenance function.

   e. Explain the effects of corrosion on machinery. How corrosion can be prevented?

   f. Define project management. Elaborate the phases of project management.

   g. Compare the characteristics of CPM and PERT.

   h. Explain the steps involved in evaluating project deviations.

SECTION-B

2. Discuss the salient features, advantages, limitations and applications of predictive maintenance in manufacturing organizations.

3. Discuss the documents used in manufacturing organizations for maintenance planning.

4. Explain the maintenance control strategies adopted by manufacturing organizations.

5. How do organizations plan training for optimizing maintenance performance?

6. What do you understand by vibration analysis? How do maintenance engineers plan for monitoring and minimizing vibrations impact on machine performance?

7. Elaborate the common mistakes in planning and scheduling the projects. How these mistakes can be avoided?

8. Draw the network for the activities given on right, thereby identifying the critical path, total project duration and floats. If the activities 2-5, 3-7 and 8-9 involve the use of crane, determine the minimum number of cranes so as that no delay is caused. If there is only one crane, indicate the delay caused, if any.

Activity	Duration	Activity	Duration
1 - 2	2	3 - 7	5
1 - 3	2	4 - 6	3
1 - 4	1	5 - 8	1
2 - 5	4	6 -9	5
3 - 6	8	7 - 8	4
		8 - 9	3

9. Describe the steps involved in project commissioning and performance review.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.