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10MA764

Seventh Semester B.E. Degree Examination, Dec.2016/Jan.2017
Maintenance Engineering

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Define maintenance. Explain different types of maintenance system. (10 Marks)
b. Explain the functions of maintenance department. (10 Marks)
- 2 a. Explain repair cycle and repair complexity. (10 Marks)
b. Average number of breakdown per month is equate to 3 in only one inspection. Mean time to perform a repair is 24 hrs. Mean time to perform a inspection is 8 hrs. The value of output per uninterrupted time equate to Rs.3 lakhs. Cost of repair per uninterrupted time is equal to Rs.3000/- cost of inspection per uninterrupted is Rs.1250/-. Determine the optimal number of inspection/months in order to maximize the profit. Assuming that the breakdown rates varies with number of inspection. (10 Marks)
- 3 a. Explain the maintenance of any one machine tool. (10 Marks)
b. Explain in detail 'Performance evaluation'. (10 Marks)
- 4 a. Explain the importance of maintenance job analysis. (10 Marks)
b. A project schedule has the following characteristics construct the PERT network and find critical path and time duration of the project.

Sl. No.	Activity	Time in days
1	1-2	2
2	1-4	2
3	1-7	1
4	2-3	4
5	3-6	1
6	4-5	5
7	4-8	8
8	5-6	4
9	6-9	4
10	7-8	3
11	8-9	5

(10 Marks)

PART – B

- 5 a. Explain how computers can be effectively used in maintenance management. (10 Marks)
b. Explain the various maintenance information systems. (10 Marks)
- 6 a. Explain the economic importance of accidents. (10 Marks)
b. Write a note on 'Industrial House Keeping', mention its necessity and advantages of good housekeeping. (10 Marks)
- 7 a. Explain the safety standards for chemical hazards. (10 Marks)
b. Explain the safety standards for mechanical equipment. (10 Marks)
- 8 a. With a neat sketch, explain the working of electro static precipitators. (10 Marks)
b. Explain the vibration control techniques. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.