

F 3483

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Reg. No.....

Name.....

**B.TECH. DEGREE EXAMINATION, NOVEMBER 2014**

**Seventh Semester**

Branch : Mechanical Engineering

PLANT ENGINEERING AND MAINTENANCE (Elective I) [M]

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

**Part A**

*Answer all questions.*

*Each question carries 4 marks.*

1. Explain the design consideration for wear.
2. What do you mean by fatigue ? What are the causes of fatigue ?
3. Explain the general properties and uses of solid lubricants.
4. Explain the general properties and uses of Synthetic lubricants ?
5. Explain the principles and features of preventive maintenance.
6. Explain the causes of deterioration and obsolescence.
7. What do you mean by reliability ? Explain.
8. What are the various chances of failure ?
9. What are the common fire protection system ?
10. Explain the relevance of safety in the current industrial scenario.

(10 × 4 = 40 marks)

**Part B**

*Answer all questions.*

*Each question carries 12 marks.*

11. Explain the effect of moisture, gas and liquid on wear.

*Or*

12. Explain the procedure of calculating working life.

Turn over



13. Explain the various tests applicable to lubricants.

*Or*

14. What are the additives used for lubricants ? Explain their significance.

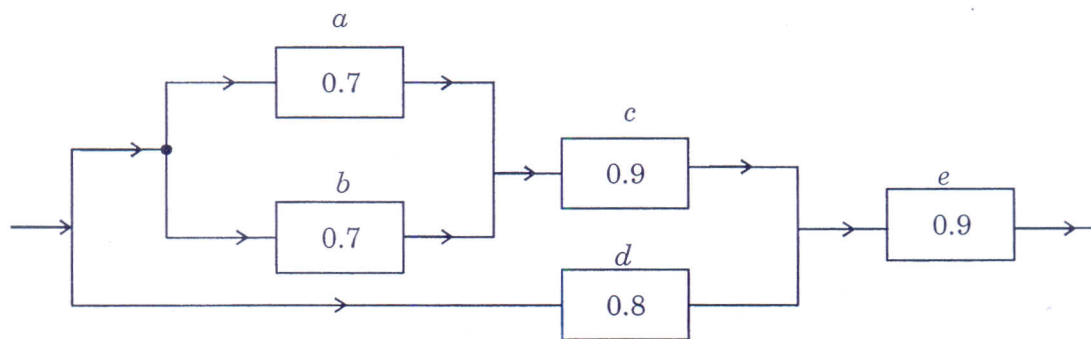
15. (a) Explain how a maintenance work is organized.

(b) Explain the various stages of evolution of maintenance management.

*Or*

16. What is MAP method ? Explain different steps in MAPI method.

17. Calculate the reliability of the system as shown in Figure.



*Or*

18. Explain wear and failure application of stochastic model for reliability studies.

19. Explain the legal provisions for safety in Industry.

*Or*

20. Explain the detailed procedure for designing of Safe Operation.

(5 × 12 = 60 marks)

