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## EIGHTH SEMESTER

**B.E. (COE)**

**MID SEM EXAMINATION**

**March**

**2006**

### **COE-411 COMPUTER COMMUNICATION AND ELECTRONICS SWITCHING**

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

**Note :** Answer **ALL** questions.

Assume suitable missing data, if any.

- 1 Why are networking standards important. Describe the four types of network standards and explain their differences. 5
- 2 What are the three essential elements of any network. Describe the differences between LANs and WANs. 4
- 3 Compare the following :
  - i. Synchronous, Asynchronous and Isochronous communication
  - ii. Shannon and Nyquist theorem
  - iii. OSI reference model and TCP/IP reference model 7
- 4 Explain the following :
  - i WDM
  - ii Multimode fiber 4

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## EIGHTH SEMESTER

**B.E. (COE)**

**MID SEM EXAMINATION**

**March.**

**2006**

### COE-412 SOFTWARE ENGINEERING

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

**Note :** Answer **ALL** questions.  
Assume suitable missing data, if any.

- 1      What is the difference between a software process model and a software process? Explain in brief the various phases of a waterfall model. List the various advantages of using a waterfall model. 6
- 2[a]    Explain why the process of project planning is an iterative one and why a plan must be continually reviewed during a software project. 2
- [b]    What are the various activities that take place while developing a software project. 2
- 3      Explain critical path method describing critical activities and significance of slack time using a suitable example. 4
- 4      Discuss the following in brief
- [a]    Spiral process model
- [b]    Capability maturity model 6

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**EIGHTH SEMESTER**

**B.E. (COE/EC)**

**MID SEM EXAMINATION**

**March 2006**

**COE/EC-413 FAULT TOLERANT  
COMPUTING**

*Time: 1 Hour 30 Minutes*

*Max. Marks : 20*

**Note :** Answer any **TWO** questions from the following.  
Assume suitable missing data, if any.

- 1[a] Define the terms (i) Maintainability and (ii) Availability & (iii) MTBF 3
- [b] Find the average number of failures /hour, if we have 4000 components with a failure rate of 0.02% per 1000 hours. 2
- [c] A first generation computer contains 10000 thermionic valves each with  $\lambda = 0.5\%$  (1000 hours). What is the period of 99% reliability? 5
- 2[a] Discuss the basic principle of one-dimensional path sensitizing technique with an illustrative example. What are the limitations of the same? 5

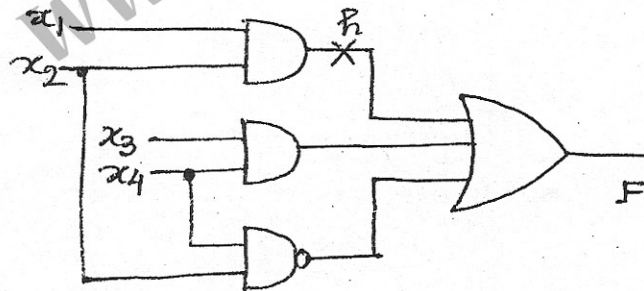


fig.1

- [b] In the above circuit the switching function  $F = x_1x_2 + x_3x_4 + x_2x_4$ . With Boolean difference technique, find the tests to detect s-a-0 and s-a-1 faults on the internal line h. 5

3 Write short notes on

[a] SPOOF Method

[b] Stuck-open faults in CMOS ICS.

5x2