

**MID SEM. EXAMINATION MARCH, 2014**  
**COE-411: COMPUTER COMMUNICATION AND ELECTRONICS SWITCHING**

Time: 1:30 hrs.

Max. Marks: 20

Note: Attempt all questions. All questions carry equal marks. Assume any missing data.

1. Compare seven layers ISO-OSI Reference Model with TCP/IP Model. Explain function of each layer of both models with example.
2. (a) What are the major classes of Guided Media and Unguided Media. Compare Guided Media with Unguided Media.  
(b) (i) State advantage of optical fiber cable over co-axial and twisted pair cable.  
(ii) Compare Physical addressing with Logical addressing.
3. (a) What is ARQ protocol? Compare and contrast Stop-and-Wait ARQ Protocol with Selective Repeat and Go-Back-N ARQ.  
(b) (i) Compare pure Aloha and slotted Aloha protocol.  
(ii) One hundred stations on a pure ALOHA network share a 1-Mbps channel. If frames are 1000 bits long. Find the throughput if each station is sending 10 frames per second.
4. (a) (i) List the various error correction and detection techniques.  
(ii) Define the cyclic codes and list the advantages of cyclic codes. Discuss the concept of redundancy in error detection and correction.  
(b) (i) Write the steps to compute the checksum in CRC code. Calculate CRC for the frame 1110110 and the generator polynomial  $= x^3 + x + 1$ . And also write the transmitted frame.  
(ii) Compare FDMA, CDMA and TDMA.

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Date.....

B.E. (Computer Engineering-VIIIth Semester)

Mid Semester Examination - March 2014

COE- 412(Software Engineering)

Time - 1 ½ Hours

Max. Marks -20

Note : Attempt All questions.

Q1. Write down the functional requirements of the training and placement division of an Institute and draw its static view. (3+3)

Q2. Define Requirement. What is the difference between Functional and Non Functional Requirements? Explain in detail the Non Functional requirements(NFRs) discussed in the class. List at least 10 NFRs given by IEEE standard 830. (4)

Q3. (a) What is the importance of Software Process Models? Explain in detail SPIRAL Model. List its Strengths and weakness.

(b) Which Process Model You will use to automate a chain of Hotels. Justify your answer. (3+1)

Q4. What are the different views of modeling? Define. List which diagrams are used to show these views in Structured Analysis and Object oriented Analysis using UML. (3)

Q5. What is Brain Storming. How it is different from JAD? Explain in detail. (3)

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**MID SEMESTER EXAMINATION, MARCH-2014**

VIII Sem. BE (COE)  
COE-413: Expert System

Time: 1:30 Hrs.

Max. Marks: 20

*Note: Attempt all questions.*

1.
  - a) What is an Expert System? Describe all the components with the help of a block diagram. [3]
  - b) What is Control Strategy and how it is used to develop the systems? [3]
  - c) What is the difference between Data Processing and Knowledge Engineering? [2]
  - d) Differentiate AI, Expert System and Knowledge based system [2]
2. Describe the following terms: [10]
  - a) Heuristic
  - a) Production Rules
  - b) Knowledge Representation
  - c) Search
  - d) Inference