Roll No... ..... No. of pages: 01 Date .....

B.E. (COE)

Eighth Semester

Mid SEMESTER EXAMINATION, March-2015

COE 411: Computer Communication & Electronic Switching

Max. Marks: 20

Time: 1:30 Hrs.

Note: *All questions are compulsory*
All questions carry equal marks.
Assume suitable missing data, if any

Q1: a) Why layered architecture is preferred in network? Discuss all 7 layers in OSI-ISO model in detail. **(2.5 marks)**

b) Explain TCP/IP. Compare and contrast between TCP/IP and OSI model. **(2.5 marks)**

Q2: a) Discuss the importance of CRC code. If the generator polynomial is $G(x) = x^4 + x + 1$ (i.e. divisor is 10010) and frame is: 1101011111, Calculate the transmitted frame. **(2.5 marks)**

b) Explain message switching. Compare the following multiple access techniques TDMA, FDMA, CDMA in detail. **(2.5 marks)**

Q3: a) Define Collision in shared medium. Differentiate between ALOHA and Slotted ALOHA protocols. Discuss their efficiencies in detail. **(2.5 marks)**

b) How Carrier Sense Multiple Access (CSMA) protocol handles collision. Discuss CSMA/CD and CSMA/CA in detail. **(2.5 marks)**

Q4: Write short notes on ANY TWO: **(5 marks)**

a) Guided and Unguided media
b) Switching methods
c) Network Topologies
d) Stop-and-Wait protocol and Selective repeat automatic repeat request protocol

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Roll No:_____

Total no. of pages: 1

BE COE

Eight Semester

Mid Semester Examination March 2015

COE 412 Software Engineering

Max Marks: 20

Time: 1:30 hrs

Note: Attempt all questions. Assume missing data, if any.

1. What are phases of software development? (1)
2. Is it possible to combine process models? (1)
3. What is the difference between functional and non-functional requirements? (1)
4. How requirements validation is done? (1)
5. State four problems that are faced during requirements elicitation. (1)
6. State four quality features that software requirements specification document must have. (1)
7. What is the difference between waterfall model and prototyping model? (1)
8. For the following domains which process model you will select: (1)
   i) Game ii)Bank Management System (1)
9. Sate any four requirements elicitation techniques. (1)
10. Define cardinality. (2)
11. What is Data Dictionary? Give example. (3)
12. Explain Spiral model with the help of a diagram. Write two advantages and two disadvantages of Spiral process model. (5)
13. For the functional requirements given below draw ER Diagram

XYZ Hotel's website allows potential guests to make a room reservation, specifying the dates and type of rooms. If they have registered with the website previously their stored details are used to speed up the process, otherwise they are required to register as a new customer. Each reservation is given a unique reservation code. Before the date of their stay they may enter this reservation code into the website to amend or cancel the reservation. Amendments can include altering the dates, changing he room type or the number of guests in each room. When the guests arrive at the hotel, the reservation id is used by the receptionist to find the reservation to check them in with. At the end of their stay the receptionist checks the guest out. At this point the hotel validates their payment through the card payment system; a printed invoice may be requested by the guest at this point. The hotel has many room types available, each room with a room type name, number of guest and additional facility information. Each room in the hotel has a room number and is of one specific type. Monthly reports are prepared by the system which may be viewed on request by the hotel management.

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MID SEMESTER EXAMINATION, MARCH-2015

VIII Sem. BE (COE)

COE-413: Expert System

Max. Marks: 20

Time: 1:30 Hrs.

***Note**: Attempt **any two** questions.* Question No. 3 is compulsory.

1.
a) What is an Expert System? Describe all the components with the help of a block diagram. [4]

b) What is Control Strategy and how it is used to develop the systems? [3]

c) Differentiate AI, Expert System and Knowledge based system. [3]

2.
a) Differentiate Data Processing with Knowledge Processing. [4]

b) Explain Methods of Knowledge Representation [6]

[10]

3. Describe the following terms:
   a) Heuristic
   b) Production Rules
   c) Knowledge
   d) Search
   e) Inference

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