B.Tech- IV Year (Computer Engineering) (8th Semester)
Mid Semester Examination March-2013
COE -412 Software Engineering

Time – 1 ½ hours

Max. marks – 20

Note : Attempt All questions.

Q1. What is a requirement? Explain in detail different types of requirements discussed in class.

(4)

Q2. What is a Context Diagram? For the requirements given below draw the context diagram.

A college is planning to automate the working of its examination department. The department must ensure the proper conduct of examination, printing of question papers, evaluation of answer sheets and evaluation of results. The college plans to develop its question bank. In order to do so it sends letters to prominent academicians of other universities specializing in different subjects requesting them to be on university's panel. In case the teacher agrees he/she must give his/her consent. Every semester one month prior to the examination, letters are send to the teachers requesting them to submit the question papers in specified format by a fixed date. Once the question papers are received they are stored in the database of the examination system. Reminders are also send to the teachers who do not submit the papers on time. One week prior to the examination, Invigilation duty chart is prepared and mailed to all the faculty members. Two days prior to examination the system generates the question paper by selecting the questions randomly from the database. Only the Dean of examination cell is authorized to do so. In charge examination is responsible for conducting the examination. After the copies of paper are printed they are given to the In charge Examination for conducting the exam. On the day of examination the faculty members report for invigilation duty. After the examination is held, the answer sheets are collected and given to the examination cell which after changing the roll numbers gives the answer sheets for checking to concerned faculty members. Once the answer sheets are received the marks are entered in the computer and result is compiled. At the end of the examination, Dean Examination generates the report of duties done by the faculty member. The result after compilation is send to the Faculty of Technology.

(4)

Q3. Explain the following requirement elicitation techniques:
- (i) Interview
- (ii) Brain Storming

(4)

(2)

Q4. List the quality characteristics of a good quality SRS

Q5. Which Process Model you will use for automating a chain of schools. Justify Your answer.

(2)

Q6 What are different views of modeling? Explain. Which models are used to show these views.

(2)

Q7.What are the different types of conflicts that can occur in a SRS? Explain. Which Standard you will use to write SRS.

(2)

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MID SEMESTER EXAMINATION, MARCH-2013
VIII Sem. BE (COE)
COE-413: Expert System

Time: 1:30 Hrs.

Max. Marks: 20

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

1.

a) Explain the components of an Expert System with the help of a block diagram. What are the basic activities of an expert system?   [6]

Or

Discuss fuzzy integration and fuzzy differentiation and apply them for the following:

Let $f(x) = (r(x), s(x), t(x))_{LR}$ with $r(x)=n*x$, $s(x)=1/(|x|+1)$, $t(x)=1/(1+\sin(x^2))$ $L(x)=1/(1+2|x|^3)$, $R(x)=1/(1+x^{1/2})$. Determine $f(x)$ explicitly for $x=0.5$, $x=1$ and $x=2$.

b) Differentiate Data Processing with Knowledge Processing.   [4]

Or

What do you mean by possibility distribution? What is the difference between possibility and probability distributions? Discuss.

2. Describe the following terms: [10]

a) Production Rules
b) Knowledge Acquisition
c) Control Strategy
d) Predicate Logic
e) Inference

Or

a) Why are there several different operators corresponding to union and intersection operators of crisp sets?
b) Discus t-norms and t-conorms.
c) Discuss measures of fuzziness.
d) What do you understand by fuzzy number?
e) Discuss fuzzy relations and fuzzy graphs in brief.

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