CBCS SCHEME

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18CS35

Third Semester B.E. Degree Examination, Jan./Feb. 2021
Software Engineering

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. What are the attributes of good software? Explain the key challenges faced in software engineering. **(08 Marks)**

b. With a neat diagram, explain the waterfall model of software development process. **(06 Marks)**

c. Describe the general model of software design process. **(06 Marks)**

OR

2 a. Define and differentiate functional and non-functional requirements. **(06 Marks)**

b. What is requirements specification? Explain various ways of writing system requirements. **(08 Marks)**

c. What is ethnography? How ethnography is effective in discovering the types of requirements? **(06 Marks)**

Module-2

3 a. What is OO development? Explain object oriented themes briefly. **(08 Marks)**

b. What are links and associations? Write and explain UML notation for links and association with an example. **(06 Marks)**

c. Describe generalization and inheritance with an example. **(06 Marks)**

OR

4 a. What is object orientation? What are the important characteristics of OO approach? Explain. **(08 Marks)**

b. Define model. Describe the relationship among three models. **(08 Marks)**

c. With the help of a sample class model explain multiplicity and Association and names. **(04 Marks)**

Module-3

5 a. Draw and explain a contest model for patient information system. **(06 Marks)**

b. With a diagram, explain the phases in the Rational Unified Process (RUP). **(06 Marks)**

c. With the help of a neat state diagram, illustrate the working of a microwave oven. **(08 Marks)**

OR

6 a. What is model driven engineering? State the three types of abstract system model produced with a neat diagram. **(08 Marks)**

b. What are the activities to the carried out in object oriented design process of a system? How the objects are identified? **(08 Marks)**

c. What is open source development? Explain general models of open source licensing. **(04 Marks)**

Module-4

7 a. What is list driven development? With a neat diagram, explain test driven development process. **(08 Marks)**

b. With neat diagram, explain six stages of acceptance testing process. **(08 Marks)**

c. What are the different types of interfaces to be tested during component testing? Explain. **(04 Marks)**

OR

8 a. Write and explain Lehman's laws related to system charge. **(08 Marks)**

b. What is software maintenance? Draw the general model of reengineering process and explain. **(08 Marks)**

c. What are the strategic options involved in legacy system management? Discuss. **(04 Marks)**

Module-5

9 a. For the set of tasks shown below draw the activity bar chart for the project scheduling.

Task	Duration (Days)	Dependencies
T_1	10	-
T_2	15	
T_3	15	T_1 (M1)
T_4	10	-
T_5	10	T_2, T_4 (M3)
T_6	5	T_1, T_2 (M4)
T_7	20	T_1 (M1)
T_8	25	T_4(M2)
T_9	15	T_3, T_6 (M5)
T_{10}	15	T_7, T_8 (M6)
T_{11}	10	T_9 (M7)
T_{12}	10	T_{10}, T_{11} (M8)

(08 Marks)

b. Write and explain the factors affecting software pricing. **(05 Marks)**

c. Explain briefly the algorithm cost modeling and write the difficulties. **(07 Marks)**

OR

10 a. With a diagram, explain the phase involved in software review process. **(08 Marks)**

b. Explain briefly the key stages in the process of product measurement. **(08 Marks)**

c. Write any four product and process standards. **(04 Marks)**

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