Total No. of Questions :10]

SEAT No. :

P3633

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[4959]-1122
B.E. IT
Software Modeling & Design
(2012 Course) (Semester -I)

Time : 2 Hours 30 minutes *[Max. Marks :70]*

Instructions to candidates:

1) ***Solve Q1 or Q2 Q3 or Q4 Q5 or Q6 Q7 or Q8 Q9 or Q10.***
2) ***Use UML2.0 notations to draw the UML diagrams***

Q1) a) With the context of class diagram show a qualified association and composition relationship with the help of one example each. **[6]**

b) With the context of state diagram, Define simple state, entry, do and exit. **[4]**

OR

Q2) a) A project has three to five students. A project has a guide a guide can guide one to three projects. For this description draw a class diagram. From the class diagram draw an object diagram to show two projects, seven students and one guide. Do not write any explanation, just draw the diagrams. **[6]**

b) Diagrammatically show generalization, include and extend relationship in the context of a use case diagram. **[4]**

Q3) a) A Draw an activity diagram for a Passport Management System To get a new passport, an applicant has to apply on-line, get the appointment. He has to submit the documents in passport office on the date of appointment. In case of insufficient or incorrect documents, the applicant's has to reapply and get new appointment After submission of documents, applicant's verification is done by the police. On successful verification , passport is issued to the applicant. If verification is unsuccessful, applicant has to reapply for passport. **[6]**

b) In the context of squence diagram, what is an entity and a controller class? **[4]**

OR

P.T.O.

Q4) a) What is a shallow history state? Elaborate with an example of a display screen of a desktop. **[6]**

b) State the steps of preparing application interaction model. **[4]**

Q5) a) Write a note on Making a Reuse Plan from the context of system design. **[8]**

b) Which are the boundary conditions & how they are handled. **[8]**

OR

Q6) a) Describe one way of breaking a system into subsystems. **[8]**

b) Describe allocation of subsystems in System Design. **[8]**

Q7) a) Write the classification, motivation, class diagram and uses of adapter design pattern. **[8]**

b) Write the classification, motivation class, diagram and uses of observer design pattern. **[8]**

OR

Q8) a) Write the classification, motivation, class diagram and uses of strategy design pattern. **[8]**

b) Write the classification, motivation, class diagram and uses of state design pattern. **[8]**

Q9) a) Draw a flow chart of test driven development. **[8]**

b) Features of printer are to be tested & its specification is as follows **[10]**

It prints the document in black & white, colour. It has an on/off button. It accepts A4 paper one at a time for printing. It has two LED lights. Green light shows normal printing operating & red light show problem with printing it has two cables, one is power cable and other is data cable which is connected to the CPU. Write at least five test cases to check that the Printer machine works properly.

OR

Q10)a) Differentiate Black box testing and white box testing on the basis of definition, levels of testing, basis for test cases responsibility of testing. **[8]**

b) Write at least five test cases for following screen. **[10]**