SB - 56

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Seat No.	

T.Y. B.Tech. (Computer Science) ((Part - III) (Semester - V)
(CBCS) Examination, January - 2023
OBJECT ORIENTED MODELING AND DESIGN
Sub. Code : 80796

Day and Date : Thursday, 19 - 01 - 2023 **Total Marks : 70**

Time : 10.30 a.m. to 1.00 p.m.

Instructions :
1) **All questions are compulsory.**
2) **Assume suitable data wherever necessary.**
3) **Figures to the right indicate full marks.**

Q1) Solve MCQs (1 marks each)

a) Object model describes _____ structure of the object in system.
   i) static ii) dynamic
   iii) detailed iv) overall

b) A _____ is a name that uniquely identifies one end of and association.
   i) Ordering ii) Role name
   iii) Qualification iv) None of these

c) Aggregation is the _____ relation.
   i) Whole ii) Part
   iii) Part-whole or a-part-of iv) None of these

d) In data flow diagram, data store is drawn as _____
   i) Rectangle containing name of data store
   ii) Cylinder containing name of data store
   iii) Ellipse containing name of data store
   iv) A pair of parallel lines containing name of data store

e) A _____ has initial and final states.
   i) Continuous loops ii) Scenario
   iii) Event trace diagram iv) One-shot state diagram

f) A _____ is a sequence of events that occurs during one particular execution of a system.
   i) State diagram ii) Information transfer
   iii) Scenario iv) Sequence diagram

P.T.O.

g) The classes having ill-defined boundaries or to broad in scope are called as.

i) Vague classes ii) Identical

iii) Irrelevant iv) None of these

h) If a class has little or nothing to do with a problem, then they are called as.

i) Identical ii) Redundant

iii) Associate iv) Irrelevant

i) A _____ extends the properties of a UML building block, allowing you to create new information in that element's specification.

i) Note ii) Tagged Values

iii) Constraints iv) Stereotypes

j) _____ is an interaction diagram that emphasizes the time ordering of messages.

i) Activity diagram ii) Interaction diagram

iii) Sequence diagram iv) Collaboration diagram

k) _____ constraint specifies that instance or link is created during execution of the enclosing interaction but is destroyed before completion of execution.

i) Destroyed ii) New

iii) Transient iv) None of these

l) A call event represents

i) Passage of time ii) The dispatch of an operation

iii) A change in state iv) The occurrence of a signal

m) A set of objects or components that are allocated to a node as a group is called a _____

i) Distribution unit ii) Contribution unit

iii) Components unit iv) Collection

n) A _____ diagram shows a set of components and their relationships.

i) Deployment ii) Interaction

iii) Activity iv) Component

Q2) Solve any 2 of the following : (7 marks each)

a) Explain how generalization can be used as extension and restriction

b) Write note on :

i) Events

ii) States

c) Explain the several phases of the OMT Methodology.

Q3) Solve any 2 of the following : (7 marks each)

a) What is class and object? Explain with appropriate example

b) Explain the following elements of data flow diagrams:

i) Data Stores

ii) Control Flows

iii) Nested Data Flow Diagrams

c) List and explain the steps involved in designing the algorithms

Q4) Solve any 2 of the following : (7 marks each)

a) Explain the architecture of UML.

b) Explain the following terms with respect to Activity diagram :

i) Action states

ii) Transitions

iii) Branching

c) What is component? Give difference between components and classes.

Q5) Solve any 2 of the following : (7 marks each)

a) Explain four kinds of relationships in the UML

b) Explain Activity diagram with example.

c) Explain the following terms with respect to architecture modelling:

i) Node

ii) Collaboration

iii) Pattern