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Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Object Oriented Modeling and Design

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. What is Object Orientation? Explain the concept of OO themes. (05 Marks)
- b. Explain three kinds of models useful to model a system. (05 Marks)
- c. Prepare a metadata of CAR model that supports UML concept like class, attribute, association, association with ends and multiplicity. (06 Marks)

OR

- 2 a. Explain the following with examples:
 - i) links and associations
 - ii) Aggregation and Association
 - iii) Multiplicity
 - iv) Qualified Association.
 (10 Marks)
- b. Prepare a class diagram from the object diagram shown in Fig Q2(b). Explain multiplicity decision.

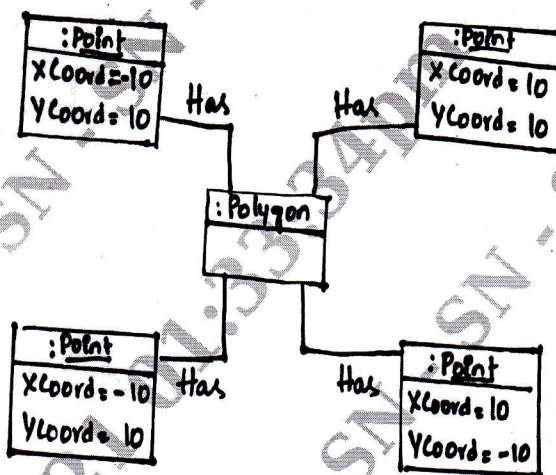


Fig Q2(b)

(06 Marks)

Module-2

- 3 a. Explain use case diagram with an example. (05 Marks)
- b. Draw a use case diagram for order entry subsystem with <<includes>>. (05 Marks)
- c. Explain Fully developed description used to document a use case. (06 Marks)

OR

- 4 a. Explain system sequence diagram notation with example. (05 Marks)
- b. Explain a simple state chart diagram with example. (05 Marks)
- c. Draw a second cut state chart for order. (06 Marks)

Module-3

- 5 a. Mention the questions to be answered for a good system concept. (06 Marks)
- b. Explain how unnecessary and incorrect classes can be eliminated. (06 Marks)
- Explain last step of class modeling (Group classes into packages). (04 Marks)

OR

- 6 a. Explain Domain state model. (10 Marks)
b. Draw a sequence diagram for process transaction scenario. (06 Marks)

Module-4

- 7 a. With a neat diagram, explain design models with their respective input models. (06 Marks)
b. Explain standard stereotypes found in design models. (04 Marks)
c. Explain Cohesion and separation of responsibilities. (06 Marks)

OR

- 8 a. Draw first cut sequence diagram for lookup item availability use case. (08 Marks)
b. Explain with an example communication diagram. (08 Marks)

Module-5

- 9 a. What is a design pattern? Describe design patterns. (08 Marks)
b. Explain Prototype. (08 Marks)

OR

- 10 a. Explain how design patterns solve design problems. (08 Marks)
b. Explain Proxy pattern. (08 Marks)
