ST.ANNE'S

COLLEGE OF ENGINEERING AND TECHNOLOGY
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QUESTION BANK

UNIT I – UML DIARAMS

PART – A

1. Distinguish between method and message in object. **(Nov /Dec 2015)**
2. What are the three ways and perspectives to apply UML? **(Nov /Dec 2015)**
3. What are the primary goals in design of UML? . **(Nov /Dec 2016)**
4. Define design class diagram . . .**(May/Jun 2016)**
5. What test can help to find useful Use Cases ? .**(May/Jun 2016)**
6. Define object oriented analysis and design.
7. What is UML? **(Dec-2014)**
8. Define Use cases. **(Nov /Dec 2017)**
9. What is inception step?
10. What is the need for modeling? **(May -2014)**
11. List out the reasons for complexity of software.
12. What is analysis and design?
13. What is interaction diagram? Mention its types.
14. What is meant by implementation diagram?
15. What is UP? **(Nov /Dec 2017)**
16. What is iterative evolutionary development? **(Nov /Dec 2017)**
17. What are the phases of unified process?
18. Define use case generalization?
19. Define use case modeling
20. What is UML activity diagram? **(Nov /Dec 2017)**

PART – B

16-Mark

1. Briefly explain the different phases of Unified process? **(Nov /Dec 15 ,16 ,May/Jun 16)**
2. Discuss about UML deployment and Component diagram .Draw the diagram for banking applications .
3. List various UML diagrams and explain the purpose of each diagram .**(May/Jun 2016)**
4. A University conducts examinations and the results are announced. Prepare a report for the following:
   • Print the marks in the register number order semester wise for each department
   • Print the Arrear list semester wise.
   • Prepare a Rank list for each department.
   • Prepare the final aggregate mark list for final year students.
   Identify the problem statement and Design the classes for each sequence. Draw a detailed

flow chart using state chart diagrams. Design this system using Rational Rose. Draw all the UML diagrams for designing this system.

8-Mark

1. Explain about activity diagram with example? **(Nov /Dec 2016)**
2. For any scenario draw the use case diagram in detail and ex[plain ? **(May/Jun 2015)**
3. For any scenario draw the class diagram in detail and ex[plain ? **(May/Jun 2015)**

UNIT II - DESIGN PATTERN [QUESTION BANK]

PART-A

1. What is design pattern ? **(May -11, 14 , Dec-13)**
2. Write notes on pattern. **(Dec- 11,14)**
3. When to use pattern ?
4. What is GRASP ?**(May-13)**
5. Define object with an example .**(Dec-12)**
6. A system must be loosely coupled and highly cohesive . Justify
7. What is Pattern ? **(Dec- 11,14)**
8. Define the concept of creator ?

9. Define Controller and mention the advantages of Controller.

10. Limitations of Factory pattern.

11. Define coupling. **(May -11, 12 , Dec-13)**
12. What is Adapter Pattern? Mention the types of adapter pattern.

13. List out the categories of Design patterns.

14. What is Façade Pattern ? **(Nov /Dec 2017)**

15. Define information Expert.

16. State the use of design pattern ? **(May -12, 13 , Dec-15)**
17. What are the advantages of Factory objects?

18. Define Modular Design. **(May -16)**

19. What is Observer Pattern?

20. List out the types of Coupling.

21. List out the four main benefits in Design Pattern? **(Nov-16)**

22. Define Behavioral.

23. Define Creational. **(Nov /Dec 2017)**

24. What is meant by Low Coupling ? **(May -14, Dec-14)**
25. Define Structural Pattern.

26. Define Factory Method .

27. Distinguish between coupling and cohesion . **(Dec -11,15,16)**
28. What is Information Expert .

29. Define Singleton Pattern .

30. What do you mean by High Cohesion ? .**(Dec-12)**
31. Define Modular Design
32. Mention Interface and Domain Layer responsibilities .

PART- B

16 - Mark

1. What is GRASP ? Explain the following GRASP pattern : Creator , Information Expert, Low Coupling, and High Cohesion ? **(Dec-11 ,Nov-15,16)**
2. Write a short note on adapter ,singleton, factory and observer Pattern .**(Apr-11,Nov-13, 15)**
3. Explain in detail about structural , Bridge, Adapter, Strategy and Observer **.(Nov -15 ,May -16)**
4. Design the Use case Realization with GoF Design Pattern .**(May-2016)**

8 - Mark

1. Explain the concept of creator ?**(May-2012,16 , Nov-16)**
2. What is GRASP. How will you design the behavioral pattern ? **(Nov-15)**
3. Explain about Low coupling, Controller , and High Cohesion ? **(May -16)**

UNIT III - CASE STUDY [QUESTION BANK]

PART-A

1. Define aggregation and composition.
2. What is elaboration?
3. What is domain model ?
4. Define swim lane .
5. Define Use Case.
6. Define Inception step. **(Nov /Dec 2017)**
7. What do you mean by use case and actors?
8. Give the hint to identify the attributes of a class.
9. List the relationships used in use cases
10. List out the steps to finding use cases.
11. Differentiate single and multiple inheritances.
12. What is the purpose of association relationship?
13. What are the three kind of actors?
14. What is meant by POS? **(Nov /Dec 2017)**
15. What artifacts may start in Elaboration?
16. What is Conceptual Classes and what are they ? **(May-16)**
17. Difference between Include and Extend use case relationships.
18. When to use Generalization use case relationship.
19. What is an attribute? List out its types.
20. Why call a Domain model a "Visual Dictionary"? **(Nov-16)**
21. What is a scenario?
22. When to define new data type classes ? **(May-16)**
23. How to create domain model ? **(Nov- 15,16)**
24. List the relationship used in class diagram .**(Nov-15)**

PART-B

16-Mark

Use case Modeling

1. Explain with an example, how use case modeling is used to describe functional requirements. Identify the actor, scenario, and use cases for example.**(16 Mark) Nov-16**

Elaboration

2. Write briefly about elaboration and discuss the difference between Elaboration and Inception
   With example . **(16 Mark) Nov-15**

Relating Use cases

3. Explain the relationships that are possible among the classes in the UML representation with
   Your own example **(16 Mark)**

Next Gen POS system

4 .Explain about Next GEN POS System. (**8 Mark).**

8 – Mark

Aggregation and Composition

5. Differentiate Aggregation and Composition and Association with an example (Library
   Management System. **(8 mark) Nov-16**

Domain Models

6. Define Domain model with suitable example. (**8 Mark**) **May-16**

Use case Modeling

7. Write short notes on Use Case Modeling**.(8 Mark)**

Finding conceptual classes and description classes

8. Explain the method of identifying the classes using the common class approach with
   Example **(8 Mark) May-16**

Associations – Attributes

9.Write Short notes on Association and attributes **(8 Mark**)**Nov-16**

Finding conceptual classes

10. Explain three strategies to find conceptual classes **(8 Mark) Nov-16**

UNIT- 4 [APPLYING DESIGN PATTERN]

PART -A

1. What is the use of SSD?
2. List the relationships used in class diagram. **Dec-14 , 15**
3. What is use of system sequence diagram? **Dec-14**
4. What do you mean by sequence number in UML? Where and for what it is used ?
5. Define package and draw the UML notation for package?
6. Differentiate sequence and communication diagram.
7. What is the use of UML package diagram?
8. What is mean by interaction diagram?
9. What are interactive diagram? List out the component?
10. What is the use of UML state diagram? **May-14**
11. Give the meaning of Event, State .and Transition. **Dec-13**
12. Define the term stereotype and profile.
13. What is the use of operation contracts?
14. Define component with example.
15. How will you reflect the version control information in UML diagram ?
16. Define System Events and the System Boundary.
17. What is meant by Inter-System SSDs?
18. What is meant by link?
19. List the approaches for identifying classes.
20. List the relationships used in class diagram? **(Nov /Dec 2017)**
21. How would you identify attributes and methods?

PART –B

16- Mark

System Sequence Diagram

1. Illustrate with example , the relationship between sequence diagram and use cases .[16] **Dec-13 ,May-14,Dec-14**

UML Class Diagram
2. With a suitable example explain how to design a class .give all possible representation of class (name , attribute , visibility ,methods ,responsibilities) .[16] **Dec-14**

UML Interaction Diagram

3. Explain Interaction diagram with an example ? .[16] **Dec-13**

System Sequence Diagram

4. Briefly explain about UML sequence diagram . [16]

Logical architecture and UML package diagram

5. Explain the logical architecture and UML package diagram .[16] **May-14**

Logical architecture refinement

6. Explain logical architecture refinement with example . .[16]

Applying GoF Design Pattern

7. Discuss about GOF design pattern . .[16]
8. Discuss the below
   (i) Composition and Aggregation   [5]
   (ii) Singleton Class [4]
   (iii) Template Class and Active Class [4]
   (iv) Dependency [3]

8 – Mark

UML Class Diagram

9. Write notes about UML Class Diagram [8]

State Diagram

10. Discuss about state diagram [8]

Operation Contracts

11. Explain about operational contract [8] **Dec-13 ,May-14,Dec-14**

UML deployment and component diagram

12. Briefly discuss UML deployment and component diagram [8] . **May-14**

GoF Patterns

13. Write short notes on factory pattern (8) **Dec-13 ,May-14,Dec-14**
14. Write short notes on observer pattern (8) **Dec-13 ,May-14,Dec-14**

UNIT- V [CODING AND TESTING]

Part-A

1. Mention the guidelines for contracts.
2. What are steps for mapping design to coding?
3. What are the issues in OO Testing? **Dec-15**
4. List the four level of OO testing.
5. What is flattening of class?
6. What is Test driven Development?
7. What are the steps for mapping designs to code? **Dec- 15 , Dec- 16**
8. What is refactoring? **Dec- 16**
9. What is regression testing? **Dec- 16**
10. Distinguish between OO Integration Testing OO system testing. **Dec- 16**
11. Define Unit.
12. Define GUI Testing. **(Nov /Dec 2017)**

13. Define MM- path
14. Define External event.
15. Define internal event.
16. Define temporal event.
17. What are the difficulties in GUI testing?
18. Define ASF.
19. What is meant by thread? **(Nov /Dec 2017)**
20. How will you create Class Definitions from DCDs?

Part-B

16-Mark

1. Explain about implementation model (Mapping Design to Code) .
2. Explain OO Integration testing and OO System Testing? **Dec 2016 (16 mark)**
3. What is OO testing? Explain in detail about concept of OO testing in OOAD? **Dec 2015 (16 mark).**

8 -Mark

1. Write short notes on integration testing and class testing.
2. Explain about class testing with example?
3. Briefly explain about GUI testing.
4. Explain in detail about different types of testing in OOAD. **Jun 2016 (16 mark)**