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GIET MAIN CAMPUS AUTONOMOUS GUNUPUR – 765022

B. Tech Degree Examinations, November – 2021

(Seventh Semester)

BCSPE7041 /BITPE7041- OBJECT ORIENTED ANALYSIS & DESIGN

(CSE / IT)

Time: 3 hrs

Maximum: 100 Marks

Answer ALL Questions**The figures in the right hand margin indicate marks.****PART – A: (Multiple Choice Questions)****(2 x 10 = 20 Marks)****Q.1. Answer ALL questions**

[CO#]

[PO#]

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|---|-------------------------------|---------|
| a. To hide the internal implementation of an object we use ... | CO1 | PO1 |
| (i) Inheritance | (ii) Encapsulation | |
| (iii) Polymorphism | (iv) None of these | |
| b. CRC approach and noun phrase approach are used to identify ... | CO1 | PO2 |
| (i) Classes | (ii) Collaborators | |
| (iii) Use Cases | (iv) Object | |
| c. Aggregation is | | |
| (i) Set of relationship | (ii) Composed of Relationship | CO2 PO2 |
| (iii) Part of Relationship | (iv) All of these | |
| d. A model is a _____ of the reality | CO3 | PO1 |
| (i) Complication | (ii) Simplification | |
| (iii) Realization | (iv) Generalization | |
| e. A model helps us to _____ a system as it is or the way it is wanted. | CO4 | PO2 |
| (i) Analyze | (ii) Design | |
| (iii) Visualize | (iv) Measure | |
| f. Algorithmic and object-oriented are the two common ways for modeling _____ | CO1 | PO1 |
| (i) Non-Software Systems | (ii) Software Systems | |
| (iii) Vocabulary of a system | (iv) Client/Server System | |
| g. UML is useful to _____ a system as it is or as we want it to be. | CO4 | PO1 |
| (i) Visualize | (ii) Specify | |
| (iii) Document | (iv) All of these | |
| h. A collection of operations that specify the services rendered by a class or component known as _____ | CO2 | PO2 |
| (i) Class | (ii) Interaction | |
| (iii) Interface | (iv) Collaboration | |
| i. A Link is an instance of _____ | CO1 | PO1 |
| (i) Generalization | (ii) Association | |
| (iii) Dependency | (iv) Realization | |
| j. An actor is _____ | CO3 | PO1 |
| (i) A person | (ii) A Job title | |
| (iii) A role | (iv) A System | |

PART – B: (Short Answer Questions)**(2 x 10 = 20 Marks)**Q.2. Answer **ALL** questions

[CO#] [PO#]

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| a. Define Object Oriented Analysis and Design | | |
| b. List any 4 differences between Traditional and OOAD for Software Development process. | CO1 | PO1 |
| c. List the 4 Major Elements of Object Model | CO1 | PO1 |
| d. Explain Association Relationship | CO1 | PO2 |
| e. What is an actor in Use Case diagram | CO3 | PO2 |
| f. List out the differences between collaboration diagram and Sequence Diagram | CO4 | PO1 |
| g. Draw life line for an object | CO4 | PO2 |
| h. Illustrate the elements of Use Case diagram by drawing them | CO4 | PO1 |
| i. What are the terms On Entry, do and On Exit in State Chart Diagram | CO3 | PO2 |
| j. What are the adornments in the UML? | CO4 | PO1 |

PART – C: (Long Answer Questions)**(15 x 4 = 60 Marks)**Answer **ALL** questions

Marks [CO#] [PO#]

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| 3. a. Explain the basic relationship in UML with examples | 7 | CO2 | PO2 |
| b. Draw a Class Diagram for Hospital Management System with possible relations. | 8 | CO2 | PO2 |

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| c. Explain the elements of Object Model | 8 | CO1 | PO1 |
| d. With reference to class diagrams, enumerate the steps to forward engineer. | 7 | CO1 | PO3 |
| 4. a. What do you mean by CRC? Illustration with suitable examples | 7 | CO2 | PO2 |
| b. Draw an Usecase diagram for online Hotel Booking system | 8 | CO3 | PO3 |

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|---|---|-----|-----|
| c. Define UML and Explain Structural Things in UML | 8 | CO4 | PO1 |
| d. Explain State chart Diagram with suitable diagram | 7 | CO4 | PO3 |
| 5. a. Draw a Sequence Diagram for book issue in Library Management System | 8 | CO4 | PO3 |
| b. Draw a collaboration diagram for train ticket Cancellation in Manual Process and explain | 7 | CO4 | PO3 |

(OR)

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| c. Explain Grady Booch Object Methodology | 7 | CO3 | PO1 |
| d. Draw a component diagram for ATM model. | 8 | CO3 | PO1 |
| 6. a. Explain Jacobson Object Oriented Methodology | 7 | CO2 | PO1 |
| b. What is Fork and Join? Explain with help of a diagram | 8 | CO4 | PO1 |

(OR)

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|---|---|
| c. Explain Booch Object Oriented Methodology | 7 |
| d. Illustrate a Package diagram with help of a diagram for any model. | 8 |

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