UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Course: Object Oriented Analysis and Design   Semester: V
Program: B.Tech – CSE + All Branches   Time 03 hrs.
Course Code: CSEG 3002   Max. Marks: 100

Instructions: Attempt all questions. Internal choice is given, wherever applicable. Diagrams should be neat and clean.

SECTION A

S. No.		Marks	CO
Q 1	Present an analytical contrast between behavioral and structural models of a system.	**4**	**CO1**
Q 2	Enumerate total number of diagrams in UML. Who are the three amigos of UML?	**[1+3]**	**CO1**
Q 3	Explain requirements engineering. Which diagram of UML is best suited for requirements modeling at functional level?	**4**	**CO2**
Q 4	Explain how CRC cards are helpful in system modeling. Design a CRC card for Customer placing and Order.	**4**	**CO2**
Q 5	Explain swim lane architecture with a suitable example.	**4**	**CO3**

SECTION B

Q 6	Give your critical comments on 'object dimension' and 'time dimension' of a sequence diagram. Draw a sequence diagram for a room reservation system through a hotel chain. System should be operated using a GUI. It should handle the reservation for multiple days after checking availability and other constraints.	**[4+6]**	**CO4**
Q 7	Discuss two aspects of an object. Differentiate object diagram and class diagram. Make an object diagram for the point of sales (POS) scenario.	**[2+2+6]**	**CO2**
Q 8	List the key advantages of incremental models as a better choice for project development. Explain in detail all 4 phases of RUP.	**[4+6]**	**CO1**
Q 9	Differentiate between activity and action. State the scenario of the use of activity diagram. List the basic symbols used in it. Explain preconditions and post conditions. **OR** Explain the meaning of 'event' and 'state'. Elaborate state machine diagram with a suitable example.	**[2+2+2+4]** **[3+7]**	**CO3** **CO4**

SECTION-C

Q 10	Recognize the use of component diagram. Elaborate its usefulness in modeling the physical aspects of the system. List five limitations of top-down approach of system design. Make a component diagram for an online store.	**[4+4+5+7]**	**CO5**

Q 11	Explain in detail the object-oriented approach for analysis and design. Explain UML and its basic building blocks. Discuss the need of collaboration diagrams in interaction modeling. **OR** List the different phases of SDLC. Explain the major activities in deployment and maintenance phases. Make a deployment diagram for a typical enterprise web application on a server architecture.	**[8+6+6]** **[4+6+10]**	**CO3** **CO5**