

Date: 23/11/2015.

Student Exam No: _____

GANPAT UNIVERSITY
B. Tech. Semester. V – Computer Engineering / Information Technology
Regular Examination November- December 2015
2CE501/2IT501: Object Oriented Analysis and Design

Time: 3 Hours}

Total Marks: 70

Instructions:

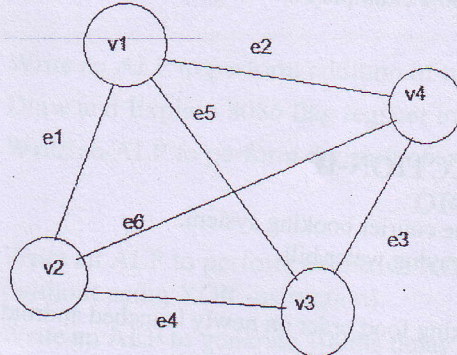
1. Figures to the right indicate full marks.
2. Each section should be written in a separate answer book.
3. Be precise and to the point in your answer.
4. Assume suitable data, if necessary.

SECTION-I

- Q.1 (a)** Draw the class diagram for working of mobile by assuming your own scenario. (6)
Show the following things and relationships wherever possible in diagram: classes, attributes, operations, association, multiplicity, aggregation and generalization.
- (b)** Construct the class diagram for online laptop shopping by assuming own scenario. (6)
Show the following things and relationships wherever possible in diagram : classes, attributes, operations, association, multiplicity, aggregation and generalization.

OR

- Q.1 (a)** Draw the class diagram and object diagram for the given undirected graph. Each (6)
vertex has name and each edge has name which is given below.



- (b)** Categorize the following relationship into generalization, aggregation, (6)
Composition and association with proper justification.
- 1) Processor and RAM are the parts of computer.
 - 2) Browser window have multiple tab windows.
 - 3) Car has music player and charger.
 - 4) Mobile is window mobile or android mobile.
 - 5) Antivirus system scans the pen drive.
 - 6) Bluetooth connects laptops and tabs.

- Q.2 (a) Draw the use case diagram for scenario of offline hospital system. In this system any emergency, patient can ask for availability of doctor at time of issuing the appointment. Receptionist will manage the appointment and bill. Patient will visit the hospital for treatment. Receptionist will allow the patient by checking their advance appointment only. Patient will visit the doctor for treatment. Doctor will identify for disease by diagnosis the patient or diagnosis the lab reports. Doctor will suggest the medicine after identifying for diseases. Lab technician will issue the lab reports by generating it using computer. Patient will pay the bill to the receptionist. Nurse will help the doctor and patient. Nurse, receptionist and doctor are the employees of the hospital system. (6)
- (b) Draw the use case diagram for the scenario of online assignment system. In this system there will be two registered users: students and faculties. Admin will manage the accounts of students and faculties. Faculties will upload the assignments after login successfully. Students will refer the assignments after login successfully. Student can send the chat message for query. Students will solve and submit the assignments. Faculties will check the assignments. Faculties will give the grades for the assignment. Faculties and students can see the grades. Faculties will leave the comments if students will make the mistakes in their assignments. (5)

OR

- Q.2 (a) Prepare the use case diagram to purchase a prepaid SIM card from offline Vodafone store. (6)
- (b) What is the purpose of drawing use case Diagram? Explain actor with its types, using suitable example. (5)

- Q.3 (a) Do as directed for the following : (6)
- 1) Define analysis and design with example.
 - 2) Draw the hierarchy of UML diagram.
 - 3) List the objectives of UML. (6)
- (b) Explain the following with suitable example : (6)
- 1) Association class.
 - 2) Use case specification.
 - 3) Reflexive association.

SECTION-II

- Q.4 (a) Draw sequence diagram for online courier booking system. (6)
- (b) Draw collaboration diagram for paying water bill. (6)
- Q.4 (a) Draw sequence diagram for booking food order on newly launched android app. (6)
- (b) Draw collaboration diagram for paying gas connection bill. (6)
- Q.5 (a) Draw the activity diagram for organizing and managing convergence 2016. (6)
- (b) Draw swimlane diagram for booking car from apna cab in Ahmedabad. (5)
- Q.5 (a) Draw the activity diagram for disaster management system. Assume the help and needs of people after disaster. Also assume the help from different bodies and nations. (6)
- (b) Draw swimlane diagram for booking ticket in GSRTC bus. (5)
- Q.6 (a) Draw state diagram for ATM machine. Assume suitable states of ATM at the time of withdrawing money by user. (6)
- (b) Write short notes on: (6)
1. Types of events
 2. Forward and reverse engineering

END OF PAPER