M.Tech. Computer Science & Engineering CBCS Pattern Semester-I
PCSS13 - Object Oriented Software Engineering

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Notes : 1. Solve **any five** questions.
2. All questions carry equal marks.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.
5. Illustrate your answers wherever necessary with the help of neat sketches.

1. a) What are the ethics of software engineering that are defined in IEEE? **7**

b) What are the reasons for overriding methods? Explain with example. **7**

2. a) List and explain the principles that should be applied while designing a software. **7**

b) Discuss in detail the storage structure of object oriented database system. **7**

3. Draw class diagram and interaction diagram for the following activities. **14**

i) Withdrawing amount from automatic teller machine.

ii) Read message of a voice mail system.

4. a) Define problem and scope for a system that handles university degree requirements and registration. **6**

b) What is a requirement? Discuss in detail the functional & non- functional requirements. **8**

5. a) An organization has three categories of employees. Professional staff, technical staff & supporting staff. The organization also has departments & divisions each employee belongs to either department or division. Draw class diagram corresponding to this assume that there will be different attributes or operation in all the classes & that people will never need to change from one category to another. **5**

b) What do you mean by design pattern? Discuss general hierarchy pattern. **5**

c) How can ever interface be evaluated? **4**

6. a) Discuss a technique for making good design decisions. **5**

b) What are the difficulties and risks when using design patterns? **4**

c) What is the difference between testing and inspection?
Write the steps of each in detail with examples. **5**

7. a) Discuss the following testing concept with example **any five.**   **10**

    i) Component   ii) Fault

    iii) Erroneous state   iv) Facture

    v) Test cases   vi) Test stub

   b) What is cohesion? Give short definitions of different types of cohesion.   **4**

8. a) How to find degrees in ordinary algorithm.   **4**

   b) Write short notes on the following.   **10**

    i) Effective & efficient testing.

    ii) Distributes object computing.

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