BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BE   SEMESTER : VII
BRANCH: IT   SESSION : MO/19

SUBJECT: IT7029 OBJECT ORIENTED DESIGN

TIME: 3:00 HOURS   FULL MARKS: 60

INSTRUCTIONS:
1. The question paper contains 7 questions each of 12 marks and total 84 marks.
2. Candidates may attempt any 5 questions maximum of 60 marks.
3. The missing data, if any, may be assumed suitably.
4. **Before attempting the question paper, be sure that you have got the correct question paper.**
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

Q.1(a)   Define Polymorphism with an example.   [2]
Q.1(b)   How does the Object-Oriented concept of Message passing help to encapsulate the implementation   [4]
          of an object, including its data?
Q.1(c)   What does it mean to say that an object oriented system is highly modular? How modularity helps   [6]
          in achieving reusable components?

Q.2(a)   What is a Diagram? How it is different from model?   [2]
Q.2(b)   Write two advantages and two disadvantages of interviewing in requirement capture process.   [4]
Q.2(c)   What are the main activities of system development process? Explain them in brief.   [6]

Q.3(a)   What is use case model? Explain with an example.   [2]
Q.3(b)   Differentiate between functional and non functional requirements.   [4]
Q.3(c)   Using an activity diagram, show the activities involved in developing prototypes. Why prototype [6]
          building is important in object oriented system development?

Q.4(a)   Define pre and post conditions with an example.   [2]
Q.4(b)   What are the roles of operation specifications?   [4]
Q.4(c)   Draw a sequence diagram for the use case ATM cash withdrawal.   [6]

Q.5(a)   Define event and state.   [2]
Q.5(b)   List four quality criteria of good analysis.   [4]
Q.5(c)   What is CRC Cards? Explain format of a CRC card.   [6]

Q.6(a)   Why should attributes be private?   [2]
Q.6(b)   What are the activities are undertaken during system design?   [4]
Q.6(c)   What is cohesion and coupling? What are the criteria for good design?   [6]

Q.7(a)   Define object state.   [2]
Q.7(b)   What are the major differences between pattern and framework?   [4]
Q.7(c)   What are the different fact-finding techniques to investigate requirements? List two advantages [6]
          and two disadvantages of each