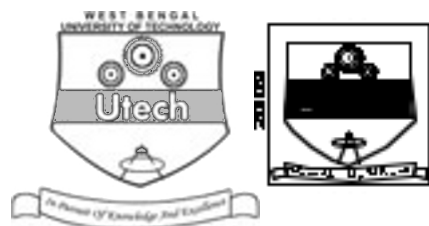


**CS/M.Sc (IS)/SEM-2/MI-202/09**  
**OBJECT TECHNOLOGY ( SEMESTER - 2 )**



1. ....  
Signature of Invigilator

2. ....  
Signature of the Officer-in-Charge

**Reg. No.**

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**Roll No. of the Candidate**

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**CS/M.Sc (IS)/SEM-2/MI-202/09**  
**ENGINEERING & MANAGEMENT EXAMINATIONS, JULY – 2009**  
**OBJECT TECHNOLOGY ( SEMESTER - 2 )**

Time : 3 Hours ]

[ Full Marks : 70

**INSTRUCTIONS TO THE CANDIDATES :**

1. This Booklet is a Question-cum-Answer Booklet. The Booklet consists of **32 pages**. The questions of this concerned subject commence from Page No. 3.
2. You have to answer the questions in the space provided marked 'Answer Sheet'. Write on both sides of the paper.
3. **Fill in your Roll No. in the box** provided as in your Admit Card before answering the questions.
4. Read the instructions given inside carefully before answering.
5. You should not forget to write the corresponding question numbers while answering.
6. Do not write your name or put any special mark in the booklet that may disclose your identity, which will render you liable to disqualification. Any candidate found copying will be subject to Disciplinary Action under the relevant rules.
7. **Use of Mobile Phone and Programmable Calculator is totally prohibited in the examination hall.**
8. You should return the booklet to the invigilator at the end of the examination and should not take any page of this booklet with you outside the examination hall, **which will lead to disqualification.**
9. Rough work, if necessary is to be done in this booklet only and cross it through.

**No additional sheets are to be used and no loose paper will be provided**

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**FOR OFFICE USE / EVALUATION ONLY**

Marks Obtained

Question Number												Total Marks	Examiner's Signature
Marks Obtained													

.....  
**Head-Examiner/Co-Ordinator/Scrutineer**

**39003 ( 04/07 )**



**DO NOT WRITE ON THIS PAGE**



## OBJECT TECHNOLOGY SEMESTER - 2



Time : 3 Hours ]

[ Full Marks : 70

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

Answer any *five* of the following.

5 × 14 =

1. Write different features of Object Oriented programming. Why is main function declared as public and static in Java ? What is Byte code ? Briefly discuss about finalize method of Java. 4 + 5 + 2 + 3
2. What is polymorphism ? How many types of polymorphism are there in Java ? Discuss dynamic method dispatch with an example. Why function overloading is known as compile time polymorphism ? 2 + 2 + 7 + 3
3. Briefly discuss about final keyword in Java. What is constructor ? Discuss about super keyword. Implement the stack using Java. 3 + 2 + 3 + 6
4. What is inheritance ? How many types of inheritance are there in Java ? Write different features of abstract class. Write a Java program to implement the concept of abstract class and runtime polymorphism. 2 + 2 + 3 + 7
5. What is multithreaded programming ? How can you create child thread in Java ? What is the default priority of a Java thread ? Write a Java program to create more than two child thread and run accordingly. What is the use of isAlive ( ) and join ( ) method ? 2 + 2 + 1 + 6 + 3



6. Explain the skeleton of an import statement when we use it in package. Discuss various types of access specifiers available for packages. What do you mean by Exception Handling ? Explain 'finally' keyword with an example.  $3 + 5 + 2 + 4$
7. Our problem domain is an information system for a video rental store. Simplifying assumptions and details : It is a stand alone store, not part of a larger organization. Rents only videos. A video can be in any medium tape, DVD and so on. The rental charge may vary by medium. For example, DVD rentals are higher than tapes. The store does not sale anything. All transactions are rentals. Cash only payments. On completion of a rental, the customer receives a transaction report with typical information on — use your judgement. Each customer has a separate membership.
- Draw and explain the following for the above problem statement :  $6 + 8$
- a) Use case diagram
  - b) Sequence diagram.
8. Why is UML called a modelling language ? What are the primary goals of UML ? Describe the class diagram and use case diagram.  $4 + 3 + 7$
9. What are the differences between sequence and collaboration diagram ? Explain the sequence and the collaboration with a proper example.  $4 + 10$

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END