21112 3 Hours / 100 Marks

Seat No.

Instructions: (1) All Questions are *compulsory*.

- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data, if necessary.

Marks

1. (A) Attempt any THREE of the following:

12

- (a) Write all primitive data types available in Java with their storage sizes in bytes.
- (b) Define thread. What is thread priority?
- (c) Explain, why Java is called as true object oriented language.
- (d) List any four built in packages from Java API along with their use.

(B) Attempt any ONE of the following:

6

- (a) List various wrapper classes. Give any four methods of Integer wrapper class.
- (b) Write a program to calculate percentage of 4 subjects and print in suitable format.

2. Attempt any TWO of the following:

16

- (a) What is difference between overloading and overriding methods?
- (b) What is Exception ? Give different types of exceptions that could occur during runtime. Why to handle exceptions ?
- (c) Write a program to define two threads, one thread will print 1 to 10 numbers whereas other will print 10 to 1 numbers.

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3. Attempt any FOUR of the following: **16** State any four features of Java. What do you understand by Byte code? (b) (c) Define Interface. Give the general structure of Interface. What is package? How to create it? Explain with suitable example. (d) (e) Write a program to read a file. (using character stream) 4. (A) Attempt any THREE of the following: **12** (a) Describe any four methods from graphics class. Explain serialization in relation with stream classes. (b) Write a program to check whether the given string is palindrome or (c) not. (d) Illustrate with example the use of switch case statement. (B) Attempt any ONE of the following: 6 What is difference between array and vector? Explain element at () and add element () method. Define a class 'employee' with data members as empid, name and (b) salary. Accept data for 5 objects and print it. 5. **Attempt any TWO of the following: 16** Write the effect of access specifiers public, private and protected in package. (b) Explain drawing polygons with suitable example. Differentiate between applet and application and also write a simple (c) applet which display message "Welcome to Java". 6. **Attempt any FOUR of the following:** 16 Explain the following methods related to thread Wait() (ii) Notify() (b) What are the different forms of inheritance? How do we put an applet into web page? Explain. (c) Write a program to generate Fibonacci series. (d) What is constructor? Demonstrate the use of parameterized constructor (e) with a suitable example.