B.C.A. DEGREE EXAMINATION – NOVEMBER 2023
THIRD SEMESTER

COURSE   : MAJOR CORE
PAPER   : ESSENTIALS OF OBJECT ORIENTED PROGRAMMING
SUBJECT CODE: 19CS/MC/OP33
TIME   : 3 HOURS   MAX. MARKS: 100

SECTION – A

ANSWER ALL THE QUESTIONS   **(20 X 1=20)**
Choose the correct answer:

1. _____ is one of the java features that enables java program to run anywhere anytime.
   A0) Object-Oriented   b) Multithreaded
   c) Platform-Independent   d) Dynamic & Extensible
2. If two methods have same name but different parameter list then it is called _____
   a) Method overriding   b) Method overloading
   c) Operator overloading   d) Operator overriding
3. The keyword _____ can be used anywhere the current object might appear.
   a) Super   b) Static   c) this   d) synchronize
4. We cannot create a subclass of _____ class.
   a) abstract   b) public   c) static   d) final
5. _____ helps to extend the functionality of an existing class by adding more methods
   to the subclass.
   a) Mutual Exclusion   b) Inheritance   c) Package   d) Interface
6. A _____ in java is a group of related classes, interfaces and sub-packages.
   a) abstract classes   b) wrapper classes   c) packages   d) finalizer
7. The methods within the interface can carry modifiers such as public and _____.
   a) abstract   b) private   c) protected   d) static
8. Order of execution of constructors in Java inheritance is _____
   a) Base to derived class   b) Derived to base class
   c) Random order   d) sequential order
9. Which of these keywords is used by a class to use an interface defined previously?
   a) import   b) imports   c) implement   d) implements
10. Classes declared as _____ can be imported by other classes outside the package.
    a) private   b) public   c) protected   d) const

Fill in the blanks:

11. It is possible to throw an exception explicitly using the _____ statement.
12. The _____ interface is implemented to create a thread.
13. The class Thread is present in _____ packages.
14. _____ function of pre defined class Thread is used to check whether current thread being checked is still running.
15. _____is the purpose of the wait() method in Java threads.
16. _____ parameters is used for a generic class to return and accept a number.
17. toString( ) method is defined in _____.

18. _____is used to concatenate two or more strings, separating each string with a delimiter, such as a space or a comma.
19. The Date class is included within _____ package.
20. The _____method converts data from its internal format into a human-readable form.

SECTION – B

ANSWER ALL THE QUESTIONS: **(5 X 2 = 10)**

21. Define bytecode.
22. What is the use of super keyword?
23. What are the keywords that are associated with exception handling?
24. List out the priorities that are present in the Thread class.
25. What is the use of wrapper classes in Java ?

SECTION – C

ANSWER ANY EIGHT OF THE FOLLOWING: **(8 X 5 = 40)**

26. Define a class and object. Write syntax to create class and object with an example.
27. What are constructors? How does it differ from a method?
28. Explain how interface is used to achieve multiple Inheritance in Java.
29. What is the importance of 'super' and 'this' keyword in inheritance? Illustrate with suitable example.
30. Which are the ways to access package from another package? Explain with an example.
31. What is an exception? Why does the exception occur in program? Explain with suitable example.
32. Write a program to create two threads in which one thread will print even numbers between 1 to 10 whereas other will print odd numbers between 11 to 20.
33. Explicate the general form of a Generic class.
34. Explain the primitive data types available in Java.
35. What is Iterator class? Give its syntax and use of any two methods of Iterator class.

SECTION – D

ANSWER ANY THREE OF THE FOLLOWING: **(3 X 10 = 30)**

36. Describe the usage of final modifier involving final classes, final variables and final methods with an example.
37. When do we declare a method or class abstract? Discuss with one example.
38. Explain creating and accessing a package with an example.
39. With proper syntax and example explain the following thread methods:
    a) wait( )
    b) sleep( )
    c) resume( )
    d) notify( )
40. What is use of ArrayList class? State any five methods with their use from ArrayList.

****