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Reg. No. :

Code No. : 20417 E Sub. Code : EMCA 41

B.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2025.

Fourth Semester

Computer Application – Core

JAVA PROGRAMMING

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which one is the correct array declaration statement?
(a) `int a[] = new int [5];`
(b) `int [a] = new int[5];`
(c) `int a[] = new int(5);`
(d) `int a() = new int[5];`

2. What is the return type of a method that does not return any value?
(a) int (b) float
(c) void (d) double
3. Which of the following is a method having same name as that of its class?
(a) constructor (b) delete
(c) class (d) finalize
4. Which method can be defined only once in a program?
(a) finalize method (b) main method
(c) paint method (d) init method
5. Thread priority in Java is _____.
(a) Integer (b) Float
(c) Double (d) Long
6. Which class is used to read characters in a file?
(a) FileReader
(b) FileWriter
(c) FileInputStream
(d) InputStreamReader

7. Name the component used as a multiline editor.
(a) TextField (b) Label
(c) TextArea (d) Button
8. _____ is the root of the Java event hierarchy.
(a) Applet
(b) Source
(c) Component
(d) EventObject
9. Which package contains the Java Swing classes?
(a) java.lang
(b) java.io
(c) java.util
(d) javax.swing
10. Which method is used to set the text content of a JTextField?
(a) setText()
(b) append()
(c) setLabel()
(d) setContent()

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain ternary Operator in Java.
Or
(b) Describe the concepts of constructors with example.
12. (a) Explain method overloading with an example.
Or
(b) Write the purpose of try, catch, finally, throw and throws keywords.
13. (a) Explain isAlive() and join() methods of the class Thread.
Or
(b) Write about ByteStream classes in Java.
14. (a) Write a note on FlowLayout.
Or
(b) Explain the terms Events, Event Sources and Event Listeners in Java.

15. (a) Describe the history of Swing components.

Or

(b) Discuss about JLabel and JButton controls with example.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Illustrate type conversion and casting in Java.

Or

(b) Write a program to find the area of square using methods in Java.

17. (a) Explain Interfaces with example.

Or

(b) What is built-in exception? Explain briefly.

18. (a) Discuss in detail about synchronization.

Or

(b) How to read console input? Explain with example.

19. (a) Describe CheckBox and CheckBoxGroup in detail.

Or

(b) Describe Event Listener interface.

20. (a) Explain JTextField and JTextArea.

Or

(b) Design a simple calculator using Swing components.