

Code No. : 1296

B. C. A. (Fourth Semester) Examination, 2023-24

AFFIX PRESCRIBED  
RUBBER STAMP

Paper Second

INTERNET AND JAVA PROGRAMMING

Course Code—BCA-402T (Major)

In Figures (अंकों में) :

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Roll No.

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Date : .....

Time : 2 Hrs.

Signature of Invigilator

कक्ष निरीक्षक के हस्ताक्षर

Max. Marks : 75

**Important Instructions :**

1. The candidate will write his/her Roll Number only at the places provided for, i. e., on the cover page and on the OMR answer sheet at the end and nowhere else.
2. Immediately on receipt of the question booklet, the candidate should check up the booklet and ensure that it contains all the pages and that no question is missing. If the candidate finds any discrepancy in the question booklet, he/she should report the invigilator within 10 minutes of the issue of this booklet and a fresh question booklet without any discrepancy is obtained.
3. No second question booklet shall be given to a candidate under any circumstances after 10 minutes. The candidate should be careful in handling the question booklet and in filling the OMR answer sheet given separately with this booklet.

**महत्त्वपूर्ण निर्देश :**

1. अभ्यर्थी अपने अनुक्रमांक केवल उन्हीं स्थानों पर लिखेंगे जो इसके लिए दिये गये हैं, अर्थात् प्रश्न पुस्तिका के मुख्य पृष्ठ तथा साथ दिये गये ओ. एम. आर. उत्तर पत्र पर, तथा अन्यत्र कहीं नहीं लिखेंगे।
2. प्रश्न पुस्तिका मिलते ही अभ्यर्थी को जाँच करके सुनिश्चित कर लेना चाहिए कि पुस्तिका में पूरे पृष्ठ हैं और कोई प्रश्न छूटा तो नहीं है। यदि कोई विसंगति है तो प्रश्न पुस्तिका मिलने के 10 मिनट के भीतर ही कक्ष परिप्रेक्षक को सूचित करना चाहिए और बिना त्रुटि की दूसरी प्रश्न पुस्तिका प्राप्त कर लेना चाहिए।
3. किसी भी परिस्थिति में 10 मिनट बाद अभ्यर्थी को दूसरी प्रश्न पुस्तिका नहीं मिलेगी। अभ्यर्थी को प्रश्न पुस्तिका को उपयोग में लाने और ओ. एम. आर. उत्तर पत्र को भरने में सावधानी बरतनी चाहिए।



1. **What is internet ?**
  - (A) **A single network**
  - (B) **A collection of unrelated computers**
  - (C) **Interconnection of local area networks**
  - (D) **Interconnection of wide area networks**
  
2. **To join the internet, the computer has to be connected to a .....**
  - (A) **internet architecture board**
  - (B) **internet society**
  - (C) **internet service provider**
  - (D) **different computer**
  
3. **Internet access by transmitting digital data over the wires of a local telephone network is provided by .....**
  - (A) **leased line**
  - (B) **digital subscriber line**
  - (C) **digital signal line**
  - (D) **digital leased line**
  
4. **ISP exchanges internet traffic between their networks by .....**
  - (A) **internet exchange point**
  - (B) **Subscriber end point**
  - (C) **isp end point**
  - (D) **internet end point**
  
5. **Which of the following protocols is used in the internet ?**
  - (A) **HTTP**
  - (B) **DHCP**
  - (C) **DNS**
  - (D) **DNS, HTTP and DHCP**
  
6. **The size of an IP address in IPv6 is .....**
  - (A) **32 bits**
  - (B) **64 bits**
  - (C) **128 bits**
  - (D) **265 bits**
  
7. **Internet works on .....**
  - (A) **packet switching**
  - (B) **circuit switching**
  - (C) **both packet switching and circuit switching**
  - (D) **data switching**

8. Which one of the following is not an application layer protocol used in internet ?
- (A) Remote procedure call
  - (B) Internet relay chat
  - (C) Resource reservation protocol
  - (D) Local procedure call
9. Which protocol assigns IP address to the client connected in the internet ?
- (A) DHCP
  - (B) IP
  - (C) RPC
  - (D) RSVP
10. Which one of the following is not used in media access control ?
- (A) Ethernet
  - (B) Digital subscriber line
  - (C) Fiber distributed data interface
  - (D) Packet switching
11. A network that links many different types of computers all over the world :
- (A) Intranet
  - (B) Internet
  - (C) ARPANET
  - (D) LAN
12. Internet was evolved from the basic ideas of ARPANET.
- (A) True
  - (B) False
13. A service that allows a user to login into another computer somewhere on the Internet :
- (A) Telnet
  - (B) FTP
  - (C) e-Mail
  - (D) UseNet
14. An internet service that allows the user to move a file :
- (A) FTP
  - (B) Telnet
  - (C) UseNet
  - (D) Time Sharing
15. Anonymous FTP files are called ..... accessible files.
- (A) Privately
  - (B) Publicly
  - (C) Batch
  - (D) User

16. TCP stands for :
- (A) Transmission Control Program
  - (B) Transmission Control Protocol
  - (C) Transfer Control Program
  - (D) Transfer Control Protocol
17. Any system that uses the HTTP protocol is called .....
- (A) Web Browser
  - (B) Web Server
  - (C) WWW
  - (D) TCP/IP
18. Any computer that can access the server is called :
- (A) Web Server
  - (B) Web Browser
  - (C) User
  - (D) Web Client
19. Allows the user to create and maintain a personal list of favorite URL addresses :
- (A) Software
  - (B) Web Servers
  - (C) Web Browsers
  - (D) WWW
20. URL stands for :
- (A) Uniform Resource Locator
  - (B) Uniform Research Locator
  - (C) Uniform Resource Link
  - (D) Uniform Research Link
21. Who invented Java Programming ?
- (A) Guido van Rossum
  - (B) James Gosling
  - (C) Dennis Ritchie
  - (D) Bjarne Stroustrup
22. Which statement is true about Java ?
- (A) Java is a sequence-dependent programming language.
  - (B) Java is a code-dependent programming language.
  - (C) Java is a platform-dependent programming language.
  - (D) Java is a platform-independent programming language.

23. Which component is used to compile, debug and execute the Java programs ?

- (A) JRE
- (B) JIT
- (C) JDK
- (D) JVM

24. Which one of the following is not a Java feature ?

- (A) Object-oriented
- (B) Use of pointers
- (C) Portable
- (D) Dynamic and Extensible

25. Which of these cannot be used for a variable name in Java ?

- (A) identifier and keyword
- (B) identifier
- (C) keyword
- (D) None of the mentioned

26. What is the extension of java code files ?

- (A) .js
- (B) .txt
- (C) .class
- (D) .java

27. What will be the output of the following Java code ?

```
class increment {  
    public static void main  
(String args [ ])  
    {  
        int g = 3;  
        System.out.print (++g * 8);  
    }  
}
```

- (A) 32
- (B) 33
- (C) 24
- (D) 25

28. Which environment variable is used to set the java path ?

- (A) MAVEN\_Path
- (B) JavaPATH
- (C) JAVA
- (D) JAVA\_HOME

29. Which of the following is not an OOPs concept in Java ?

- (A) Polymorphism
- (B) Inheritance
- (C) Compilation
- (D) Encapsulation

30. What is not the use of "this" keyword in Java ?

- (A) Referring to the instance variable when a local variable has the same name
- (B) Passing itself to the method of the same class
- (C) Passing itself to another method
- (D) Calling another constructor in constructor chaining

31. What will be the error in the following Java code ?

```
byte b = 50;
```

```
b = b * 50;
```

- (A) b cannot contain value 50
- (B) b cannot contain value 100, limited by its range
- (C) No error in this code
- (D) \* operator has converted b \* 50 into int, which cannot be converted to byte without casting

32. Which of the following is a type of polymorphism in Java Programming ?

- (A) Multiple polymorphism
- (B) Compile time polymorphism
- (C) Multilevel polymorphism
- (D) Execution time polymorphism

33. What will be the output of the following Java program ?

```
class leftshift_operator
{
    public static void main
(String args [ ])
    {
        byte x = 64;
        int i;
        byte y;
        i = x << 2;
        y = (byte) (x<<2);
        System.out.print(i + "" + y);
    }
}
```

- (A) 0 256
- (B) 0 64
- (C) 256 0
- (D) 64 0

34. What is Truncation in Java ?
- (A) Floating-point value assigned to a floating type
  - (B) Floating-point value assigned to an integer type
  - (C) Integer value assigned to floating type
  - (D) Integer value assigned to integer type

36. What is the extension of compiled java classes ?
- (A) .txt
  - (B) .js
  - (C) .class
  - (D) .java

37. What will be the output of the following Java code snippet ?

```
class abc
{
    public static void main
(String args [ ])
    {
        if(args.length>0)
            System.out.println
(args.length);
    }
}
```

- (A) The snippet compiles and runs but does not print anything
- (B) The snippet compiles, runs and prints 0
- (C) The snippet compiles, runs and prints 1
- (D) The snippet does not compile

35. What will be the output of the following Java program ?

```
class output
{
    public static void main
(String args [ ])
    {
        int arr[ ] = {1, 2, 3, 4, 5};
        for ( int i = 0;
i < arr.length - 2; ++i)
            System.out.println(arr [i] + " ");
    }
}
```

- (A) 1 2 3 4 5
- (B) 1 2 3 4
- (C) 1 2
- (D) 1 2 3

38. Which exception is thrown when Java is out of memory ?

- (A) MemoryError
- (B) OutOfMemoryError
- (C) MemoryOutOfBounds

Exception

- (D) MemoryFullException

39. Which of these are selection statements in Java ?

- (A) break
- (B) continue
- (C) for( )
- (D) if( )

40. Which of these keywords is used to define interfaces in Java ?

- (A) intf
- (B) Intf
- (C) interface
- (D) Interface

41. What will be the output of the following Java program ?

```
class output
{
    public static void main
(String args [ ])
    {
        StringBuffer s1 = new
StringBuffer ("Quiz");
        StringBuffer s2 = s1.
reverse ( );
        System.out.println(s2);
    }
}
```

- (A) QuizziuQ
- (B) ziuQQuiz
- (C) Quiz
- (D) ziuQ

42. Which of the following is a superclass of every class in Java ?

- (A) ArrayList
- (B) Abstract class
- (C) Object class
- (D) String



43. Which of the following is not a Java Profiler ?
- (A) JProfiler
  - (B) Eclipse Profiler
  - (C) JVM
  - (D) JConsole
44. Which of these package contains the exception stack overflow in Java ?
- (A) java.io
  - (B) java.system
  - (C) java.lang
  - (D) java.util
45. Which of these statements is incorrect about Thread ?
- (A) start( ) method is used to begin execution of the thread.
  - (B) run( ) method is used to begin execution of a thread before start( ) method in special cases.
  - (C) A thread can be formed by implementing Runnable interface only.
  - (D) A thread can be formed by a class that extends Thread class.
46. Which of these keywords are used for the block to be examined for exceptions ?
- (A) check
  - (B) throw
  - (C) catch
  - (D) try
47. Which one of the following is not an access modifier ?
- (A) Protected
  - (B) Void
  - (C) Public
  - (D) Private
48. What is the numerical range of a char data type in Java ?
- (A) 0 to 256
  - (B) - 128 to 127
  - (C) 0 to 65535
  - (D) 0 to 32767
49. Which class provides system independent server side implementation ?
- (A) Server
  - (B) ServerReader
  - (C) Socket
  - (D) ServerSocket

50. Which of the following is true about servlets ?
- (A) Servlets can use the full functionality of the Java class libraries.
  - (B) Servlets execute within the address space of web server, platform independent and uses the functionality of Java class libraries.
  - (C) Servlets execute within the address space of web server.
  - (D) Servlets are platform-independent because they are written in Java.
51. Which of these functions is called to display the output of an applet ?
- (A) display( )
  - (B) paint( )
  - (C) displayApplet( )
  - (D) PrintApplet( )
52. Which of these methods can be used to output a string in an **Applet** ?
- (A) display( )
  - (B) print( )
  - (C) drawString( )
  - (D) transient( )
53. Which of these methods is a part of Abstract Window Toolkit (AWT) ?
- (A) display( )
  - (B) paint( )
  - (C) drawString( )
  - (D) Transient( )
54. Which of these modifiers can be used for a variable so that it can be accessed from any thread or parts of a program ?
- (A) transient
  - (B) volatile
  - (C) global
  - (D) No modifier is needed.
55. Which of these operators can be used to get runtime information about an object ?
- (A) getInfo
  - (B) Info
  - (C) instanceof
  - (D) getinfoof

56. What is the message is displayed in the Applet made by the following Java program ?

```
import java.awt.*;
import java.applet.*;
public class myapplet extends
Applet
{ public void paint
                (Graphics g)
    {
        g.drawString    ("A
Simple Applet", 20, 20);
    }
}
```

- (A) A Simple Applet
- (B) A Simple Applet 20 20
- (C) Compilation Error
- (D) Runtime Error

57. Which component is used to compile, debug and execute java program ?

- (A) JVM
- (B) JDK
- (C) JIT
- (D) JRE

58. Which component is responsible for converting bytecode into machine specific code ?

- (A) JVM
- (B) JDK
- (C) JIT
- (D) JRE

59. Which component is responsible to run java program ?

- (A) JVM
- (B) JDK
- (C) JIT
- (D) JRE

60. Which component is responsible to optimize bytecode to machine code ?

- (A) JVM
- (B) JDK
- (C) JIT
- (D) JRE

61. Which statement is true about Java ?
- (A) Platform independent programming language
  - (B) Platform dependent programming language
  - (C) Code dependent programming language
  - (D) Sequence dependent programming language
62. Which of the following is invalid identifier with the main method ?
- (A) public
  - (B) static
  - (C) private
  - (D) final
63. WWW stands for .....
- (A) Web Window Word
  - (B) World Wide Web
  - (C) Working Window Web
  - (D) None of the above
64. Which was the first network ?
- (A) ANSNET
  - (B) NSFNET
  - (C) ARPANET
  - (D) CSNET
65. How can we identify whether a compilation unit is class or interface from a class file ?
- (A) Java source file header
  - (B) Extension of compilation unit
  - (C) We cannot differentiate between class and interface
  - (D) The class or interface name should be postfixed with unit type
66. What is use of interpreter ?
- (A) They convert bytecode to machine language code.
  - (B) They read high level code and execute them.
  - (C) They are intermediated between JIT and JVM.
  - (D) It is a synonym for JIT.

67. Which of the following contains both date and time ?
- (A) java.io.date
  - (B) java.sql.date
  - (C) java.util.date
  - (D) java.util.dateTime
68. Which of the following is advantage of using JDBC connection pool ?
- (A) Slow performance
  - (B) Using more memory
  - (C) Using less memory
  - (D) Better performance
69. Which of the following is advantage of using PreparedStatement in Java ?
- (A) Slow performance
  - (B) Encourages SQL injection
  - (C) Prevents SQL injection
  - (D) More memory usage
70. Which one of the following contains date information ?
- (A) java.sql.TimeStamp
  - (B) java.sql.Time
  - (C) java.io.Time
  - (D) java.io.TimeStamp
71. What does setAutoCommit(false) do ?
- (A) commits transaction after each query
  - (B) explicitly commits transaction
  - (C) does not commit transaction automatically after each query
  - (D) never commits transaction
72. Which of the following is used to call stored procedure ?
- (A) Statement
  - (B) PreparedStatement
  - (C) CallableStatement
  - (D) CalledStatement
73. Which of the following is used to limit the number of rows returned ?
- (A) setMaxRows(int i)
  - (B) setMinRows(int i)
  - (C) getMaxRows(int i)
  - (D) getMinRows(int i)

74. Which of the following is method of JDBC batch process ?
- (A) `setBatch()`
  - (B) `deleteBatch()`
  - (C) `removeBatch()`
  - (D) `addBatch()`
75. Which of the following is used to rollback a JDBC transaction ?
- (A) `rollback()`
  - (B) `rollforward()`
  - (C) `deleteTransaction()`
  - (D) `RemoveTransaction()`
76. Which of the following is not a JDBC connection isolation levels ?
- (A) `TRANSACTION_NONE`
  - (B) `TRANSACTION_READ_COMMITTED`
  - (C) `TRANSACTION_REPEATABLE_READ`
  - (D) `TRANSACTION_NON_REPEATABLE_READ`
77. Which of these methods are used to register a keyboard event listener ?
- (A) `KeyListener()`
  - (B) `addKistener()`
  - (C) `addKeyListener()`
  - (D) `eventKeyboardListener()`
78. Which of these methods are used to register a mouse motion listener ?
- (A) `addMouse()`
  - (B) `addMouseListener()`
  - (C) `addMouseMotionListner()`
  - (D) `eventMouseMotionListener()`
79. Which of these events will be generated if we close an Applet's window ?
- (A) `ActionEvent`
  - (B) `ComponentEvent`
  - (C) `AdjustmentEvent`
  - (D) `WindowEvent`
80. Event class is defined in which of these libraries ?
- (A) `java.io`
  - (B) `java.lang`
  - (C) `java.net`
  - (D) `java.awt.event`

81. What is a listener in context to event handling ?
- (A) A listener is a variable that is notified when an event occurs.
  - (B) A listener is a object that is notified when an event occurs.
  - (C) A listener is a method that is notified when an event occurs.
  - (D) None of the mentioned
82. The JdbcTemplate class offers template method for batch update operations :
- (A) batchUpdate( )
  - (B) update( )
  - (C) All of the mentioned
  - (D) None of the mentioned
83. The JdbcTemplate class declares a number of overloaded query( ) template methods to control the overall query process.
- (A) True
  - (B) False
  - (C) Both (A) and (B)
  - (D) None of the above
84. The primary interface that allows you to process the current row of the result set :
- (A) PreparedStatementSetter
  - (B) PreparedStatementCreator
  - (C) RowCallbackHandler
  - (D) All of the mentioned
85. RowCallbackHandler purpose is to map a single row of the result set to a customized object.
- (A) True
  - (B) False
  - (C) Both (A) and (B)
  - (D) None of the above
86. Which of these events will be notified if scroll bar is manipulated ?
- (A) ActionEvent
  - (B) ComponentEvent
  - (C) AdjustmentEvent
  - (D) WindowEvent
87. RowMapper implementation which can automatically map a row to a new instance of the specified class :
- (A) BeanPropertyRowMapper
  - (B) BeanPropertyRow
  - (C) All of the mentioned
  - (D) None of the mentioned

88. On applying Left shift operator, <<, on integer bits are lost one they are shifted past which position bit ?
- (A) 32
  - (B) 31
  - (C) 30
  - (D) 33
89. Which of these class is super class of all the events ?
- (A) EventObject
  - (B) EventClass
  - (C) ActionEvent
  - (D) ItemEvent
90. Method to retrieve the JDBC template :
- (A) setJdbcTemplate()
  - (B) getTemplate()
  - (C) getJdbc()
  - (D) getJdbcTemplate()
91. Which of the following is not an Enterprise Beans type ?
- (A) Doubleton
  - (B) Singleton
  - (C) Stateful
  - (D) Stateless
92. Which of the following is not true about Java beans ?
- (A) Implements java.io.Serializable interface
  - (B) Extends java.io.Serializable class
  - (C) Provides no argument constructor
  - (D) Provides setter and getter methods for its properties
93. Which file separator should be used by MANIFEST file ?
- (A) /
  - (B) \
  - (C) -
  - (D) //
94. Which of the following is correct error when loading JAR file with duplicate name ?
- (A) java.io.NullPointerException
  - (B) java.lang.ClassNotFound
  - (C) java.lang.ClassFormatError
  - (D) java.lang.DuplicateClassError
95. Java Beans are extremely secured.
- (A) True
  - (B) False
  - (C) Both (A) and (B)
  - (D) None of the above



96. How constructor can be used for a servlet ?

- (A) Initialization
- (B) Constructor function
- (C) Initialization and Constructor function
- (D) Setup( ) method

97. What is the difference between Servlets and Applets ?

- (i) Servlets execute on Server; Applets execute on browser
- (ii) Servlets have no GUI; Applet has GUI
- (iii) Servlets creates static web pages; Applets creates dynamic web pages
- (iv) Servlets can handle only a single request; Applet can handle multiple requests

**Codes :**

- (A) (i), (ii), (iii) are correct.
- (B) (i), (ii) are correct.
- (C) (i), (iii) are correct.
- (D) (i), (ii), (iii), (iv) are correct

98. Which of the following code is used to get an attribute in a HTTP Session object in servlets ?

- (A) session.getAttribute(String name)
- (B) session.alterAttribute(String name)
- (C) session.updateAttribute (String name)
- (D) session.setAttribute(String name)

99. When destroy( ) method of a filter is called :

- (A) The destroy( ) method is called only once at the end of the life cycle of a filter.
- (B) The destroy( ) method is called after the filter has executed doFilter method.
- (C) The destroy( ) method is called only once at the beginning of the life cycle of a filter.
- (D) The destroyer( ) method is called after the filter has executed.

100. How is the dynamic interception of requests and responses to transform the information done ?

- (A) servlet container
- (B) servlet config
- (C) servlet context
- (D) servlet filter