

Roll. No.

Question Booklet Number

O.M.R. Serial No.

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B.C.A. (SEM.-V) (NEP) (SUPPLE.) EXAMINATION, 2024-25

COMPUTER APPLICATION

(Java Programming and Dynamic Webpage Design)

Paper Code							
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(BCA-5002)

Question Booklet
Series

A

Time : 1 : 30 Hours

Max. Marks : 75

Instructions to the Examinee :

1. Do not open the booklet unless you are asked to do so.
2. The booklet contains 100 questions. Examinee is required to answer 75 questions in the OMR Answer-Sheet provided and not in the question booklet. All questions carry equal marks.
3. Examine the Booklet and the OMR Answer-Sheet very carefully before you proceed. Faulty question booklet due to missing or duplicate pages/questions or having any other discrepancy should be got immediately replaced.
4. Four alternative answers are mentioned for each question as - A, B, C & D in the booklet. The candidate has to choose the correct / answer and mark the same in the OMR Answer-Sheet as per the direction :

(Remaining instructions on last page)

परीक्षार्थियों के लिए निर्देश :

1. प्रश्न-पुस्तिका को तब तक न खोलें जब तक आपसे कहा न जाए।
2. प्रश्न-पुस्तिका में 100 प्रश्न हैं। परीक्षार्थी को 75 प्रश्नों को केवल दी गई OMR आन्सर-शीट पर ही हल करना है, प्रश्न-पुस्तिका पर नहीं। सभी प्रश्नों के अंक समान हैं।
3. प्रश्नों के उत्तर अंकित करने से पूर्व प्रश्न-पुस्तिका तथा OMR आन्सर-शीट को सावधानीपूर्वक देख लें। दोषपूर्ण प्रश्न-पुस्तिका जिसमें कुछ भाग छपने से छूट गए हों या प्रश्न एक से अधिक बार छप गए हों या उसमें किसी अन्य प्रकार की कमी हो, उसे तुरन्त बदल लें।
4. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार सम्भावित उत्तर- A, B, C एवं D हैं। परीक्षार्थी को उन चारों विकल्पों में से सही उत्तर छानना है। उत्तर को OMR उत्तर-पत्रक में सम्बन्धित प्रश्न संख्या में निम्न प्रकार भरना है :

(शेष निर्देश अन्तिम पृष्ठ पर)

1. Who invented Java Programming?
 - (A) Guido van Rossum
 - (B) James Gosling
 - (C) Dennis Ritchie
 - (D) Bjarne Stroustrup
2. 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
3. Which component is used to compile, debug and execute the java programs?
 - (A) JRE
 - (B) JIT
 - (C) JDK
 - (D) JVM
4. Which one of the following is not a Java feature?
 - (A) Object-oriented
 - (B) Use of pointers
 - (C) Portable
 - (D) Dynamic and Extensible
5. Which of these cannot be used for a variable name in Java?
 - (A) Identifier & keyword
 - (B) Identifier
 - (C) Keyword
 - (D) None of the above of the mentioned
6. What is the extension of java code files?
 - (A) .js
 - (B) .txt
 - (C) .class
 - (D) .java
7. Which environment variable is used to set the java path?
 - (A) MAVEN_Path
 - (B) JavaPATH
 - (C) JAVA
 - (D) JAVA_HOME
8. Which of the following is not an OOPS concept in Java?
 - (A) Polymorphism
 - (B) Inheritance
 - (C) Compilation
 - (D) Encapsulation
9. 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

10. 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
11. 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 floating type
12. What is the extension of compiled java classes?
- (A) .txt
 - (B) .js
 - (C) .class
 - (D) .java
13. Which exception is thrown when java is out of memory?
- (A) Memory Error
 - (B) Out Of Memory Error
 - (C) Memory Out Of Bounds Exception
 - (D) Memory Full Exception
14. Which of these are selection statements in Java?
- (A) break
 - (B) continue
 - (C) for()
 - (D) if()
15. Which of these keywords is used to define interfaces in Java?
- (A) intf
 - (B) Intf
 - (C) interface
 - (D) Interface
16. Which of the following is a superclass of every class in Java?
- (A) ArrayList
 - (B) Abstract class
 - (C) Object class
 - (D) String
17. Which of the below is not a Java Profiler?
- (A) JProfiler
 - (B) Eclipse Profiler
 - (C) JVM
 - (D) JConsole

18. Which of these packages contains the exception Stack Overflow in Java?
- (A) java.io
 - (B) java.system
 - (C) java.lang
 - (D) java.util
19. 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
20. Which of these keywords are used for the block to be examined for exceptions?
- (A) check
 - (B) throw
 - (C) catch
 - (D) try
21. Which one of the following is not an access modifier?
- (A) Protected
 - (B) Void
 - (C) Public
 - (D) Private
22. Which class provides system independent server side implementation?
- (A) Server
 - (B) Server Reader
 - (C) Socket
 - (D) Server Socket
23. 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
24. JDK stands for :
- (A) Java development kit
 - (B) Java deployment kit
 - (C) JavaScript deployment kit
 - (D) None of the above of these
25. JRE stands for :
- (A) Java run ecosystem
 - (B) JDK runtime Environment
 - (C) Java Runtime Environment
 - (D) None of the above of these

26. What makes the Java platform independent?
- (A) Advanced programming language
 - (B) It uses bytecode for execution
 - (C) Class compilation
 - (D) All of these
27. In which file can you define URL mappings for Servlets in older Java EE versions (Servlet 2.5 and earlier)?
- (A) web.xml
 - (B) web-config.xml
 - (C) servlet-mapping.xml
 - (D) servlet-config.xml
28. What are the types of memory allocated in memory in java?
- (A) Heap memory
 - (B) Stack memory
 - (C) Both (A) and (B)
 - (D) None of the above of these
29. Multiline comment is created using ____.
- (A) //
 - (B) /* */
 - (C) <!-- -- >
 - (D) All of these
30. What is the entry point of a program in Java?
- (A) main() method
 - (B) The first line of code
 - (C) Last line of code
 - (D) main class
31. Which keyword in java is used for exception handling?
- (A) exep
 - (B) excepHand
 - (C) throw
 - (D) All of these
32. Which class in Java is used to take input from the user?
- (A) Scanner
 - (B) Input
 - (C) Applier
 - (D) None of the above of these
33. Method used to take a string as input in Java?
- (A) next()
 - (B) nextLine()
 - (C) Both (A) and (B)
 - (D) None of the above of these

34. Which of the following is the correct syntax to create a variable in Java?
- (A) var name;
 - (B) int name;
 - (C) var name int;
 - (D) All of these
35. Which of these is a type of variable in Java?
- (A) Instance Variable
 - (B) Local Variable
 - (C) Static Variable
 - (D) All of these
36. What is type casting in Java?
- (A) It is converting type of a variable from one type to another
 - (B) Casting variable to the class
 - (C) Creating a new variable
 - (D) All of these
37. Which type of casting is lossy in Java?
- (A) Widening typecasting
 - (B) Narrowing typecasting
 - (C) Manual typecasting
 - (D) All of these
38. Which of the following can be declared as final in java?
- (A) Class
 - (B) Method
 - (C) Variable
 - (D) All of these
39. Finally block is attached to?
- (A) Try-catch block
 - (B) Class block
 - (C) Method block
 - (D) All of these
40. The break statement in Java is used to:
- (A) Terminates from the loop immediately
 - (B) Terminates from the program immediately
 - (C) Skips the current iteration
 - (D) All of these
41. Can the Java program accept input from the command line?
- (A) Yes, using command-line arguments
 - (B) Yes, by access command prompt
 - (C) No
 - (D) None of the above of these
42. Array in java is :
- (A) Collection of similar elements
 - (B) Collection of elements of different types
 - (C) The data type of consisting of characters
 - (D) None of the above of these

43. Which of these is the correct method to create an array in java?
- (A) `int[] arr = {1, 3, 5};`
 - (B) `int[] arr;`
 - (C) `arr = new int[] {3, 1, 8};`
 - (D) All of these
44. Object in java are:
- (A) Classes
 - (B) References
 - (C) Iterators
 - (D) None of the above of these
45. What is garbage collection in java?
- (A) Method to manage memory in java
 - (B) Create new garbage values
 - (C) Delete all values
 - (D) All of these
46. Static variables in java are declared as:
- (A) Final variables
 - (B) New variables
 - (C) Constants
 - (D) All of these
47. BigInteger Class is used to :
- (A) Store very long range of number
 - (B) Store integer values
 - (C) A class that stores large range of integer
 - (D) None of the above
48. 'this' keyword in java is :
- (A) Used to hold the reference of the current object
 - (B) Holds object value
 - (C) Used to create a new instance
 - (D) All of these
49. The 'super' keyword is used to :
- (A) Access instance of the parent class
 - (B) Access instance of the same class
 - (C) Access instance of child class
 - (D) Access instance of friend class
50. The `super()` method is used to :
- (A) Call constructor of friend class
 - (B) Is a declared method
 - (C) Call constructor of the parent class
 - (D) Call constructor
51. Wrapper class in java is :
- (A) Used to encapsulate primitive data types
 - (B) Declare new classes called wrapper
 - (C) Create a new instance of the class
 - (D) None of the above of these

52. Boxing is :
- (A) Creating new box
 - (B) Creating object
 - (C) Converting primitive type of object instance
 - (D) All of these
53. Abstract class is :
- (A) Created using abstract keyword
 - (B) Contains only abstract method
 - (C) Needs to be inherited to be used
 - (D) All of these
54. What is file handling in java?
- (A) It is creating, deleting, and modifying files using a java program.
 - (B) Creating new method
 - (C) Filing method to different file to extract them better
 - (D) All of these
55. How can we access methods for file handling in java?
- (A) Java.files
 - (B) Java.io
 - (C) Java.io.File
 - (D) Java.FileHandling
56. Which is the correct absolute path of a file in Java?
- (A) C:\Program Files \ Java \jdk1.8.0_131\bin\file_name.txt
 - (B) C:\Program Files \ Java \file_name.txt
 - (C) C:\Program Files \ Java \jdk1.8.0_131\file_name.txt
 - (D) C:\Program Files \ Java \jdk1.8.0_131\bin\File Handling\file_name.txt
57. Which method is used to add a new line to file in Java?
- (A) file.add Line()
 - (B) file.nextLine()
 - (C) file.write()
 - (D) file.line()
58. Which method deletes a file in Java?
- (A) file.delete()
 - (B) file.remove()
 - (C) file.garbage()
 - (D) file.dump()
59. Which method in java is used to read lines from file?
- (A) file.read()
 - (B) file.nextLine()
 - (C) file.getLine()
 - (D) All of these

60. The correct syntax to import the math library in java is :
- (A) `import java.lang.math`
 - (B) `import math`
 - (C) `import java.math`
 - (D) All of these
61. Which is/are valid method(s) of math library in java?
- (A) `max()`
 - (B) `cbrt()`
 - (C) `log10()`
 - (D) All of these
62. Which method in java is used to generate random numbers in Java?
- (A) `random.nextInt()`
 - (B) `random()`
 - (C) `rand()`
 - (D) All of these
63. In java, recursion is :
- (A) Method
 - (B) A process allowing methods to call itself
 - (C) The process to call methods
 - (D) None of the above of these
64. What is stringBuffer in java?
- (A) Class to create a string array
 - (B) Class to create a mutable string in java
 - (C) Class to create a string from i/o buffer
 - (D) All of these
65. Which of the following is a valid data structure in java?
- (A) Array
 - (B) List
 - (C) Vector
 - (D) All of these
66. Which syntax is valid to create a vector in java?
- (A) `Vector< string > names = new Vector< String > ();`
 - (B) `Vector name = new string;`
 - (C) `int name = new vector ();`
 - (D) All of these
67. Which of these is true for interfaces in java?
- (A) The keyword interface is used to create a method
 - (B) All the methods of an interface are abstract
 - (C) It does not contain constructors
 - (D) All of these

68. Encapsulation is :
- (A) Wrapping up of data and related functions into a single entity
 - (B) Creating special methods
 - (C) Creating special data structure
 - (D) All of these
69. Which Java method is used to convert an object to string?
- (A) createString()
 - (B) toString()
 - (C) object.string()
 - (D) newString()
70. What is a deadlock in Java?
- (A) State when all processes have complete working and are dead
 - (B) State when threads are in hold state forever
 - (C) State when threads are not ready
 - (D) All of these
71. Which statement is correct for private member in Java?
- (A) Access outside the class is allowed
 - (B) Any class can access
 - (C) Declared using private keyword
 - (D) All of these
72. Which keyword is used to inherit classes in Java?
- (A) extends
 - (B) inheritance
 - (C) isChild
 - (D) None of the above of these
73. Which of the following inheritance of class is invalid in Java?
- (A) Single
 - (B) Multiple
 - (C) Multi-level
 - (D) Hierarchical
74. The 'implements' keyword is used to :
- (A) Implement the function of a class
 - (B) Inherit an interface in Java
 - (C) Inherit a class in java
 - (D) All of these
75. What is polymorphism in Java?
- (A) Performing a single task in multiple ways
 - (B) Performing multiple tasks using multiple methods
 - (C) Creating a new class for each task
 - (D) All of these

76. What are packages in Java?
- (A) Methods of a friend class
 - (B) Methods of the main class
 - (C) Way to encapsulate a group of classes, sub-packages, and interface
 - (D) All of these
77. Empty interface in Java is called:
- (A) Marker interface
 - (B) Abstract class
 - (C) Derived class
 - (D) None of the above of these
78. What is boolean in Java?
- (A) A value consisting of only true and false value
 - (B) A value consisting of 8 values
 - (C) Truthy value in java
 - (D) All of these
79. Which of these is a property of threads in Java?
- (A) Multiple threads can be executed concurrently
 - (B) Has its own priority
 - (C) Both (A) and (B)
 - (D) None of the above of these
80. Which of the following methods is used to extract the length of a string in Java?
- (A) length()
 - (B) len()
 - (C) sizeof()
 - (D) size()
81. What is the full form of AWT?
- (A) Absolute window tool kit
 - (B) Abstract window tool kit
 - (C) Absolute wear kit
 - (D) Abstract window tools
82. Jar in java stands for :
- (A) Java Archive
 - (B) Java application runtime
 - (C) Java application runner
 - (D) None of the above of these
83. The result of dividing by 0 in Java is :
- (A) Error
 - (B) Expectation
 - (C) Infinite
 - (D) None of the above of these

84. Which of the following is not a component in AWT?
- (A) Button
 - (B) Checkbox
 - (C) Table
 - (D) TextArea
85. Which layout manager arranges components in a grid of rows and columns?
- (A) Flow Layout
 - (B) Border Layout
 - (C) Grid Layout
 - (D) Card Layout
86. Which event is generated when a user clicks a button in AWT?
- (A) Mouse Event
 - (B) Action Listener
 - (C) Key Event
 - (D) Window Event
87. Which event is generated when a user types a key in AWT?
- (A) Mouse Event
 - (B) Action Listener
 - (C) Key Event
 - (D) Window Event
88. What does JDBC stand for?
- (A) Java Data Base Connectivity
 - (B) Java Data Binary Connector
 - (C) Java Data Base Collection
 - (D) Java Data Buffering Class
89. What is the purpose of the Driver Manager class in JDBC?
- (A) To manage database drivers
 - (B) To manage database connections
 - (C) To manage database queries
 - (D) To manage database transactions
90. Which type of JDBC driver translates JDBC calls into database-specific calls using a middleware server?
- (A) Type-1 driver
 - (B) Type-2 driver
 - (C) Type-3 driver
 - (D) Type-4 driver
91. What does JSP stand for?
- (A) Java Server Pages
 - (B) Java Servlet Pages
 - (C) Java Script Pages
 - (D) Java Static Pages

92. Which of the following is a correct syntax for a JSP expression?
- (A) `<% expression %>`
 - (B) `<%= expression %>`
 - (C) `<%@ expression %>`
 - (D) `<%! expression %>`
93. What is the primary purpose of JavaServer Pages (JSP)?
- (A) To style web pages using CSS.
 - (B) To create dynamic and interactive web pages.
 - (C) To define the structure of a web page.
 - (D) To manage server-side databases.
94. Which file extension is commonly used for JSP files?
- (A) .html
 - (B) .xml
 - (C) .jsp
 - (D) .js
95. Which method is called only once during the run time of your applet?
- (A) Destroy()
 - (B) Init()
 - (C) Stop()
 - (D) Paint()
96. Which is the correct order for lifecycle of an applet?
- (A) None of these
 - (B) Applet is painted, started, stopped, initialized, destroyed
 - (C) Applet is initialized, started, painted, stopped, destroyed
 - (D) Applet is initialized, started, painted, destroyed, stopped
97. Which life cycle method of an applet java.awt.Component class provides?
- (A) Public void paint(Graphics g)
 - (B) Public void init()
 - (C) Public void stop()
 - (D) Public void destroy()
98. What does a servlet in Java do?
- (A) Serves static web pages
 - (B) Handles client requests and generates dynamic content
 - (C) Manages database connections
 - (D) Handles email communication
99. Which method is used to initialize a servlet?
- (A) init()
 - (B) start()
 - (C) initialize()
 - (D) setup()
100. What is a Servlet container in the context of Java Servlets?
- (A) A component responsible for rendering HTML.
 - (B) A web server or application server that provides a runtime environment for Servlets.
 - (C) A part of the Servlet class for managing HTTP requests.
 - (D) A special type of Servlet used for deploying applications.

ROUGH WORK

Example :

Question :

Q.1 (A) ● (C) (D)

Q.2 (A) (B) ● (D)

Q.3 (A) ● (C) (D)

5. Each question carries equal marks. Marks will be awarded according to the number of correct answers you have.
6. All answers are to be given on OMR Answer Sheet only. Answers given anywhere other than the place specified in the answer sheet will not be considered valid.
7. Before writing anything on the OMR Answer Sheet, all the instructions given in it should be read carefully.
8. After the completion of the examination, candidates should leave the examination hall only after providing their OMR Answer Sheet to the invigilator. Candidate can carry their Question Booklet.
9. There will be no negative marking.
10. Rough work, if any, should be done on the blank pages provided for the purpose in the booklet.
11. To bring and use of log-book, calculator, pager & cellular phone in examination hall is prohibited.
12. In case of any difference found in English and Hindi version of the question, the English version of the question will be held authentic.

Impt. On opening the question booklet, first check that all the pages of the question booklet are printed properly. If there is any discrepancy in the question Booklet, then after showing it to the invigilator, get another question Booklet of the same series.

उदाहरण :

प्रश्न :

प्रश्न 1 (A) ● (C) (D)

प्रश्न 2 (A) (B) ● (D)

प्रश्न 3 (A) ● (C) (D)

5. प्रत्येक प्रश्न के अंक समान हैं। आपके जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
6. सभी उत्तर केवल ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर ही दिये जाने हैं। उत्तर-पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
7. ओ०एम०आर० उत्तर-पत्रक (OMR Answer Sheet) पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाये।
8. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी OMR Answer Sheet उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें। परीक्षार्थी अपने साथ प्रश्न-पुस्तिका ले जा सकते हैं।
9. निगेटिव मार्किंग नहीं है।
10. कोई भी रफ कार्य, प्रश्न-पुस्तिका में, रफ-कार्य के लिए दिए खाली पेज पर ही किया जाना चाहिए।
11. परीक्षा-कक्ष में लॉग-बुक, कैल्कुलेटर, पेजर तथा सेल्युलर फोन ले जाना तथा उसका उपयोग करना वर्जित है।
12. प्रश्न के हिन्दी एवं अंग्रेजी रूपान्तरण में भिन्नता होने की दशा में प्रश्न का अंग्रेजी रूपान्तरण ही मान्य होगा।

महत्वपूर्ण: प्रश्नपुस्तिका खोलने पर प्रथमतः जाँच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभाँति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्षनिरीक्षक को दिखाकर उसी सिरिज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।