

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Summer 2018 - 19 Examination

Semester: 5
Subject Code: 03105331
Subject Name: Java and Internet Technology

Date: 21/05/2019
Time: 10:30am to 1:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions - (Fill in the blanks, one word answer, MCQ-not more than Five in case (15) of MCQ) (All are compulsory) (Each of one mark)

1. _____ command is used to compile the Java program
2. _____ keyword is used to generate an exception explicitly
3. _____ is the default value of a variable having float data type.
4. _____ attribute of an array can be used to find out how many elements are present in it
5. _____ specifies only behavior and not the implementation
6. Write the signature of the method which is the entry point of a Java program
7. Write the size of long data type (in bytes) in java
8. Which access qualifier declares a class member that is to be shared by all of its objects?
9. Which package needs to be imported if we want to use the Scanner class?
- 10 Which HTML tag is used to create a hyperlink to an existing web page?
11. What will be the result of attempting to compile and execute following program?

```
public class MyClass{
    public static void main(String args[]){
        int[] a = [1, 2, 3]; // line no. 3
        System.out.println("2nd element: " + a[2]);
    }
}
```

- | | |
|--|----------------------|
| a) Compilation error: illegal start of expression (line no. 3) | b) 2nd element: 3 |
| c) 2nd element: 2 | d) None of the above |

12. Predict the output of following program

```
public class MyClass{
    public static void main(String args[]){
        System.out.println("In first main()");
    }
    static{
        System.out.println("In static block");
    }
    public static void main(char args[]){
        System.out.println("In second main()");
    }
}
```

- | | |
|--|---|
| a) In static block
In second main() | b) In static block
In first main() |
| c) Compile time error: Duplicate main() method declaration | d) In static block
In first main()
In second main() |

13. What will be the output of following program?

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

- a) true
- b) false
- c) Compilation error
- d) Runtime error

14. Which function of document object is used to select an element based on valid CSS selector?

- a) document.getElementById
- b) document.createElement
- c) document.querySelector
- d) None of the above

15. JavaScript is

- a) Strongly typed language
- b) Loosely typed language

Q.2 Answer the following questions. (Attempt any three) **(15)**

A) Explain how an Object reference works in java with example

B) What is method overloading? Explain with example

C) Explain the abstract class and its use in java with example. Also explain the difference between abstract class and interface

D) Write a JavaScript function to compute the sum of the two given positive integers. Your function takes two inputs. If the two input values are same, then returns triple their sum else returns their sum. If any of the inputs is negative then it generates an exception with the message “negative number not allowed!” Also write statement with usage of this function.

Q.3 A) List out features of Java. Explain any three in detail **(07)**

B) Explain the types of JDBC drivers with their appropriate diagrams **(08)**

OR

B) Declare a class called Coordinate to represent 3 dimensional Cartesian coordinates (x, y and z). **(08)**

Define following members:

- constructor with 3 formal parameters for each x, y & z

- display(), to print values of coordinates

- add_coordinates(), to add two such coordinate objects to produce a resultant coordinate object. Generate and handle Exception if x, y and z coordinates of the result are zero.

- main(), to show use of above methods

Q.4 A) Explain the life cycle of the Applet with appropriate diagram **(07)**

OR

A) Explain the life cycle of the Servlet with appropriate diagram **(07)**

B) Explain following string handling methods with example code snippet: **(08)**

1. length()
2. charAt()
3. toCharArray()
4. indexOf()