



PROGRAMMING IN JAVA

Assignment7

TYPE OF QUESTION: MCQ

Number of questions: 10

Total mark: $10 \times 1 = 10$

QUESTION 1:

Which of the following cannot be used to read a text file in Java?

- a. BufferedReader
- b. FileReader
- c. Scanner
- d. Document

Correct Answer: d

Detailed Solution:

Text files can be read using all the options a,b and c; so option d is the answer.

QUESTION 2:

Which of the following statement(s) is/are true?

- a. In unbuffered I/O, each read or write request is handled directly by the underlying OS.
- b. Buffered input streams read data from a memory area known as a buffer; the native input API is called only when the buffer is empty.
- c. Buffered output streams write data to a buffer, and the native output API is called only when the buffer is full.
- d. In buffered I/O scheme, each read or write request often triggers disk access, network activity.

Correct Answer: a,b,c

Detailed Solution:

In unbuffered I/O scheme, each read or write request often triggers disk access, network activity. So it is less efficient.

QUESTION 3:



Which of the following is/are Standard Stream(s)?

- a. System.in
- b. System.out
- c. System.err
- d. System.console

Correct Answer: a,b,c

Detailed Solution:

The Java platform supports three Standard Streams: Standard Input, accessed through System.in; Standard Output, accessed through System.out; and Standard Error, accessed through System.err.

QUESTION 4:

Which of the following code is correct?

- a.

```
FileWriter fileWriter = new FileWriter("../file.txt");  
File file = new File(fileWriter );  
BufferedWriter bufferedOutputWriter = new BufferedWriter(fileWriter);
```
- b.

```
BufferedWriter bufferedOutputWriter = new  
BufferedWriter("../file.txt");  
File file = new File(bufferedOutputWriter );  
FileWriter fileWriter = new FileWriter(file);
```
- c.

```
File file = new File("../file.txt");  
FileWriter fileWriter = new FileWriter(file);  
BufferedWriter bufferedOutputWriter = new BufferedWriter(fileWriter);
```
- d.

```
File file = new File("../file.txt");  
BufferedWriter bufferedOutputWriter = new BufferedWriter(file);  
FileWriter fileWriter = new FileWriter(bufferedOutputWriter );
```

Correct Answer: c

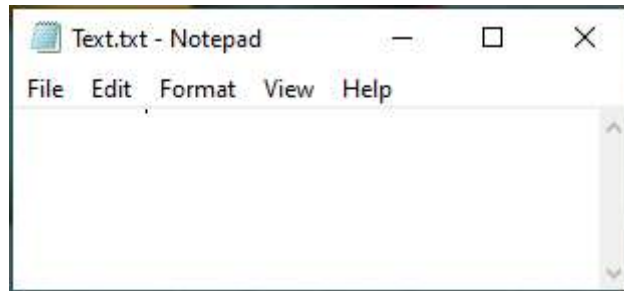
Detailed Solution:

The correct procedure would be to create a File object first, then create a FileWriter object with File object and finally create a stream object for writing in to the File object.



QUESTION 5:

Assume that “Text.txt” file is already created in the root directory, which is shown below.



Consider the following program and choose the correct option.

```
import java.io.*;

public class Question6{
    public static void main(String[] args) {
        try ( RandomAccessFile rf =
            new RandomAccessFile("Text.txt", "r"); ) {
            int i = rf.readInt();
        }
        catch (FileNotFoundException ex) {
            System.out.println("File not found");
        }
        catch (IOException ex) {
            ex.printStackTrace();
        }
    }
}
```

- a. The program will not be compiled successfully.
- b. The program will be compiled successfully, but will encounter runtime exception
- c. The program produces an output “File not found”.
- d. The program will be executed successfully, but doesn’t produce any output.

Correct Answer: b

Detailed Solution:



It will compile fine, but raises a run time exception on invoking `readInt()` because nothing is in the file.

QUESTION 6:

Which of the following statement(s) is/are true?

- a. `Streams` detects an end-of-file condition by using `EOFException`, instead of testing for an invalid return value.
- b. `Streams` uses floating point numbers to represent monetary values.
- c. Data streams support I/O of primitive data types.
- d. Object streams support I/O of objects.

Correct Answer: a,b,c,d

Detailed Solution:

All options are correct.

`Streams` detects an end-of-file condition by catching `EOFException`, instead of testing for an invalid return value.

QUESTION 7:



What will happen during execution of the following code for the command line input?

```
public class Question14 {  
    public static void main(String args[]) {  
        System.out.println(args[5]);  
    }  
}
```

Consider the following input on command line.

Input:

- A: Indian Institute of Technology
- B: 1 2 3 4 5
- C: Indian Institute of Technology Nptel
- D: 1 2 3 4 5 6

- a. A : *Exception* *ArrayIndexOutOfBoundsException*
B : *Exception* *ArrayIndexOutOfBoundsException*
C : *Exception* *ArrayIndexOutOfBoundsException*
D : *Exception* *ArrayIndexOutOfBoundsException*
- b. A : *Output* Technology
B : *Output* 1 2 3 4 5
C : *Exception* *ArrayIndexOutOfBoundsException*
D : *Exception* *ArrayIndexOutOfBoundsException*
- c. A : *Exception* *ArrayIndexOutOfBoundsException*
B : *Exception* *ArrayIndexOutOfBoundsException*
C : *Output* Nptel
D : *Exception* *ArrayIndexOutOfBoundsException*



- d. A : *Exception* ArrayIndexOutOfBoundsException
B : *Exception* ArrayIndexOutOfBoundsException
C : *Exception* ArrayIndexOutOfBoundsException
D : *Output* 6

Correct Answer: d

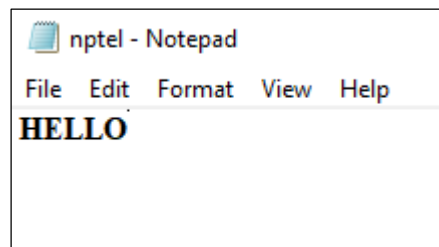
QUESTION 8:



Consider the following program.

```
import java.io.*;
public class TestIO {
public static void main(String[] args) throws IOException {
    BufferedReader br=new BufferedReader(new
    FileReader("nptel.txt"));
    String str;
    int c=0;
    while((str=br.readLine())!=null) {
        c=c+1;
        System.out.println(str.charAt(1));
    }
    System.out.println(c);
}
}
```

The file **nptel.txt** when browse with the Notepad text editor, it shows the content, which is shown below.



If the program is executed, then what will be the output from the execution?

- a. E
1
- b. E
5
- c. N
1
- d. L
5

Correct Answer: a



Detailed Solution:

It will print the 2nd character of HELLO that is E.

QUESTION 9:

Which of the following classes can be used to implement the input stream that uses a character array as the source?

- a. BufferedReader
- b. FileReader
- c. CharArrayReader
- d. FileArrayReader

Correct Answer: c

Detailed Solution:

Note: FileArrayReader creates a stream to read an array from a file, whereas CharArrayReader class read an array of characters in memory (main memory).

QUESTION 10:

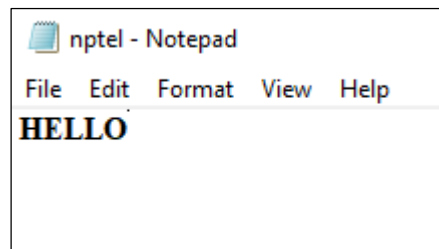


Consider the following program.

```
import java.io.*;

public class FileInfo {
    public static void main(String args[]) {
        File f = new File("nptel.txt");
        System.out.println("length: "+ f.length());
    }
}
```

The file **nptel.txt** when browse with the Notepad text editor, it shows the content, which is shown below.



If the program is executed, then what will be the output from the execution?

- a. length: 6
- b. length: 5
- c. length: 0
- d. length: 1

Correct Answer: b

Detailed Solution:

It will print length of “HELLO” that is 5.
