

**FIRST TERMINAL EXAMINATION, 2016**  
**INFORMATICS PRACTICES**

Time : 3 hrs.

Class - XI

M.M. : 70

Date – 16/09/2016

**Instructions:**

- This question paper contains seven questions.
- All the questions are compulsory.
- Answer the questions carefully.
- Assume any name to the controls, if not given in the question.

**Q.1 Answer the following:**

- a. Explain Real Time OS. (1)
- b. What do you understand by Digital Certificate? (1)
- c. What is denial-of-service? (1)
- d. What does a bus mean? (1)
- e. Explain language processors. (2)
- f. What are the two categories of printers? Which type of printer is found to be more speedy? (2)
- g. Explain Embedded Computers. (2)

**Q.2 Answer the following:**

- a. What value is assigned to num in the following code fragment, when choice equals 2? (1)  
switch(choice){  
case 1: num=1; break;  
case 2: num=3; break;  
case 3: num=2; break;  
default: num=0;  
}
- b. How many times is the following loop executed? (1)  
int x=5;  
int y=50;  
while(x<50){  
x=x+10;  
}
- c. Determine the error in the following statement: (1)  
int 2=a,b=5,c=11;d=12;
- d. Identify the correct answer: (1)
  - i) If x=300 and y=700 then what will be the output of the following expression ? (1)  
y – x < 500 ? 150 : 50  
(a) 50            (b) 400            (c) 500            (d) 150

ii) `int a,b=20;` (1)

`a=50%5;`

`b=b+a;`

`System.out.print(a);`

`System.out.print(b);`

Output will be?

(a) 10, 30

(b) 0, 20

(c) 50, 20

(d) 5, 20

iii) The statement `i++`; is equivalent to (1)

(a) `i = i + i;`

(b) `i = i + 1;`

(c) `i = i - 1;`

(d) `i--;`

iv) Suppose, `a=5` and `b=2`, then value of `a%b` is: (1)

(a) 5

(b) 2

(c) 1

(d) 2.5

e. What is the difference between the methods `print` and `println`? (1)

f. `int a=11;` (1)

`int b=22;`

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

(a) `a>=b`

(b) `a<b`

(c) `a<=b`

(d) `a>b`

### Q.3 Answer the following:

a. What will be the content of `(jTextField1)` after executing the following code: (1)

```
int Num=6;
```

```
Num = Num + 1;
```

```
if(Num>5)
```

```
    jTextField1.setText(""+Num);
```

```
else
```

```
    jTextField1.setText(""+(Num+5));
```

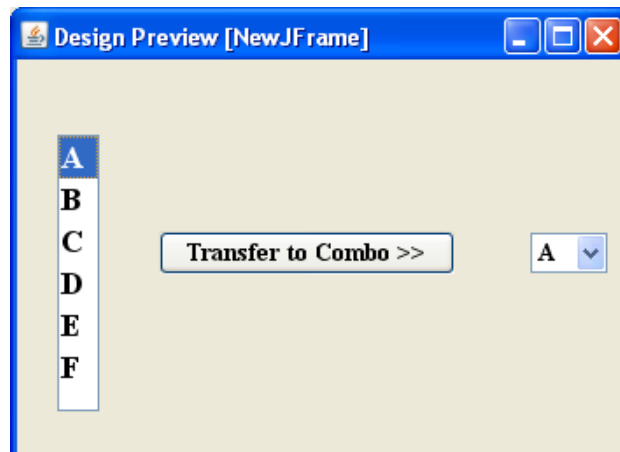
b. Name the methods of `TextArea` should be used in coding for: (1)

i. Selecting all characters in the text area.

ii. Setting whether user can edit the text in the text area.

c. Differentiate between a `Container` and a `Component`. (2)

d. Give java code to the  `jButton1` labelled `Transfer to Combo`: (2)



e. Rewrite the following program code using switch statement: (2)

```
if (d= =1)
    Day="Monday";
else if (d= =2)
    Day="Tuesday";
else if (d= =3)
    Day="Wednesday";
else
    Day="";
```

f. The following code has some error(s). Rewrite the correct code underlining all the corrections made: (2)

```
int i=2;j=5;
while j>i
{
    jTextField1.getText("j is greater");
    j--,++i;
}
JOptionPane.showMessageDialog("Hello");
```

#### Q.4 Answer the following

a. Write the output that will be generated by the code given below: (2)

```
int i;
i=7;
int r;
r=8;
while (i<=10){
    System.out.println(r*i);
    i+=2;
}
```

b. What is the difference between jTextField and jPasswordField components? (2)

c. Give syntax of switch statement. In a switch statement what is the purpose of default section? (2)

d. Write the value of variable 'c' after execution of the following code: (2)

```
int d;
int c;
d=7;
c = (5*++d)%3;
```

e. Give java code for the following output:

(2)

1  
10  
101  
1010

f. Read the following case study and answer the questions that follows:

Mr. Vidyarthi works in Blossoms Public School as a programmer. He is required to develop a student record. The school offers two different streams, medical and non-medical, with different grading criteria. The school also offers incentive to the NCC cadets in the form of a 3% increment in percentage for all the NCC cadets. The grading criteria for the two streams is given below:

Stream	Percentage	Description
Medical	> 80	A
	60 – 80	B
	< 60	C
Non – Medical	> 75	A
	50 – 75	B
	< 50	C

Object Type	Object Name	Description
jFrame	frmStudRec	The JFrame
jTextField	txtFirstTerm	To enter First Term Marks
	txtSecondTerm	To enter Second Term Marks
	txtPercentage	To display the percentage of the student
	txtGrade	To display the grade of the student

jCheckBox	chkGrade	To be Checked if student is an NCC Cadet
jRadioButton	jRBMedical	To provide stream information
	jRBNonmedical	
jButton	jBCalcPer	To calculate the percentage
	jBCalcGrade	To calculate the grade
	jBClearAll	To clear all the jTextFieldes and jCheckBox

- i) Write the code for jBClearAll Command Button to clear all the jTextFieldes and the checkbox. (1)
- ii) Write the code for jBCalcPer to calculate the percentage after finding the total marks of first term and second term (assuming that both marks are out of 100). Also ensure that NCC cadets get an increment of 3% in their percentages. (2)
- iii) Write the code for jBCalcGrade to calculate the grade depending on the stream selected and according to the criteria given above. (2)

**Q.5 Give java code for the following:**

- a. To input any alphabet and print the next five alphabets of the English alphabet series. (2)
- b. To print the series:  
2, -4, 6, -8 ..... upto n terms (2)
- c. To calculate sum of the following series :  
 $1 + 2^2 + 3^3 + 4^4 + 5^5 + \dots + n^n$  terms (2)
- d. To accept string in small letters and display in capital letters. (2)
- e. To check whether the password entered in a password field by the user is "opjs". (2)

**Q.6 Give java code for the following:**

- a. To print Fibonacci series up to n terms. (2)
- b. To display reverse of a given number. (2)
- c. To print all the prime palindrome numbers from 1 to 1000. (3)
- d. To count the number of vowels in the given string. (3)

**Q.7 Answer the following:**

- a. Write the name of the java swing controls to be used in the GUI suitable to :
  - (i) Select any one Gender (Male / Female) (1)
  - (ii) Select one country from all the countries present (1)
  - (iii) Select one or more subject of specialization from any list (1)
  - (iv) Submit the form for adding record. (1)
- b. Write code to exit the java application (1)

