

ANNUAL EXAMINATION, 2018-19

INFORMATICS PRACTICES

Time - 3 hrs.

Class - XI

M.M. – 70

Name of the student _____ Section _____ Date-16.02.2019 (Saturday)

Instructions:

- All questions are compulsory, however question numbers 2, 4, 5 and 7 have internal choices.
- Answer the questions after carefully reading the text.

Q.1 Answer the following questions:

- (i) Arrange the following units of memory in ascending order of their capacity: (1)
Terabyte, Petabyte, Megabyte, Gigabyte
- (ii) Ramesh works for Info Solutions Bangalore. He was signing in the attendance register daily till now. Recently his employers started taking attendance by registering his thumb impression on an electronic device. Name the category of these devices used for individual's recognition using physical traits like thumb impression or retina recognition? (1)
- (iii) Ravi is unaware of the possible cyber-threats. He receives an email from an unknown person containing an attractive offer. He is asked to download a file looking like a MS-Word document. His Computer gets infected soon after he clicks the link. Which type of Security threat he was subjected to? (1)
- (iv) Name the language processor that converts the whole set of source code into object code at one go and reports the errors at the end? (1)
- (v) You are regularly visiting your School's Computer Lab. Enlist two items that you consider as e-waste. Also justify your answer. (2)
- (vi) Which software tool will you prefer to re-arrange files in your hard disk so that the computer works faster? Justify your answer. (2)
- (vii) What is Spam? Why has it become a big Internet issue? (2)

Q.2 Answer the following questions:

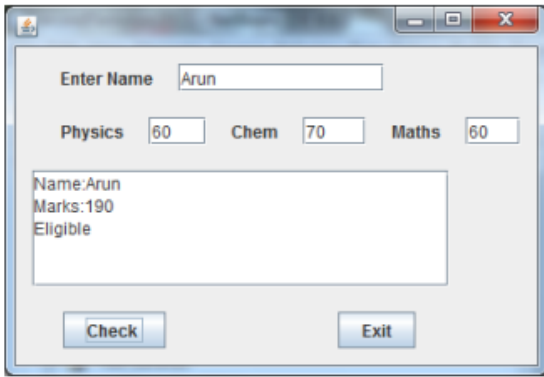
- (i) What is Rapid Application Development? (2)

OR

Explain JVM.

- (ii) Name the Java methods used to achieve the following action: (2)
a) To check whether a `JRadioButton` has been selected or not.
b) To add text in a `JTextArea` along with existing text.
- (iii) Amit wants to extract an item from a `JComboBox` in his GUI application with the following code: `String str = combo1.getSelectedItem();` He gets a compilation error. Why do you think this code will not compile? Re- write the above code to remove the error. (2)

(iv)



(jTextField – txtName
jTextFiled – txtPhy
jTextField – txtChe
jTextField – txtMat
jTextArea – txtRes
jButton – btnRes
jButton – btnExit

CET counselor for Karnataka uses this interface to decide the eligibility for admission to Engineering Colleges. If the sum of marks of Physics Chemistry and Mathematics is greater or equal to 180 out of 300 maximum marks, then only, a student is eligible.

- i) Write code under the Exit button to quit the application. (1)
- ii) Write code under the action event of the Check Button to add all the three marks and verify if the total is greater or equal to 180. If yes, the details are displayed in the JTextArea as shown. (3)

OR

Give code for a button (assuming a button with caption calculate grade is there) to display grade in text area based on following criteria:

- >= 80 A
- >=50 B
- <50 C

Q.3 Answer the following questions:

- (i) Differentiate between DDL and DML queries in SQL. (1)
- (ii) A relation in MySQL has 5 attributes and 8 tuples. What will be the cardinality and degree of the relation? (1)
- (iii) What is the difference between Candidate key and Alternate Key in a Relation? (2)
- (iv) What is a Column alias in SQL? Give an example of using column alias in a query. (2)
- (v) Give one word answer to the following questions: (4)
 - a) An attribute that is a Primary key of one table and used as non-key attribute in another table.
 - b) A SQL command used to display the structure of a table in MySQL.
 - c) A SQL command used to remove duplicate rows from a SELECT query.
 - d) An SQL query that uses SET command to make modification on table data.

Q.4 Answer the following questions:

- (i) What will be the value of variable c after execution of the following java code: (1)

```
int a=10, b=20;
int c = (++a) + (b++);
lblRes.setText( "" +c);
```

- (ii) What are comments in a program? Enlist types of comments supported in java. (1)
- (iii) Enlist two naming rules in declaring a java variable. (1)
- (iv) Re-Write the following code fragments after removing the errors. Also underline the corrected code: (2)

```
Integer i, sum=0;
while(i<= 10) {
    sum =+ i; i++;
}
```

- (v) Convert the following java code using switch-case: (2)

```
int num = Integer.parseInt(t1.getText());
String result;
If(num==2 || num==4)
    result ="Even Number";
else if(num==1 || num==3)
    result="Odd Number" ;
else result="Wrong Choice";
```

- (vi) Give java code to display the following pattern: (2)

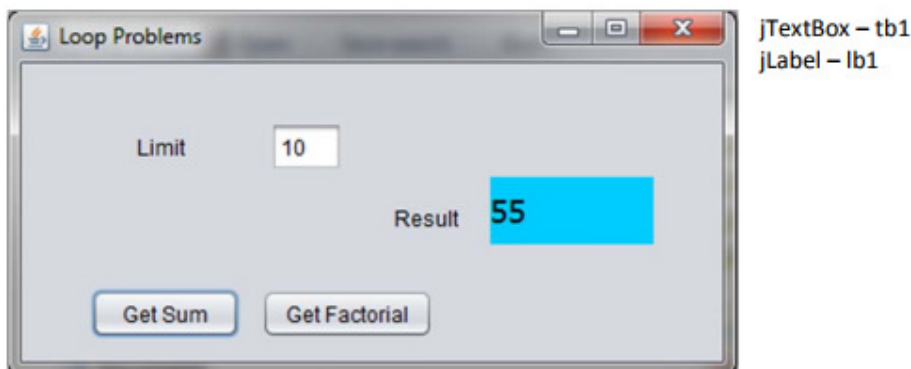
```
4
43
432
4321
```

OR

Give java code to display the following pattern:

```
A
AB
ABC
ABCD
```

- (vii) The given application is used to calculate the sum of natural numbers up to given limit and to obtain the factorial (product of numbers upto given limit). (6)



Write java code under the action event of the two jButton's to achieve the goals.

OR

Give java code to print all the prime numbers from 1 to 100.

Q.5 Answer the following questions:

(i) What will be the output of the following SQL queries:

- a) SELECT MID('AVATAR',3,2) (1)
- b) SELECT CHAR(66,65,68) (1)
- c) SELECT DAYOFYEAR('2011-12-31') (1)
- d) SELECT ROUND(15.15, -1) (1)

(ii) Study the following table's structure and answer the given questions.

Table: STUDENT

Column name	Data type	Limit	Constraint
ROLLNO	Integer	4 digits	Not Null
SNAME	Varchar	25 characters	Not Null
GENDER	Char	1	Not Null
DOB	Date		Not Null
HOUSEID	Integer	2	Not Null
FEES	Integer	4 digits	Not Null
HOBBY	Varchar	15 characters	Null
Primary Key is ROLLNO			

- a) Write SQL query to create the STUDENT table. (2)
- b) Write SQL query to increase the size of the SNAME to hold 30 characters. (2)

OR

Write SQL query to delete the field HOBBY.

- c) Write SQL query to insert a row in the STUDENT table. (2)

Q.6 Answer the following questions:

(i) Sample data is given for STUDENT table. Answer the queries that follow.

ROLL NO	SNAME	GENDER	DOB	HOUSEID	FEES	HOBBY
1001	RAVI	M	2002-01-20	10	850	HOCKEY
1002	AMAR	M	2001-03-20	11	550	SOCCER
1003	SUJA	F	2004-11-25	10	650	
1004	RUMA	F	2003-12-31	12	650	SKATING
1005	SIJU	M	2002-09-11	13	550	
1006	ARUNA	F	2001-12-20	10	750	HOCKEY
1007	HYDER	M	2004-09-18	11	850	SOCCER
1008	RAINA	M	2005-08-21	12	850	SOCCER

- a) Write SQL query to display the details of STUDENT table in the descending order of the FEES. (1)

- b) Write SQL query to display the SNAME, GENDER and FEES for all the students whose HOUSEID is either 10 or 11 or 13. (1)
- c) Write SQL query to display the SNAME, FEES and HOBBY for all the students who do not have a hobby. (1)
- d) Write SQL query to display the SNAME and GENDER for all the students who are paying fees in the range of 600 to 800. (1)
- e) Write SQL query to display the ROLLNO and SNAME for all the students whose SNAME is ending with 'A'. (1)
- f) Write SQL query to display the STUDENT details whose year of birth is 2002. (1)

(ii) Study the given HOSPITAL table and write the DML queries that follow.

PID	PNAME	DOA	DOD	WARD	FEES
1001	RAVI	2008-01-10	2008-01-20	SURGERY	2000
1002	AMAR	2008-02-21	2008-03-20	MEDICINE	1500
1003	SUJA	2009-10-02	2009-11-25	SURGERY	2500
1004	RUMA	2007-12-12	2007-12-31	OPHTHALMO	1800
1005	SIJU	2008-08-10	2008-09-11	MEDICINE	2800
1006	ARUNA	2007-10-10	2007-12-20	NEURO	3500
1007	HYDER	2008-09-15	2008-09-18	OPHTHALMO	3250
1008	RAINA	2009-06-12	2009-08-21	SURGERY	3000

- a) Write a query to Increase the FEES by 200 for all patients whose WARD is SURGERY. (2)
- b) Write a query to delete all the rows from the HOSPITAL table whose WARD is NEURO. (2)

- Q.7**
- a) How e-Governance has benefited the Common man? (1)
 - b) Enlist two websites that offers e-learning. (2)

OR

Explain e-Governance Model.

- c) Abhinav wants to create a GUI using the swing controls JLabel, JTextField, JComboBox, JRadioButton, JTextArea. Suggest him the control for the following: (2)
 - i) To enter multiline text.
 - ii) To select gender from male and female.
 - iii) To display results that cannot be edited.
 - iv) To select hobbies from a list of hobbies.

