KENDRIYA VIDYALAYA ONGC, PANVEL
SEE - 2013

CLASS – XI
SUBJECT : INFORMATICS PRACTICES (065)

Time Allowed : 3 Hrs.   Max Marks : 70

Blue Print

Topic/Unit	SA(1)	SA(2)	LA(3)	TOTAL
Introduction to Computer System	-	5(10)	-	5(10)
Introduction to Programming	1(1)	9(18)	2(6)	12(25)
Relational Database Management System	16(16)	7(14)	-	23(30)
IT APPLICATION	1(1)	2(4)		3(5)

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Note :

1-This question paper is divided into three sections.

2- Section-A and Section-B are of 25 marks each.

3-Section-C consists of 20 marks.

4-Answer the questions after carefully reading the text.

5-All questions are compulsory.

Section – A

Q1- Answer the following questions :

   a) Explain the various function of ALU?   2M
   b) Differentiate between Compiler and Interpreter?   2M
   c) What do you understand by Application Software? Write the name of any one
      application software?   2M
   d) Write the function of following :   2M
      (i)   Address Bus   (ii)   Control Bus
   e) What is computer virus? What are its preventive measures?   2M

Q2- Answer the following questions :

   a) What is e-Governance? How e-Governance beneficial for citizens?   2M
   b) What is e-Learning? Give two names of web sites that provides e-Learning? 2M
   c) Define e-Business?   1M

Q3- Answer the following questions :

   a) What is DBMS?   1M
   b) What do understand by Candidate Keys?   1M
   c) What do you understand by Degree and Cardinality of a table?   2M

d) What are the advantages of using a DBMS?   2M
e) Define ROUND() and TRUNCATE() function with example?   2M
f) Define the function CONCAT()?   2M

Section – B

Q4- Answer the following questions :

a) Differentiate between syntax error and logical error? Explain with suitable example?

                                                                               2M
b) What is JFrame?   1M
c) What is Casting? When do we need it?   2M
d) What are the container or container controls?   2M
e) Write Java statement to accomplish each of the following tasks :   3M
   (i)   Declare variables sum and a to be of type int.
   (ii)   Assign 1 to variable a
   (iii)   Add variable a to variable sum and assign the results to variable sum.

Q5- Answer the following questions :

a) What will the output of following code fragment if the value of ch is :   2M

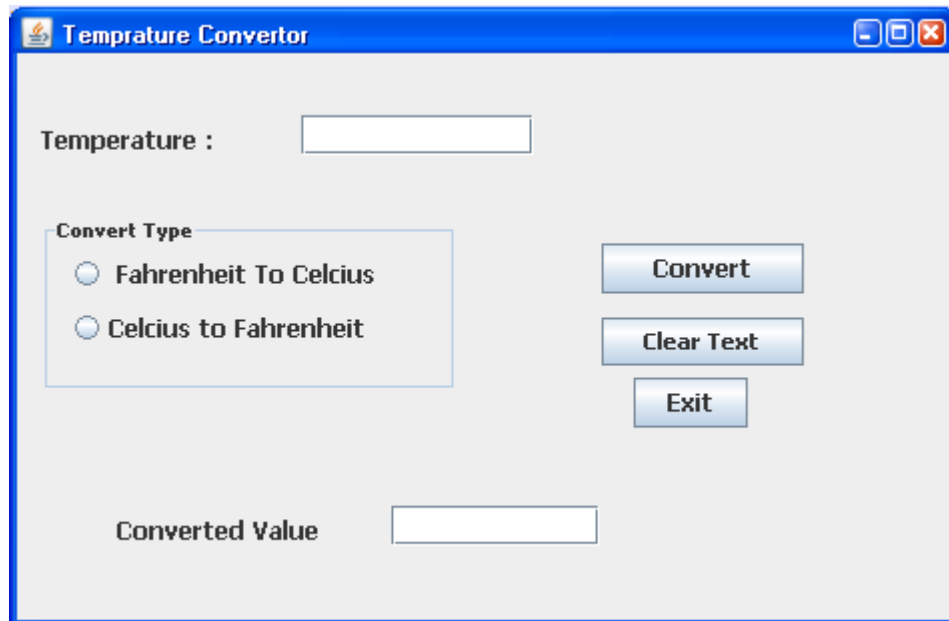   (i)a   (ii) c   (iii) d   (iv) h

Switch(ch)

{   case 'a' : System.out.println("It is a.");

     case 'b' : System.out.println("It is b.");

     case 'c' : System.out.println("It is c.");   break;

case 'd' : System.out.println("It is d."); break;

     default : System.out.println(" Not a, b, c, d); break;

}

b) Create a Java Desktop Application to convert a given temperature Fahrenheit to Celsius and Vice Versa using switch case statement.
   Hints : C=5/9 * (F-32) and F=1.8*(C+32)
   Using a JButton's click event handler, display the corresponding temperature value in a JTextField control. Implement the following settings for IDE :

Controls	Property Name	Property Value
JRadioButton1	Text buttonGroup	Fahrenheit to Celcius buttonGroup1
JRadioButton2	Text	Celcius to Fahrenheit

	buttonGroup	buttonGroup1
JTextField1	Text	txtTemp
	Variable Name	
JTextField2	Text	txtCon
	Variable Name	
JButton1	Text	Convert
	Variable Name	btnDisc
JButton2	Text	Clear the text
	Variable Name	btnClear
JButton3	Text	Exit
	Variable Name	btnExit

(i) On the Action event of the *Clear button* the text fields and radio buttons get clear.   **2M**

(ii) On the Action event of the *Exit button* the application gets closed.   **2M**

(iii) On the Action event of the button "*Convert*" the temperature is converted as per user choice.   **3M**

c) Rewrite the following code using while loop :   **2M**

```
int sum=0;
for(int i=1; i<=5;i++)
{
sum=sum+i;
}
```

d) Rewrite the correct code after removing the syntax errors if any in the following code :   **2M**

```
if(sex==1)
JLabel1.setText("Women");
else;
jLabel1.setText("Man");
```

e) Consider the following program code and tell how many time the loop will execute : **2M**

```
int x=5, y=50;
while(x<=y)
```

```
{
y=y/x;
x=x+5;
}
```

Section-C

Q6- Answer the following questions :

(a) Write the difference between Primary Key and Unique Key?   2M

(b) You have the following table CUSTOMER. Identify the required data types for each attributes :   2M

Cust_ID	Customer Identification Number
Cust_Name	Customer Name
Cust_Add	Customer Address
Bill_No	Customer bill Number

(c) Create a table name as Deptm with the following structure :   2M

Field Name	Field Type	Constraint
DEPTNO	Integer	NOT NULL PRIMARY KEY
DNAME	Varchar(14)	NOT NULL
LOC	Varchar(13)	
Salary	Integer(5)	

(d) Write a SQL command to add following column in above table.   1M

Column Name	Data Type	Size	Constraint	Description
Address	Varchar	40		Address of the Person

(e) Write SQL Commands for the questions form (a) to (h) on the basis of table Teacher.   [7 X 1M]

Table : Teacher

No.	Name	Age	Department	Dateojjoin	Salary	Sex
1	Jugal	34	Computer	2007-02-10	12000	M
2	Shanti	31	History	2008-03-24	20000	F
3	Sandeep	32	Maths	2009-02-25	14000	M
4	Sangeeta	45	History	2007-04-15	20000	F
5	Rakesh	35	Computer	2007-05-17	21000	M

(i) To show all information about the teacher of History department in descending order of their name .

(ii) To list the male teacher who are in Maths department.

(iii) To display Name, Salary, Age of all male teacher.

(iv) Update the Salary by increasing Rs. 1000 for female teacher.

(v) To Insert a new record in table Teacher with the following data :
9, 'Raja', 23, 'Hindi', '2005-08-19',12675, 'M'

(vi) Display the name of those teacher whose name started with alphabet 'S';

(vii) To Delete those records where Department is History.

(viii) Write SQL Command to drop the table Teacher.

(f) Find the Output of following :   [5 X 1M]

     (i)   SELECT ROUND (1.298,1);
     (ii)   SELECT POW(3,4);
     (iii)   SELECT LOWER('MYSQL QUERY LANGUAGE');
     (iv)   SELECT SUBSTR('MYSQL LANGUAGE', 7,8);
     (v)   SELECT LENGTH('INFORMATION');

(g) What is database?   1M

************************ Good Luck ************************************

Marking Scheme

	Question-1
a)	This unit of computer system performs arithmetical and logical operations. In the ALU addition, subtraction, multiplication, division, and logical operations or comparisons are performed. (2 Marks for correct definition)
b)	1 Marks for each correction definition of Compiler and interpreter.
c)	Application Software is a set of program designed for specific users or applications such as word processing, graphics etc. for ex. MS-Word, MS-Excel etc. 1 Marks for correct definition and 1 marks for correct example.
d)	1 Marks for each correction definition.
e)	1 Marks for correction definition of Virus and 1 marks for preventive measures.
	Question-2
a)	1 Marks for correction definition and 1/2 marks for each points (at least 2 points)
b)	1 Marks for correction definition of e-Learning and 1 marks for correct example : www.moodle.org, www.w3schools.com
c)	1 Marks for correction definition of e-business.
	Question-3
a)	The database is managed by a software package know as DBMS 1 Marks for correction definition of DBMS
b)	If a table has more than such attributes which identify a tuple uniquely, then all such attributes are known as Candidates keys. 1 Marks for correction definition Candidate Key .
c)	1 Marks for Degree : total number of attributes and 1 marks for Cardinality : total number of rows.
d)	1/2 Marks for each point (at least four points)
e)	1 Marks for Round() function and 1 marks for Truncate().
f)	1 Marks for CONCAT() function.
g)	1 Marks for correction definition of database.
	Question-4
a)	1/2 Marks for correct definition of Syntax error and 1/2 marks for correct example. 1/2 Marks for correct definition of Logical error and 1/2 marks for correct example.
b)	JFrame is a superclass which provides the basic attributes and behaviors of a window . 1 Marks for correction definition
c)	Casting is a form of conversion which uses the cast operator to specify by a type name in parentheses and is placed in front of the value to be converted. For example : Res=(float) total/count. They are helpful in situations where we temporarily need to treat a value as another type. 1 Marks for correction definition and 1 marks for its use.
d)	2 Marks for correction definition of container class.
e)	(i) int sum, a ; (ii) a=1; (iii) sum=sum+a; or sum+=a; (1 Marks for each correct statements)
	Question-5
a)	(i) It is a. It is b.

		It is c. (ii) It is c. (iii) It is d. (iv) Not a, b, c, d . **(1/2 for each correct output)**
b)		**Event on Clear button :** **jTextField1.setText(""); jRadioButton1.setSelected(false);** **jRadioButton2.setSelected(false); jTextField2.setText("");** **(1/2 marks for each correct coding)** **Event on Exit Button :** **System.exit(0);** **(2 Marks for statement).** **Event on Convert Button :** **int t = Integer.parseInt(txtTemp.getText());** **if(JRadioButton1.isSelected()==true)** **{** **float c=(5 * (t-32))/9;** **txtCon.setText(""+c);** **}** **if(JRadioButton2.isSelected()==true)** **{** **float F=1.8*(t+32)** **txtCon.setText(""+F);** **}** **1 1/2 marks for each correct output.**

c		int sum=0, i=0;
		while(i<=5)
		{
		sum=sum+i;
		i=i+1;
		}

d)		There should be not ; at the end of else jLable1 instead of JLable1; 1 marks of each correction.
e)		2 times 2marks for correct answer.
	Question-6	
a)		**Unique can be NULL while primary key cannot be NULL** **2 Marks for correct answer.**

b)	Cust_ID Integer Primary Key Cust_Name varchar(25) Cust_Add varchar(45) Bill_No Integer 1/2 marks for each.
c)	Create table Deptm (DEPTNO integer primary key, DNAME varchar(14) NOT NULL, LOC VARCHAR (14), Salary Integer(5)); 2 Marks for writing correct query.
d)	Alter table Deptm ADD (Address Varchar(40)); 1 Marks for writing correct query.
e)	(i) SELECT * FROM TEACHER WHERE DEPARTMENT='History' ORDER BY Name DESC;
	(ii) SELECT * FROM TEACHER WHERE DEPARTMENT='Maths' AND SEX='M';
	(iii) SELECT NAME, SALARY, AGE FROM TEACHER WHER SEX='M';
	(iv) UPDATE TEACHER SET SALARY= SALARY+1000 WHERE SEX='F';
	(v) INSERT INTO TEACHER VALUES (9, 'Raja', 23, 'Hindi', '2005-08-19',12675, 'M');
	(vi) SELECT Name FORM TEACHER WHERE NAME LIKE 'S%';
	(vi) DELETE FORM TEACHER WHERE DEPARTMENT='HISTORY'; (1 MARKS FOR WRITING EACH CORRECT QUERY)
f)	(i) Output will be = 1.3 (ii) 81 (iii) mysql query language (iv) LANGUAGE (vi) 11