

**CLASS XI**  
**ARMY SCHOOL**  
**R.K. Puram, Secunderabad**  
**ANNUAL EXAMINATION**  
**Informatics Practices**

**Time : 3 hour**

**Max. Marks: 70**

**SECTION – A**

**1 Answer the following questions :**

**( 1 x 5 = 5 marks )**

- (a) What are the three types of computers ? How do they differ ?
- (b) Write the full forms of the following terms : (i) OCR (ii) MICR
- (c) Define the terms : (i) Track (ii) Gigabyte
- (d) Name some pointing devices ?
- (e) How has e-governance benefited the common man ?

**2 Answer the following questions :**

**( 2 x 5 = 10 marks )**

- (a) What are the differences between RAM and ROM ?
- (b) What are the various categories of operating systems ?
- (c) What are the major strengths and weaknesses of computer ?
- (d) Explain E-Business. What is the most outstanding feature of E-Business ?
- (e) Define the terms : (i) E - Governance (ii) E - Learning

**SECTION – B**

**3 Answer the following questions :**

**( 1 x 7 = 7 marks )**

- (a) What is an identifier in Java ? What is the identifier forming rules of Java ?

- (b) What is meant by an entry-controlled loop ? Which java loops are entry-controlled?
- (c) What is Type Casting ? Explain with an example.
- (d) What will be the result of  $a = 7 / 2$ , if a is (i) float (ii) int ?
- (e) What will be the value of expression  $j = --p + 4 * p$  . if p is 20 initially ?
- (f) What output will the following code fragment produce ? Explain.

```
int x = 20 ;
```

```
System.out.println( ++ x + " , " + x + " , " + x -- );
```

- (g) How many times the following loop is executed ? Explain.

```
int x = 10 , y = 7 ;
```

```
while ( x % y >= 0 ) {
```

```
    x = x + 1 ;
```

```
    y = y + 2 ;
```

```
}
```

**4 Answer the following questions :**

**( 2 x 6 = 12 marks )**

- (a) What is a data type ? What are the data types supported in Java ? Explain briefly.
- (b) What will be the values of a and b after execution of the following code fragments?

```
int a = 1 , b = 2 ;
```

```
if ( ++ b < 5 )
```

```
    a * = b ;
```

- (c) Rewrite the following fragment using do - while loop :

```
int sum = 0 ;
```

```
for ( int i = 0 ; i <= 5 ; ++ i )
```

```
    sum = sum + i ;
```

```
System.out.println ( "Sum is : " + sum ) ;
```

- (d) Rewrite the following fragment using switch :

```
if ( y == 3 )
```

```
    year = "March" ;
```

```
if ( y == 4 )
```

```
    year = "April" ;
```

```
if ( y == 5 )
```

```

year = "May" ;
else
year = " Its Not Spring " ;

```

- (e) Write a Java method, that receives principal amount, time period and rate of interest as parameters and returns simple interest to display as a result.
- (f) Write the Java GUI program code to print the multiplication table of a given number. (*Draw the GUI*)

**5 Case Study : A company insured its drivers in the following cases: ( 1x 6 = 6 marks)**

- If the driver is married
- If the driver is unmarried, male and above 30 years of age.
- If the driver is unmarried, female and above 25 years of age.

In all other cases the driver is not insured. Nandita creates a GUI application for this company to check whether the driver is insured or not. (*You can assume any suitable names for various controls on the form*)



- (a) What should be done so that only one of the radio buttons out of male and female and one from married and unmarried could be selected at a time? 1
- (b) Write the code for Clear button to clear the all text fields and radio buttons. 1
- (c) Write the code for Exit button the application should be closed. 1
- (d) Write the code for Check button to check whether the driver is insured or not based on the above condition. 3

And display the result in the given text field. Also see that the age of a driver should not be less than 18 and if so show a message that “Under Age”.

### SECTION - C

**6 Answer the following questions :** ( 1 x 4 = 4 marks )

- (a) What are the keywords that :
  - (i) Retains duplicate output rows in a query result ?
  - (ii) Ensures that a column cannot have NULL values ?
- (b) Sahil created a table in Mysql. Later on he found that there should have been another column in the table. Which command should he use to add column to the table.
- (c) A table Customer in a database has 5 columns and no rows in it. What is its cardinality ? What will be its degree if 4 rows are added in the table ?
- (d) What are the commands to enlist the names of all databases and tables created by us.

**7 Answer the following questions :** ( 2 x 7 = 14 marks )

- (a) Explain the three levels of data abstraction in a database systems with neat labeled diagram ?
- (b) How are SQL commands classified ?
- (c) What are views ? How are they useful ?
- (d) What is the output of the queries :
  - (i) `select lower ( mid ( " SECUNDERABAD " , 4 , 5 ) ) ;`
  - (ii) `select truncate ( round ( 13.467 , 2 ) , 1 ) ;`
  - (iii) `select dayname ( curdate ( ) ) ;`
  - (iv) `select pow ( month ( curdate ( ) ) , length ( "ARMY" ) ) ;`
- (e) (i) Write a query to display Ename and Sal of employees whose salary greater than or equal to 2200 from table Empl ?  
(ii) Write a query to display Ename and Sal of those employees whose do not have there salary in the range of 2500 to 4000 from table Empl ?
- (f) Write a SQL statement to display Today, the date is < current date >
- (g) Distinguish between a Primary key and Candidate key with the help of suitable example each

**8 Answer the following questions :** ( 2 x 6 = 12 marks )

(a) Name of the Table : TEACHER

Field	Type	Null	Key	Default
No	int(4)	NO	PRI	NULL
Name	varchar(10)	YES	UNI	NULL
Class	varchar(5)	NO		XI

Write the commands for the following :

- (i) To create a database COLLEGE 1
- (ii) To create a table by name teacher with above description 2
- (iii) To add a column section of type varchar and size 2. 1
- (iv) To rename the column section to division 1
- (v) To change the size of the column Name to varchar 20 1
- (vi) To Delete the column division. 1
- (vii) To change the name of the table from TEACHER to CANDIDATE 1
- (viii) To Remove the table.

(b) Answer the following

(i) Consider the table HOSPITAL given below. Write commands in SQL for the following :

Table :: HOSPITAL

No	Name	Age	Department	Dateofadm	Charges	Sex
1	Sandeep	65	Surgery	1998-02-23	300	M
2	Ravina	24	Orthopedic	1998-01-20	200	F
3	Karan	45	Orthopedic	1998-02-19	200	M
4	Tarun	12	Surgery	1998-01-01	300	M
5	Zubin	36	ENT	1998-01-12	250	M
6	Ketaki	16	ENT	1998-02-24	300	F
7	Ankita	29	Cardiology	1998-02-20	800	F
8	Zareen	45	Gynecology	1998-02-22	300	F
9	Kush	19	Cardiology	1998-01-13	800	M

10	Shailya	31	Nuclear Medicine	1998-02-19	400	F
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- a) To show all information about patients of ENT department 1
- b) To list the names of male patients who are in Orthopedic department 1
- c) To display Patient's name, charges, Age for only female patients. 1
- d) To count the number of patients with Age < 30 1

(ii) Create table Employee as per following Instance Chart

Column Name	EmpID	EmpName	EmpAddress	EmpPhone	EmpSal	DeptID
Key Type	Primary					Foreign
Nulls/Unique		NOT NULL				
Fk Table						Department
Fk Column						DeptID
Datatype	NUMBER	VARCHAR	VARCHAR	VARCHAR	NUMBER	NUMBER
Length	6	20	30	10	9,2	2

2

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