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Code Number 065/



INDIAN SCHOOL MUSCAT
THIRD PRELIMINARY EXAMINATION
INFORMATICS PRACTICES

CLASS: XII
01.02.2018

Sub.Code: 065

Time Allotted: 3 Hrs
Max. Marks: 70

Instructions:

- 1. All the questions are compulsory**
- 2. Read the Question carefully and write the Answer**

- Q1. a) Identify the odd one out of the following : 2
Optical Fiber/Coaxial Cable/Bluetooth/Twisted Pair Cable Give reason for your answer.
- b) How is it easier to diagnose fault in Star topology than in Bus topology? 2
- c) What is the purpose of logical address of computer? 2
- d) Does open source software only mean that the software is free of cost? 2
Give reason for your answer.
- e) Which of the following are valid IP addresses ? Give reason(s) if invalid. 2
- (i) 121.23.1.45
 - (ii) 192.168.0.254
 - (iii) 192.168.AS.1
 - (iv) 198.-1.1.1
- Q2. a) Write the value that will be assigned to variable x after executing the following statement : 1
 $x = 40 - 5 + 3 * 40/5;$
- b) Consider the statement : 1
`choice = 20.25;`
What is the datatype of variable choice ? Write a Java statement to declare the variable 'choice'.
- c) While working in Netbeans IDE, Amit wants that the text in a Text area should move to the next line without breaking the word. Which Property would help him to do that ? 1

d) Write a Java statement to : 1
Append a string "INFO" to the text that is already in the text area named JTextArea4.

e) Write the output of the following HTML code : 2

```
<ol start="7" Type="A">  
  <li>Bake the mixture in oven for an hour</li>  
  <li>Remove from oven</li>  
  <li>Allow the mixture to stand for ten minutes</li>  
  <li>Serve</li>  
</ol>
```

f) Write any two difference between XML and HTML. 2
Find out the XML tag is valid or not <STUDENT></student>

g) Rewrite the following code using if else if statement instead of switch : 2

```
switch (success) {  
  case -1:   x3 = "No result" ;  
            break;  
  case 0 :   x3 = "Final result- Not successful";  
            break;  
  default :  x3 = "result NOT known";  
  
            }
```

Q3. a) How a Table related to a database in MySQL? Write any one feature of MySQL. 1

b) Reshma wants to add another column 'Gender' in the already existing table 'CUSTOMERS'. She has written the following statement. 1
However, it has errors. Rewrite the correct statement.

```
MODIFY TABLE CUSTOMERS GENDER char(1);
```

c) Explain all the properties of Transaction. 2

d) In a hospital, the patients are allocated to wards. A database named 'Hospital' is created. One table in this database is : Ward with WardId, WardName, NumberOfBeds as columns and WardId as the primary key. 2

Write another suitable table you could expect to see in the 'Hospital' database, with 3 suitable columns identifying Primary key and Foreign key in the table that you expect.

e) Given below is the 'Department' table :

DEPCODE	DEPNAME
101	ADMIN
102	RECEPTION
103	PERSONNEL

2

```
SET AUTOCOMMIT = 0;
UPDATE Department SET DEPNAME = 'HRD' WHERE
DEPNAME = 'ADMIN';
INSERT INTO Department VALUES(104, 'OFFICE');
UPDATE Department SET DEPNAME = 'FRONT OFFICE' WHERE
DEPNAME = 'RECEPTION';
COMMIT;
DELETE FROM Department WHERE DEPNAME = 'FRONT
OFFICE';
ROLLBACK;
SELECT * FROM Department;
```

What will be the output of the above given SELECT statement ?

f) How is HAVING clause similar to WHERE clause ? How is HAVING clause different from WHERE clause ? Explain with the help of an example of each.

2

Q4. a) Write the values of r and s after the execution of the following code

```
int p = 21;
int q = 11;
int r;
int s;
r = ++q;
s = p++;
r++;
```

b) What will be displayed in jTextField1 and jTextField2 after the following code is executed :

```
intndigits = 0;
```

2

```

int N = 35;
while (N > 12) {
    ndigits = ndigits + 1;
    N = N-10;
}
jTextField1.setText(" "+ndigits);
jTextField2.setText(" "+N);

```

c) Write the value of C after executing the following code :

2

```

int P;
int R = 8;
int odd;
int C = 0;
for (P = 1; P < R; P=P+3)
{
    oddNum = P %2;
    if (odd == 1)
    {
        C= C+1;
    }
}

```

d) Write the value that will be stored in the variable t after the execution of the following code. How many times will the loop execute ?

2

```

int sum = 10;
int score = 0;
double t;
do
{
    score = score +2;
    sum = sum + score;
}
while (score <=5);
t = sum / 3;

```

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

2

```

int j;
inti =15;
int flag = 1;

```

```

while( j = 2 j <i; j++)
{
    if(i % j = 0)
    {
        flag == 0;
        break;
    }
}

```

- f) Ms. Nafisa works as a programmer in “TelTel Mobile Company” where she has designed a software to compute charges to be paid by the mobile phone user. A screenshot of the same is shown below :

The screenshot shows a software interface for 'TelTel Mobile Company'. It features a light green background. At the top, the title 'TelTel Mobile Company' is displayed. Below the title, there are four input fields: 'Name', 'Mobile Phone Number', 'Number of Calls Made', and 'Number of SMSs Sent'. Below these input fields is a section titled 'Mobile Data Plan' which contains three buttons: 'Calculate Charges', 'Clear', and 'Exit'. At the bottom of the interface, there are three output fields: 'Calls and SMS Charges:', 'Mobile Data Plan Charges:', and 'Amount to Pay:'.

Each Call is charged at <1.00.

Each SMS is charged at <0.50.

Users can also opt for Mobile Data Plan. Charges for Mobile Data Plan are flat <50.00.

Help Ms. Nafisa in writing the code to do the following :

- a) When the 'Calculate Charges' button is clicked, 'Calls and SMS Charges', 'Mobile Data Plan Charges' and 'Amount to Pay' should be calculated and displayed in the respective text fields. 4
 'Amount to Pay' is calculated as :
 Calls and SMS Charges + Mobile Data Plan Charges (if any)
- b) When the 'Clear' button is clicked, all the textfields and checkbox should be cleared. 1
- c) When the 'Exit' button is clicked, the application should close. 1

Q5. Consider the Table "INFORM" shown below :

Table : Inform

ItemCode	Item	DatePurchase	UnitPrice	Discount
101	Frock	2016-01-23	700	10
102	Cot	2015-09-23	5000	25
103	Soft Toy	2016-06-17	800	10
104	Baby Socks	2014-10-16	100	7
105	Baby Suit	2015-09-20	500	5

Write the commands in SQL for (i) to (viii) and output for (ix) and (x).

10

- (i) To display the details about the Cot.
- (ii) To list the names of items and their unit price that have unit price less than 800 and discount more than 5%.
- (iii) To list the names of items and their date of purchase that were purchased after 31stDecember, 2015.
- (iv) To display the number of items that have more than 10% as discount.
- (v) To display item code and unit price in decreasing order of unit price.
- (vi) To increase the unit price of each item by 10% of their unit price.
- (vii) To display the highest unit price of items.
- (viii) To display the names of items that have 'Baby' anywhere in their item names.

(ix) `SELECT MID (Item,1,2) FROM Infant;`

(x) `SELECT AVG(UnitPrice) FROM Infant WHERE DATEPURCHASE >'2015-01-01';`

- Q6. a) "A & A" Company conducts workshops for employees of organizations. 2
 The company requires data of workshops that are organized. Write SQL query to create a table 'Workshop' with the following structure :

Field	Type	Constraint
WorkshopId	Integer	Primary key
Title	Varchar(50)	
DateWorkshop	Date	
NumSpeakers	Integer	

- b) Consider the tables given below and answer the questions that follow : 2

Table :Event

EventId	Event	NumPerformers	CelebrityID
101	Birthday	10	C102
102	Promotion Party	20	C103
103	Engagement	12	C102
104	Wedding	15	C104

Table :Celebrity

CelebrityID	Name	Phone	FeeCharged
C101	Faiz Khan	99101956	200000
C102	Sanjay Kumar	893466448	250000
C103	Neera Khan Kapoor	981166568	300000
C104	Reena Bhatia	65877756	100000

- i. Name the Primary keys in both the tables and Foreign key in 'Event' table.
 Can NumPerformers (Number for performers) be set as the Primary key ? Give reason.
- ii. How many rows will be present in the Cartesian join of the above mentioned two tables ?
 In the table 'Event', the CelebrityID 102 is present twice in the column "CelebrityId". Is there any discrepancy ? Give reason.

- c) With reference to the above given tables (in Q6 b), write the commands in SQL for (i) to (iii). 6
- (i) To display EventId, Event name, Celebrity Id and Names of celebrities for only those events that have more than 10performers.
 - (ii) To display Event name, Celebrity Id and Names of celebrities who have “Khan” anywhere in their names.
 - (iii) To display Event name, Names of celebrities and Fee charged for those celebrities who charge more than 200000.

- Q7. a) Ms. Roxy is creating a form for Vidya University Sports Council application. Help her to choose the most appropriate controls from ListBox, ComboBox, TextField, TextArea, RadioButton, CheckBox, Label and Command Button for the following entries : 2

S.No.	Function
1	To let the user enter NAME
2	To let the user enter MOBILE NUMBER
3	To let the user choose one PROFESSION out of the categories :Teaching/Non-Teaching/Research Scholar
4	To let the user select facilities out of Gym, Yoga, Table Tennis, Badminton and Aerobics. More than one facility may be chosen.

- b) How do online retailers usually offer customers a wider range of products at prices that are lesser than those of traditional stores ? 1
- c) List two disadvantages of e-governance to a disabled person. 2

End of the Question Paper