

JB Academy, Ayodhya
Annual Examination 2020
Class XI
Computer Science New (083)

Time Allowed: 3:00 Hrs.

MM-70

Instructions:

1. Attempt all questions.
 2. Give suitable examples where ever required to support your answer.
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Q1. Answer the following questions:

[2+2+2+2+1+1]

- a. What is difference between first party and third party Cookies?
- b. Nevidita has recently shifted to new city and new school. She does not know many people in new city and her school, but all of a sudden , someone is posting negative, demeaning comments on her social networking profile, school forum etc.
She is also getting repeated emails from unknown people, every time she goes online she finds some one chasing her.
(a) What is this happening to Nevidita?
(b) What action should she take to stop them?
- c. What are solutions to PC Intrusion?
- d. What measures should you take to avoid and maintain confidentiality of personal information?
- e. What is Eavesdropping?
- f. What are different ways through which website tracks you?

Q2. Answer the following questions:

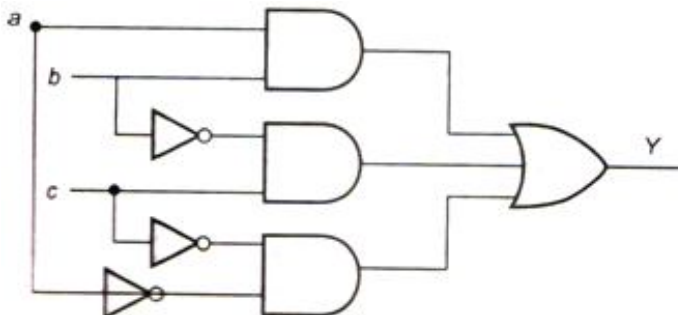
[1+2+2]

- a. Convert **(EC3B)₁₆** to decimal form.
- b. Convert the following binary as instructions given
 - (i) $(001110100110)_{16}$
 - (ii) $(001110111111)_8$
- c. Do as directed.
 - (i) $10100 + 00101$
 - (ii) $11001 - 10011$

Q3. Answer the following questions:

[2+2+1]

- a. Name the Law shown here and verify it using truth table:
 $X+X'Y=X+Y$
- b. Explain NAND gate, draw its diagram and make its Truth Table.
- c. Write Boolean expression on the basis of given diagram.



Q4. Answer the following questions:

$[1 \frac{1}{2} + 1 + 1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}]$

- a. Write advantages and disadvantages of NoSQL
- b. Using Objects how can you store Documents in a collection?
- c. Define CRUD operations in MongoDB.
- d. Observe the given collection and answer questions that follow

Items Employee

Name	Age	Salary
Faqir	21	17000
Rajat	30	18000
Alok	24	12500
Sumit	42	19700

- (i) Write a query to display all documents where salary is more than 15000 .
- (ii) Write command to delete record of employee with name as 'Alok'.
- (iii) Write query to update Salary of Sumit from 19700 to 21000

Q5. Answer the following questions:

- a. Differentiate between: [4]
 - (i) Unique and Primary Key
 - (ii) Alter and Update
 - (iii) Equi join and Natural join
 - (iv) Describe and Select
- b. What is purpose of Group By clause? Give a suitable example to explain it. [2]
- c. Consider the table **CARDEN** and answer the given questions [3]

Ccode	Carname	Make	Color	Capacity	Charges
501	A-star	Suzuki	Red	3	14
503	Indigo	Tata	Silver	3	12
502	Innova	Toyota	White	4	14
509	SX4	Suzuki	Silver	4	14
510	C-class	Mercedes	Red	4	35

Give output of the following SQL queries:

- (i) SELECT COUNT(DISTINCT Make) FROM CARDEN
 - (ii) SELECT MAX(Charges), MIN(Charges) FROM CARDEN
 - (iii) SELECT COUNT(*) FROM CARDEN GROUP BY Make
- d. Consider the following tables **Activity** and **Coach**.

Activity

Acode	Activityname	Stadium	ParticipantNum	Prizemoney	Sceduledate
1001	Relay 100x400	Star Annex	16	10000	2004-01-23
1002	High Jump	Star Annex	10	12000	2003-12-12
1003	Shot Put	Super Power	12	8000	2004-02-14
1005	Long Jump	Star Annex	12	9000	2004-01-01
1008	Discuss Throw	Super Power	10	15000	2004-03-19

Coach

Pcode	Name	Acode
1	Ahmad Hussain	1001
2	Ravinder	1008
3	Janila	1001
4	Naaz	1003

Write SQL commands for the following statements:

[6]

- (i) To display names of all activities with their Acode in descending order.
- (ii) To display sum of price money for activities played in each of the Stadiums separately.
- (iii) To display coaches name of Shot put.
- (iv) To display content of activities for which Schedule date is earlier than 01-01-2004
- (v) To display number of activities played in each stadium.
- (vi) To display coach name, Acode and Activity name.

Q6. Answer following questions

[2x6=12]

1. Differentiate between List and Dictionary.
2. Write a program to display the sum of the series [9 + 99 + 999 + 9999 + 99999] using any loop.
3. What is need of unpacking a Tuple? How can you do it?
4. What is difference between Run time and Logical errors?
5. What is purpose of Sort () in reference to List? How do you sort elements in descending order?
6. Write a program to create a tuple of first 5 elements of a Fibonacci series. (1,1,2,3,8)

Q7. Answer following questions:

1. Write a program to sort list elements (5) in ascending order using insertion sort method.

[3]

2. Write python program to print the given pyramid:

[3]

```
A
A  C
A  C  E
A  C  E  G
A  C  E  G  I
```

3. Write a program to input one number and check whether it is a prime number or not, print appropriate message.

[3]

4. Write a program that does the following:

[3]

- Take two inputs, the first an integer and the second a string.
- From the input string extract all the digits in the order they occurred.
- Add the integer input and the digits extracted.
- Print the sum on the screen.

Example: if inputs are 12 and 'abc12tr5' then the output will be 12+125=137

5. Display output of the following programs:

[2]

(I)

```
Msg1="WeLcOME"  
Msg2="GUESTs"  
Msg3=""  
for I in range(0,len(Msg2)+1):  
    if Msg1[I]>="A" and Msg1[I]<="M":  
        Msg3=Msg3+Msg1[I]  
    elif Msg1[I]>="N" and Msg1[I]<="Z":  
        Msg3=Msg3+Msg2[I]  
    else:  
        Msg3=Msg3+"*"  
print Msg3
```

(II)

Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
250 = Number  
WHILE Number<=1000:  
    if Number=>750:  
        print Number  
        Number=Number+100  
    else  
        print Number*2  
        Number=Number+50
```

[2]

(III) Predict the expected output(s) from the given code

[2]

```
import random  
  
VALUES=[10,20,30,40,50,60,70,80]  
BEGIN=random.randint(1,3)  
LAST=random.randint(BEGIN,4)  
  
for I in range(BEGIN,LAST+1):  
    print VALUES[I],"-"
```

(i) 30 - 40 - 50 -	(ii) 10 - 20 - 30 - 40 -
(iii) 30 - 40 - 50 - 60 -	(iv) 30 - 40 - 50 - 60 - 70 -