

I Term Examination : 2020-21

Class - XII

Subject - COMPUTER SCIENCE [083]

Time : 3 hrs.

M.M. : 70

- Instructions :-
- Attempt all questions.
 - Programming Language:- Python

SECTION - A

- Q.1-
- What is dynamic typing? Explain with example. [2]
 - What is purpose of comment in a program? What are different ways of writing comments? [2]
 - Differentiate between ** and // operators. [2]
 - Determine the output. [2]
 - $x = -4$
 $y = -x$
`print("value of x =", x)`
`print("value of y =", y)`
 - $x = 2$ $y = 3$
 $z = x ** y + 3$
 $x = y + 5$
`print("value of Z =", z)`
`print("value of X =", x)`
 - Write a Python program to sum the following series: [4]
 $1 + \frac{1}{2} + \frac{1}{3} \dots + n \text{ terms}$
 - Which string built in methods are used in following conditions? [4]
 - To return the length of string
 - To remove leading white spaces in string.
 - Returns the smallest alphabetical character from the string.
 - Find and write the output of following code: [3]

```
def fun(c) :  
    k = len(c)  
    m = ""  
    for i in range(0, k):  
        if s[i].isupper( ) :  
            m = m+s[i].lower( )  
        elif s[i].isalpha( ) :  
            m = m+s[i].upper( )  
        else:  
            m = m + 'bb'  
    print(m)  
fun("school2@COM")
```
- Q.2-
- Write a program to input a list of strings, sort it in ascending order using bubble sort method. [4]
 - Differentiate between implicit and explicit type conversion. [2]
 - Write a program to count positive and negative numbers in a tuple input by user. [3]
 - Explain the different types of parameters in Functions. [3]
 - Differentiate between a local variable and global variable. [2]

SECTION-B

Q.3- Questions 3 a. to 3 e. fill in the blanks:

- a. _____ , _____ , _____ are types of Computer Networks. [3]
- b. _____ protocol is used to access web pages on Internet. [2]
- c. _____ is an address of file on internet. [2]
- d. NIC stands for _____ . [2]
- e. _____ is used to connect two networks working on same protocol. [2]
- f. Differentiate between HUB and SWITCH. [2]
- g. Differentiate between client side scripting and server side scripting. [2]
- h. Write the full form of CDMA, WLL. [2]

SECTION-C

- Q.4- a. What is MySQL? [2]
- b. Which command is used to remove table from database? [2]
- c. Define Foreign key and what are conditions for referential integrity. [2]
- d. Which clause is used in SQL to retrieve aggregate information from table? [2]
- e. Is NULL value same as 0 (Zero)? Write reason for your answer. [2]
- f. Consider the following table named SOFTDRINK . Write commands of SQL for (i) to (iv) and output for (v) to (viii)

Table SOFTDRINK

DRINKCODE	DRINKNAME	PRICE	CALORIES
101	Lime and Lemon	20.00	120
102	Apple Drink	18.00	120
103	Nature Nector	15.00	115
104	Green Mango	15.00	140
105	Aam Panna	20.00	135
106	Mango Juice Bahar	12.00	150

- i. To display names and drink codes of those drinks that have more than 120 calories.
 - ii. To display drink codes, names and calories of all drinks in descending order of calories.
 - iii. To display names and price of drinks that have PRICE in the range 12 to 18 (both 12 and 18 included).
 - iv. Increase the PRICE of all drinks in the given table by 10%.
 - v. `SELECT COUNT(DISTINCT PRICE) FROM SOFTDRINK;`
 - vi. `SELECT MAX(CALORIES) FROM SOFTDRINK;`
 - vii. `SELECT DNAME FROM SOFTDRINK WHERE DNAME LIKE"%MANGO%";`
 - viii. `SELECT AVG(PRICE) FROM SOFTDRINK;`
- g. What is degree and cardinality of table SOFTDRINK? [2]
- h. Write one similarity and one difference between CHAR and VARCHAR datatype. [2]
- i. Write a Python program that displays each row fetched from table **STUDENT** of MySQL database **SCHOOLDB**. (Username is "Learner" and password is "123") [4]
- j. Differentiate between HAVING and WHERE clause?
- k. Write a query that sorts the data of table student on the basis of ProjectGroupfin ascending order), Section (in descending order), Marks(in descending order). [2]
- l. Sarthak a student of class XII, created a table "Class". Grade is one of the columns of this table. To find the details of the students whose grades have not been entered, he wrote the following MySQL query which did not give the desired result :
`SELECT * FROM Class WHERE Grade = "Null";`

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[2]