VIDYAVATI PUBLIC CENTRAL SCHOOL

Term -I (2023-24)

Class: XI Sec: _____   MM: 70
Subject: Computer Science (083)   Duration: 3 Hours
Student's Name: _____Roll No. _____Admission No. _____Date: _____

General Instructions:

◎ This question paper contains three parts A and B and C. Each part is compulsory.
◎ Part A, Part B and Part C have choices.
◎ All programming questions are to be answered using Python Language only.

PART: A

Section: I *Select the most appropriate option out of the options given for each question. Attempt any 15 questions from question no 1 to 21, Each question carries 1 mark.*

Q.1 Identify the correct statement
 (a) str(90)   (b) str(90/8)   (c) str(9**6)   (d) All of these

Q.2 What will be $(256)_{10}$ in Binary?
 (a) 100000000   (b) 10100001   (c) 000100000   (d) 100101010

Q.3 Windows-10 is the popular product of:
 (a) ANSI   (b) Sun System   (c) Microsoft   (d) None of these

Q.4 MBPS stands for…
 (a) Mega Byte Per Second   (b) Memory Bits Per Second (c) More Bytes Per Second   (d) All of these

Q.5 Find the incorrect Boolean statement from below
 (a) X + X' = 1   (b) X + X' = 0   (c) 0 + 1 = 0   (d) Both b and c

Q.6 The number 5 is not a component of which number system?
 (a) Hexa-Decimal   (b) Decimal   (c) Octal   (d) Binary

Q.7 Compiler is an example of…
 (a) Application Software (b) Utility Software   (c) System Software   (d) Freeware

Q.8 The hexadecimal number 'C7' is written in binary as
(a) 11000111   (b) 11000110   (c) 11000101   (d) 11000011

Q.9 Which value type does input( ) return ?
 (a) Floatfloat   (b) Intint   (c) string   (d) Boolean

Q.10 All files deleted from computer are stored in
 (a) Sys-tray   (b) Temporary files (c) Recycle bin   (d) My Documents.

Q.11 Convert $(259)_{10}$ to Binary form.

Q.12 What is the Function of memory in Computer System?

Q.13 What do you know about RAM?

Q.14 What is ASCII?

Q.15 What is the Property of NOT Gate?

Q.16 Identify the data type of L= [1,2,3,4,5].

Q.17 What is commutative property in Boolean Algebra?

Q.18 What is ISCII?

Q.19 What do you mean by Word Size?

Q.20 What is comment in Python?

Q-21 Convert $(168.8)_{10}$ into Binary.

Section: II *Case study-based questions are Compulsory. Each question carries 1 mark. Attempt any 5 questions.*

Q.22 Rahul is a student of Computer Science. He wants to buy a laptop for his practical. Being a Computer Science Student you have to help Rahul. Answer the following questions.
   a) Which Company's Laptop must he purchase?
   b) What should be the RAM for this Laptop and Why?
   c) Which Operating System should be there in Laptop?
   d) What should be the medium of purchase online or offline? Give your comments.
   e) If you were Rahul, which Laptop you would prefer to buy?
   f) Which storage device you going to prefer H.D.D. or S.D.D?

PART: B

Description based questions. Attempt any 10 questions from question no 23 to 33. Each question carries 2 marks.

Q.23 Make a table of Computer memory management.

Q.24 What are the applications of Python?

Q.25 What is the difference between RAM and ROM?

Q.26 What is Compiler? Explain in your words.

Q.27 Add the binary numbers-110111011011 and 111000111101.

Q.28 Convert $(ABC9)_{16}$ to Octal

Q.29 What is Unicode? What is its Significance?

Q.30 Draw the Circuit of NOT Gate.

Q.31 What is Anti-Virus software?

Q.32 Make a flow-chart to find number is even or odd.

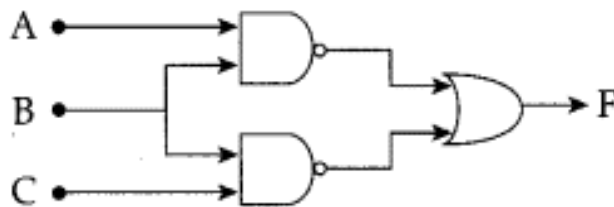Q.33 What is algorithm? How it plays an important role in Programming?

PART: C

Application and programming-based questions. Attempt all questions. Question no 34 to 38 carries 4 marks Each, questions no 39 and 40 carries 5 marks each.

Q.34 Write a python program to find the factorial of input number.

Q.35 Write a python program to print table of input number.

Q.36 Write the Python code for given pattern.

```
1
1  2
1  2  3
1  2  3  4
1  2  3  4  5
```

Q.37 Obtain the Boolean Expression for the logic circuit shown below:

Q.38 Draw the logic circuit diagram for following Expression: $Y = ab + \bar{b}c + \bar{c}\bar{a}$

Q.39 Explain Basic Logic gates with their truth tables.

Q.40 What are DeMorgan's theorems? Explain any one theorem algebraically.

OR

Write a python program to convert temperature in Fahrenheit which entered in Celsius.

(**Celsius to Fahrenheit:** °F = (°C × $\frac{9}{5}$) + 32)