HALF YEARLY EXAMINATION: 2024-25

Class - XI (CBSE)

Subject - Computer Science (083)

Time: 3 hrs. M.M.: 70

General Instructions:

- Please check this question paper contains 35 questions.
- The paper is divided into 4 Sections A, B, C, D and E.
- Section A, consists of 18 questions (1 to 18). Each question carries 1 mark.
- Section B, consists of 7 questions (19 to 25). Each question carries 2 marks.
- Section C, consists of 5 questions (26 to 30). Each question carries 3 marks.
- Section D, consists of 3 questions (31 to 33). Each question carries 5 marks.
 Section E, consists of 2 questions (34 to 35). Each question carries 4 marks.
- All programming questions are to be answered using Python Language only.

SECTION - A

Q.1-	A disk fragmentor is an example of:		
	a. Application software	b.	System software
	c. Utility software	d.	None of these
Q.2-	The physical components of a computer are called:		
	a. Software	b.	Hardware
	c. ALU	d.	CPU
Q.3-	ASCII code is a 7 bit code for		
	a. letters	b.	numbers
	c. other symbols	d.	all of these
Q.4-	The Binary equivalent of the octal number 13.54 is		
	a. 1011.1011	b.	
397	c. 1101.1110	d.	None of these
Q.5-	Which gate produces 0 when all inputs are high?		
	a. NOT	b.	
	c. AND	d.	NOR
Q.6-	Truth values are and		
	What shape represents a decision in a flowchart?		
	a. A diamond	b.	A rectangle
	c. An oval	d.	None of these
O.8-	A is a diagrammatic represent	tation	that shows sequence of operations
	to be performed for the solution of a	- 11 24	. 2011 [1921] [2] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [4
Q.9-	Python is a/an language.		
	a. high level	b.	object oriented
	c. procedural	d.	difficult
0.10-	Special meaning words of Python fixe	ed for	
laje.	a. Identifiers		functions
	c. keywords	d.	literals
0.11.	- Which of the following can be used		
	a. //	b.	#
	c. "	d.	m m
Q.12-	The input() returns the value as	-	
	a. integer	b.	string
1-13.	c. float	d.	

Q.13- What is the value of the expression 100/25?

a. 4

2.5

C.

b. 4.0d. none of these

Q.14- The result of the expression 5 or 10?

a. 5

b. 1

c. 10

d. 0

Q.15- The _____ construct allows to choose statements to be executed, depending upon the result of a condition.

a. selection

b. repetition

c. sequence

d. flow

Q.16- An empty/null statement in python is _____.

a. go

b. pass

c. over

d. ;

- Q.17- In the following question a statement of assertion (A) is followed by a statement of reason (R), mark the correct choice as:
 - a) Both A and R are true and R is the correct explanation of A.
 - b) Both A and R are true but R is not the correct explanation of A.
 - c) A is true but R is false.
 - d) A is false but R is true.

Assertion (A): Python's statement 'if' represents selection construct.

Reason (R):

The selection construct means the execution of a set of statement,

depending upon the outcome of a condition.

18. Assertion (A): Python's pass statement is an empty statement.

An empty statement does nothing.

Reason (R): An em

SECTION - B

- Q.19- What is the difference between else and elif construct of if statement?
- O.20- Find errors and underline them:

$$A = 1$$

$$A = A + 1$$

- Q.21- Write a python code to input principal amount, rate and time and calculate simple interest.
- Q.22- What will be the output produced by following code statements?

a. 17 % 5

b. 17 % 5.0

Q.23- What is the result of following expression: $a \ge b$ and $(a + b) \ge a$ if:

a. a = 3, b = 0

b. a = 7, b = 7

- Q.24- Write the working of AND gate and draw it's truth table also.
- Q.25- Write the output of the following code:

$$x = 1$$

$$y = 0$$

while $x \le 3$:

$$y = y + 1$$

$$x + = 1$$

SECTION - C

Q.26- Write a Python code to input 10 integers and print only even numbers.

OR

Write a Python code to input a string and count number of vowels into it.

- Q.27- Define types of errors in Python.
- Q.28- Difference between = and == operator explain it with example.
- Q.29- Solve the following:
 - a. 7*8/5//2
 - b. 7*(8/(5//2))
 - c. 3**3**2
- Q.30- Prove De morgan's law using truth table.
 - a. (A + B)' = A'.B'
 - b. (A.B)' = A' + B'

SECTION - D

- Q.31- Write Python code for the followings:
 - a. Input 2 numbers and swap their values. Print values before swapping and after swapping both.
 - b. What would be the output of the following code?
 - i. a = 3+5/8
 - ii. b = int(3 + 5/8)
- Q.32- Explain implicit and explicit conversion with example code.

SECTION - E

- Q.33- Do as directed:
 - a. $(1010101)_2 \rightarrow (?)_{10}$
 - b. $(7203)_8 \longrightarrow (?)_{16}$
 - c. $(ABC)_{16} \rightarrow (?)_2$
 - d. $(98.125)_{10} \rightarrow (?)_2$
 - e. $(278)_{16} \rightarrow (?)_{10}$
- Q.34- a. Draw a flowchart to input a number and print its table.
 - b. Write a python code of the above problem for which you prepared the flow chart.
- Q.35- a. Draw the circuit diagram for the following expression:

$$Z = ABC' + A'BC' + A(B+C)$$

b. Write a menu driven program to calculate Area of Triangle as choice 1 & Area of Rectangle as choice 2. If user enters any other choice except 1 or 2 message of "INVALID CHOICE" should be displayed.

OR

Write a Python code to input a number and check whether it is Prime or not.

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