No. of Printed Pages/Questions: 04 / 23

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Half–Yearly Examination (2026 – 2027)

Class: XI **MM:50**
Subject: Computer Science (083) **Time: 2 Hr**

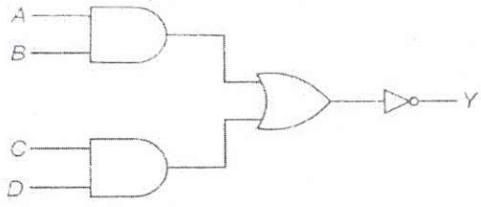
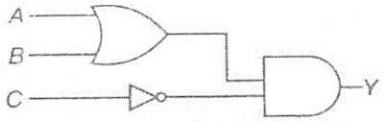
(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions

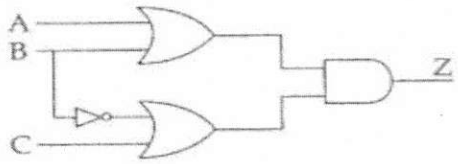
- The question paper contains 23 questions.
- All questions are compulsory. However internal choices have been provided in some questions. Attempt only one of the choices in such questions.
- The paper is divided into **5** Sections- **A, B, C, D and E.**
- Section **A** consists of **10** questions (1 to 10). Each question carries 1 Mark.
- Section **B** consists of **5** questions (11 to 15). Each question carries 2 Marks.
- Section **C** consists of **4** questions (16 to 19). Each question carries 3 Marks.
- Section **D** consists of **2** questions (20 to 21). Each question carries 4 Marks.
- Section **E** consists of **2** questions (22 to 23). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.

Q NO	**Section -A** **Each question carries 1 mark (10x1=10)**
1.	This gate will give the output signal as TRUE only when all the inputs are True a) NOT b) AND c) NAND d) OR
2	Which of the following is/are NOT legal python string? a) 'abc' + 'abc' b) 'abc'* 3 c) 'abc'+ 3 d) 'abc' + '123'
3	Data items having fixed value are called _____. a)identifiers b) functions c) keywords d)literals
4	What is the output of print(10/2) ? a)5 b)5.0 c)0 d)2.0
5	What is the output of print("ABC"<"abc") ? a)True b)False c)0 d)Error
6	Comments in python starts with _____? a)+ b)# c)$ d)==
7	Which of the following is not a valid statement in python? (a) abc = 1,000,000 (b) a b c = 1000 2000 3000 (c) a,b,c = 1000, 2000, 3000 (d) a_b_c = 1,000,000

8	What is the output of print("hello"+"1+2+3") (a) hello1+2+3 (b) hello6 (c) hello123 (d) Error
9	What will be the result of the expression 'false' or False? a.false b.False c.'false' d.'False'
	The following question 10 are Assertion-Reasoning based, answer the questions by choosingone of the following responses: **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.**
10	Assertion(A): In Python, a variable can hold values of different types at different times. Reason(R): A variable's data type once assigned, remains fixed throughout the program.
	Section -B **Each question carries 2 marks(5x2=10)**
11	What is implicit and explicit type conversion? **OR** What is difference between mutable and immutable data types? Explain with example
12	(i) What will be the output of the following code? **[1]** x=45 y=x+1 x=20, y+x print(x,y) (ii) Write a program in python to obtain the length and breadth of rectangle and find its area. **OR** Write a program to swap two numbers.
13	Predict the output of the following code x=5 y=10 print(x<y and y>20) print(x<y or y>20) print(not(x==5))
14	Do the following conversions. i) 11101.101 Binary to Decimal ii) 9E1B Hexadecimal to Decimal iii) 456 Octal to Hexadecimal iv) 889 Decimal to Octal

15	Find the Boolean equation of the following logic circuits.  (a)  (b)
	Section -C **Each question carries 3 marks (3x4=12)**
16	What is Debugging? What are the types of errors in a program explain each of them with an example.
17	Write a Python Program to read base/length, width and height of a parallelogram and calculate its area and perimeter.
18	(i) What will be the output of the following code. X=5 Z=5 Y=10 Y =X+3 X=X-1 X=X+2 print("X:",X,"Y:",Y,"Z:",Z) (ii) Evaluate the following operations as a Python interpreter would: a. 2//3*6+9 b. 7*8/5//2**1**3
19	Write a program to enter two integers and perform all arithmetic operations (+, -,* , /, //, %, and **) on them. **OR** What are tokens in Python? How many types of tokens are allowed in Python? Explain each token along with the example of it.
	Section -D **Each question carries 4 marks(2x4=08)**
20	(i) Identify the valid identifiers: i)abc ii)90ab iii)_a_ iv)__123 v) False vi) FOR vii) true viii) 1_a_c (ii) What is an Algorithm & Pseudocode? Draw a flowchart to find the sum of the first 20 natural numbers.

21	(i) What will be the output produced by these? a.12/4 b.14.0//4 c.14//14 d.14.0%4 (ii) What is Operator in Python? List out the types of operators in python. Explain any 4 types of operators in detail with an example.

	Section -E **Each question carries 5 marks (2x5=10)**
22	i) For the logic circuit shown in the figure What is the Boolean expression for Z? Draw the truth table for this logic circuit.  ii) What is Decomposition? Describe the problem-solving cycle and explain each point of it.
23	i) Write a program to obtain temperature in Celsius and convert into Fahrenheit using formula. ii) Write a program to calculate simple and compound interest.