

Maximum Marks:70

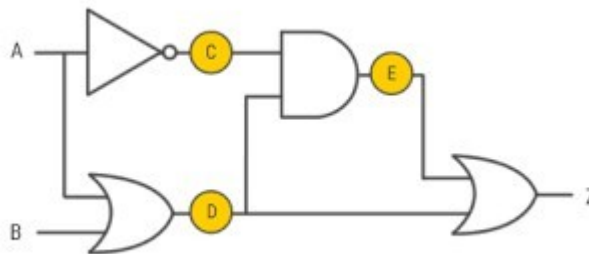
5.	The output of 1 or 0 and 1 is: a) True c) 0 b) False d) 1	1
6.	ALU is part of _____? a) Input Unit c) Central Processing Unit b) Output Unit d) Control Unit	1
7.	What type of error is caused by misspelled keyword? a) Logical c) Syntax b) Runtime d) Compilation	1
8.	“Hello” <= “hello” gives output as: a) True c) Hello b) False d) “hello”	1
9.	_____ is equal to 65 in octal: a) (110101) ₂ c) (101010) ₂ b) (1000001) ₂ d) (100011) ₂	1
10.	Which loop is best if iterations known? a) while loop c) do while loop b) for loop d) infinite Error	1
11.	What will be the output of the following code: x = “python” y = “hello” print(y + x) a) “python hello” c) “pythonhello” b) “hello python” d) “hellopython”	1

12.	Run Time error occurs due to _____ a) Wrong Syntax b) Misspelled Keyword c) Logical Mistake d) Illegal operations during execution	1
13.	UTF-8 is an encoding scheme of _____. a) Images b) Audio c) characters (Text) d) Videos	1
14.	Which function will convert string "100" into integer? a) int() b) str() c) float() d) id()	1
15.	What is the output of the following python code: if 1: print("Not Empty") else: print("Empty") a) Not Empty b) Empty c) 1 d) Error	1
16.	Which of these is a logical operator: a) == b) >= c) or d) !=	1
17.	What is the output of the following python code: n=2 while n<7: print(n,end=" ") n+=2 a) 2 4 6 b) 2 4 6 7 c) 2 7 d) Infinite loop	1

23.	Write a program in python that takes a number as an input from the user and check whether that number is positive, negative, or zero.	2
24.	<p>What will be the output of following statement: $(9 \geq 8)$ and (not False) or $(7 < 3)$</p> <p style="text-align: center;">OR</p> <p>What will be the output of following statement: $2**3**2+10-2$</p>	2
25.	Differentiate between system software and application software.	2
26.	<p>What is the output of the following code?</p> <pre>for i in range(2,5): for j in range(1,i+1): print(j,end="") print()</pre>	2
27.	<p>Write a Python program that takes an integer as an input from the user and check whether a number is divisible by 3 and 5 both.</p> <p style="text-align: center;">OR</p> <p>Write a Python program that takes an integer input from the user and prints its table.</p>	2
28.	<p>Find the Binary equivalent of $(FACE)_{16}$.</p> <p style="text-align: center;">OR</p> <p>Draw the circuit diagram of the following expression: $X'Y'Z' + XY + (XY)'$</p>	2
SECTION C		
29.	Write a Python program that takes an integer input from the user and checks whether the number is prime or not .	3

	<p style="text-align: center;">OR</p> <p>Write a Python program that takes an integer n as input from the user and prints the first n terms of the Fibonacci series.</p> <p>E.g. If the user enters 5, the program should print: 0 1 1 2 3 If the user enters 8, the program should print: 0 1 1 2 3 5 8 13</p>	
30.	<p>Prove the following identity using truth table:</p> $A \cdot (B + C) = A \cdot B + A \cdot C.$ <p style="text-align: center;">OR</p> <p>Fill in the blanks:</p> <p>(a) _____ number system uses digits 0 and 1 only.</p> <p>(b) _____ memory is volatile in nature.</p> <p>(c) A _____ is a collection of instructions that tells a computer what to do.</p>	$1 \times 3 = 3$
31.	<p>Write a Python program to reverse the digits of a number.</p> <p style="text-align: center;">OR</p> <p>Write a Python program to find the largest of three numbers entered by the user.</p>	3
SECTION D		
32.	<p>State True or False:</p> <p>(i) Python is an example of a high-level programming language.</p> <p>(ii) ASCII can represent characters of multiple languages.</p> <p>(iii) In Python, // operator is used for floor division.</p> <p>(iv) In hexadecimal, the digit 'F' represents decimal 15.</p> <p style="text-align: center;">OR</p>	$1 \times 4 = 4$

	<p>Fill in the blanks:</p> <p>(i) The component of CPU that controls the flow of data is _____.</p> <p>(ii) $(123)_8 = (\quad)_{10}$</p> <p>(iii) $(\quad)_2 = (124)_{10}$</p> <p>(iv) $(AB)_{16} = (\quad)_2$</p>	
33.	<p>Write a python program to print the following pattern using loops:</p> <pre> * * * * * * * * * * * * * * * </pre>	4
34.	<p>Write a program in python to input the value of x and n and print the sum of the following series:</p> $-x + \frac{x^2}{2} - \frac{x^3}{3} + \frac{x^4}{4} - \dots + \frac{x^n}{n}$	4
35.	<p>Answer the following questions in one word/line.</p> <p>(i) Name one primary memory type.</p> <p>(ii) Expand KB, MB and GB.</p> <p>(iii) Which base is hexadecimal?</p> <p>(iv) Name a Python keyword.</p>	1 x 4 = 4
SECTION E		
36.	<p>(i) Write a program in python that accepts two numbers and swap them without using a third variable.</p> <p>(ii) Write a program in python that accepts a and b two integers and compute the greatest common divisor.</p>	$2 + 3 = 5$

37.	<p>Partigya, a student of class 11 is designing a circuit diagram. Help her to get the output out of it at different stages.</p> 	1 x 5 =5
	(i) What will be the output at C?	
	(ii) What will be the output at D?	
	(iii) What will be the output at E?	
	(iv) What will be the output at Z?	
	(v) A cooler should turn ON when the door is closed and the fan is ON. Which gate should be used?	