| ARMY PUBLIC SCHOOL, DHAULA KUAN EXAMINATION: HALF YEARLY  CLASS : XI YEAR: 2024-25  SUBJECT: COMPUTER SCIENCE (Code 083) Max. Marks: 70 SET A Max. Time: 3 Hours |
| --- |
| General Instructions:1. Each part is compulsory. 2. Programming Language is Python |
| Q  | Part - A Section  | MM |
| 1 | This gate will give the output signal as TRUE only when any of the input is True a) NOT b) AND c) NAND d) OR | 1 |
| 2 | What will the following expression be evaluated to in Python?3\*\*3 + 4 - 6//3 + 1 | 1 |
| 3 | Identify the valid declaration of test: test=['Python' ,10, 'Good', 25.45] (a) Tuple (b) Dictionary (c) List (d) String | 1 |
| 4 | Draw the logic circuit from the following expression AB+A’C  | 1 |
| 5 | Identify the operator which is used to make a decision on two conditions.(a) Logical (b) Arithmetic(c) Relational (d) Assignment | 1 |
| 6 | Find the correct output >>> 2\*\*64\*\*0.5==513//2 A. True B. False C. Error D. None of the above | 1 |
| 7 | Which of the following identifiers(variable names) are invalid: (a) Break break (b) FILE34 (c) F\_L@ (d) Myname  | 1 |
| 8 | The third last character in a String str can be accessed by  | 1 |
| 9 |  In complex number a + ib, a represents as (a) real part (b) imaginary part (c) special part (d) None of these | 1 |
| 10 | State True or False Digits are one of the parts of the Python character set | 1 |
| 11 | Which of the following statement(s) would give an error after executing the following code?S="Welcome to my python program" # Statement 1 print(S) # Statement 2S="Python is Object Oriented programming" # Statement 3 S= S \* “5” # Statement 4 S=S+"Thank you" # Statement 5 | 1 |
| 12 | What will be the value of y when the following expression is evaluated in Python? x=10.0y=(x<100.0) and x>=10 | 1 |
| 13 | Which of the following are sequence of character data? (a) Lists (b) Tuples (c) Strings (d) Dictionaries | 1 |
| 14 | What is the ASCII equivalent no. for ‘ E’ ? | 1 |
| 15 | What will be the output of the following Python code?float(7\*20/5+8%3) | 1 |
| 16 | Arrange Memories in descending to ascending orders by size . (Biggest to Smallest) A) GB > TB > KB > MB C) MB >KB >TB >GB B) TB > GB > MB > KB D) KB >MB >GB >TB | 1 |
|  | Q17 and Q18 are ASSERTION and REASONING based questions. Mark the correct choice as(a) Both A and R are true and R is the correct explanation for A(b) Both A and R are true and R is not the correct explanation for A (c) A is True but R is False(d) A is false but R is True |  |
| 17 | Assertion (A) : Python supports multiple execution modesReason (R) : Interactive mode allows the user to enter and execute one statement at a time, while script mode allows the user to run a file containing multiple statements | 1 |
| 18 | Assertion (A) : Indentation refers to adding the relevant number of tabs and spaces at the beginning of lines of code to indicate a block of code.Reason (R) :Indentation is very important to make the code readable, without indentation you find it hard to read or debug a program  | 1 |
|  | Part - B |  |
| 19 | 1. Draw a flow chart to add two numbers along with algorithm in simple English
2. Write common data types used in Python.
 | 2+2 |
| 20 | (a) Write the corresponding Python expressions for the following mathematical expressions: (i) 2-ye2y +4y (ii) | e2 –x| (b) Write Outputx=1 if x>3:  if x>4:  print("A",end="")  else:  print("B",end="") elif x<2:  if (x!=0):  print("C",end="")  print("D",end="") | 2+2 |
| 21 | Look at the sequence of commands and determine the final output >>> import math >>> s=math.floor(-67.33) >>> print(s, s+100) A.) -68 100 B.) -68 132 C.) 67 32 D.) -68 32 | 2 |
| 22 | (a)Write the Boolean expression for the logic circuit shown below:(b) Explain NAND gate with the help of circuit diagram and truth table. | 2 |
| 23 | What is difference between implicit and explicit conversion? Explain with example | 2 |
| 24 | Differentiate between Keyword and Identifier? ORWhat is the difference between an Expression and a Statement in Python? | 2 |
| 25 | Consider the following code and find the errors. name = "maya" if name = "saya": print("delhi") else name == "mana":  print("mumbai") elif: print("india") | 2 |
| 26 | What will be the output of the following code? str=”Hello Python” print(str[0]) print(str[-3]) print(str\*2) print(str+”string”) | 2 |
| 27 | Write a program to convert the time entered as minutes to Hours : Minutes format. Example : Enter the time in minutes: 66 Hours : Minutes 1 : 6  | 2 |
| 28 | Write a menu driven program to enter the price of each item in a list. If the customer pays 500 AED , then the bill should generate as shown below. Example:Enter the qty of Item:3  Enter the price of Item:67 \*\*\*\*\*\*\*\*\*\*\*\*BILL\*\*\*\*\*\*\*\*\*\*\*\*\* Number of items: 3 Item price: 100 Total amount: 245 Balance: 255 | 2 |
|  | Part - C |  |
| 29 | Convert the following 1. (4A8C) 16 = ( ) 2
2. (145) 10 = ( ) 2 c) (273) 8 = ( ) 10
 | 3 |
| 30 | (a) WAP to display "Hello" if a number entered by user is a multiple of five, otherwise print "Bye".(b) Find Output a,b,c=20,40,60  b+=10  c+=b  print(b,c)  | 3 |
| 31 | Write a program to check (i) whether a number (accepted from user) is divisible by 2 and 3 both (ii) to accept the age of 4 people and display the youngest one | 3 |
| 32 | 1. How many types of tokens are allowed in Python ? Examplify your answer
2. WAP to check a character is vowel or not
 | 3 |
| 33 | 1. Which argument of print( ) would you set for: (i) changing the default separator (space) ? (ii) printing the following line in current line ?

(b) WAP to accept two numbers and mathematical operators and perform operation accordinglye.g.Enter first number:7Enter second number:9Enter operator:+Your answer is :16 | 4 |
| 34 | Differentiate between with example : i) int() and eval() iii) list and tuple | 4 |
| 36 | Explain the following :(i) What are different types of error? Name at least two.(ii)Write a program to count total number of characters in an input string. | 4 |
| 37 | 1. Write logical expression for the following:

(i) Name is Aman and age is between 18 and 35.(ii) Place is either ‘Delhi’ or ‘Goa’ but not ‘Jaipur’.1. Your Schools uses “Student Marks Reporting System” (SMRS) to manage student-marksheet data. The software should calculate the grade of student on the basis of marks secured by the students.

You are required to Write a program to accept the marks of the student in five subjects andfind the grade of the student as per the following criteriaCriteria Gradepercentage > 85 Apercentage < 85 and percentage >= 75 Bpercentage < 75 and percentage >= 50 Cpercentage > 30 and percentage <= 50 Dpercentage <30 Reappear | 4 |