| 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 | | |
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| 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 2  S="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=10.0  y=(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 modes  Reason (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 Output  x=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?  OR  What 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 accordingly  e.g.  Enter first number:7  Enter second number:9  Enter 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 and  find the grade of the student as per the following criteria  Criteria Grade  percentage > 85 A  percentage < 85 and percentage >= 75 B  percentage < 75 and percentage >= 50 C  percentage > 30 and percentage <= 50 D  percentage <30 Reappear | 4 |