 **Indian School Al Wadi Al Kabir**

**SAMPLE PAPER**

**COMPUTER SCIENCE (Code: 083)**

CLASS : XI Max. Marks:70

Time: 3 hours

**General Instructions:**

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A has 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 02 questions carrying 04 marks each.
7. Section E has 03 questions carrying 05 marks each.
8. All programming questions are to be answered using Python Language only.

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|  | **SECTION A** |  |
| 1. | Which of the following is Graphical User Interface based OS?  a. UNIX  b. DOS  c. WINDOWS  d. All of the above | 1 |
| 2. | Which of the following is an invalid identifier in Python?  a. Roll\_No  b. Salary  c. Account No  d. EmpID | 1 |
| 3. | \_\_\_\_\_\_\_\_\_ datatype fall under mapping.  a. List  b. Tuple  c. Dictionary  d. String | 1 |
| 4. | Name the Python Library modules which need to be imported to invoke the following functions: (i) floor() and (ii) randint()  a. (i) numpy  (ii) random  b. (i) math  (ii) matplotlib  c. (i) pickle  (ii) random  d. (i) math  (ii) random | 1 |
| 5. | What will be the output of the following statement:  print(3-10\*\*2+99/11)  (a) 80  (b) 81  (c) -81  (d) 81.0 | 1 |
| 6. | \_\_\_\_\_\_\_ is used to permanently store data.  1. ROM  2. RAM  3. REGISTERS  4. HARDDISK | 1 |
| 7. | What is the length of given tuple? ((((1,2,3,4), ‘a’, ‘b’),’g’, 1, 3), “Sonu”)  a. 4  b. 3  **c. 2**  d. 1 | 1 |
| 8. | Which of the following statement(s) would give an error after executing the following code?  tup = (20,30,40,50,80,79)  print(tup) #Statement 1  print(tup[3]+50) #Statement 2  print(max(tup)) #Statement 3  tup[4]=80 #Statement 4  (a) Statement 1  (b) Statement 2  (c) Statement 3  (d) Statement 4 | 1 |
| 9. | Binary equivalent of the Octal number 742 is \_\_\_\_\_\_\_\_\_\_\_  a. 111100010  b. 11110010  c. 10110010  d. 111011010 | 1 |
| 10. | Write the output of the following:  A = {"A" : "Apple", "B" : "Ball", "C" : "Cat"}  print(A.pop("C"))  a. Error  b. None  c**.** Cat  d. {‘A’: ‘Apple’, ‘B’: ‘Ball’} | 1 |
| 11. | Name the Boolean theorem X+Y = Y+X  a. Associative law  b. Commutative law  c . Involution law  d. Distributive law | 1 |
| 12. | Evaluate the following expression and identify the correct answer:  import math  a= math.ceil(78.23) // math.floor(3.9)  print(a)   1. 26.0 2. 26 3. 19 4. 19.0 | 1 |
| 13. | Write the output of the following:  a="blog"  b=list(a)  c=tuple(b)  print(c)  a. Error  b. [‘b’ , ‘l’ , ‘o’ , ‘g’]  c. (‘b’ , ‘l’ , ‘o’ , ‘g’)  d. (blog) | 1 |
| 14. | X.X’= \_\_\_\_\_\_\_\_\_\_\_\_\_  a. X’  b. 0  c. 1  d X | 1 |
| 15. | Write the output of the following code :  A = {1 : "One", 2 : "Two", 3 : "Three"}  B = {'A' : "Apple", 'B' : "Bat", 'C' : "Cat", 'D' : "Doll"}  print(A.get(4,"Key Not Found"))  a. KeyError  b. Key Not Found  c. None  d. Syntax Error | 1 |
| 16. | Write the output of the following code :  tuple = (1, 2, 3, 4)  tuple.append( (5, 6, 7) )  print(len(my\_tuple))   1. 7 2. 2 3. 5 4. Error | 1 |
| 17. | Which of the following logic expression represents the logic diagram given below?    a. CA+CB+CD  b. C(A+B) D’  c. C(A+B) +D  d. (CA+CB ) D | 1 |
| 18. | Which of the following is invalid operator in Python?  a. and  b. +=  c. //  d. =< | 1 |
|  | **SECTION B** |  |
| 19. | Find the output of the following code.  x,y = 15 , 16  p , q = x\*2,x%2  r=1  if x>1 and p:  r += x\*2//3  if x> 2 and not q:  r += x/2\*3  else:  r += p\*\*q+x  print(r) | 2 |
| 20. | Explain operating system and its functions | 2 |
| 21. | If the following code is executed, what will be the output of the following code?  Title="Online Teaching 2020"  print(Title[6:10], Title[-2:-4:-1]) | 2 |
| 22. | What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum values that can be assigned to each of the variables BEG and END.  import random  HEIGHTS = [10,20,30,40,50]  BEG = random.randint(0,2)  END =random.randint(2, 4)  for X in range (BEG, END):  print(HEIGHTS[X],"$")  (i) 30$ (ii) 10$20$30$40$50$  (iii) 20$ (iv)10$ | 2 |
| 23. | Do the following:  1. (3642)10 = ( \_\_\_\_\_\_\_\_\_\_\_\_) 16  2. ( 2983)16  = ( \_\_\_\_\_\_\_\_\_\_\_\_\_) 2 | 2 |
| 24. | What is the difference between a list and a dictionary | 2 |
| 25. | i. Given is a Python list declaration:  L=[9,3,2,4,7,5,8,9,1,2,4]  What will be the output of :  print(L[0:8:2] + L[7:-2])  ii. If the following code is executed, what will be the output of the following code?  EPL2021 = {“Man United”:40, “Man City”:37, “Leicester”: 36}  EPLLatest = {“Liverpool”:34, “Man City”:38, “Tottenham”:33, “Leicester” : 38 }  EPL2021.update(EPLLatest)  print (EPL2021) | 2 |
|  | **SECTION C** |  |
| 26. | Predict the output of the Python code given below:  t1=(10,20,"book",30,9.5,"item",[12,13],(3,4),30,5,30)  print(t1.index(20))  print(t1.count(30))  print(t1[–8:–4]) | **3** |
| 27. | Find the output of the following program:  L= [43,12,25,67,87,89,90,32,12,55]  L[4]=L[6] - L[1]  L.insert(2,45)  print(L)  del L[3:6]  print(L)  L.pop()  L.remove(12)  print(L) | 3 |
| 28. | Predict an output of the following:  List1=[13,18,11,16,13,18,13]  print(List1.index(18))  print(List1.count(18))  List1.append(List1.count(13))  print(List1) | 3 |
| 29. | S='IPv6 128-bit'  k =len(s)  m=" "  for i in range(0,k):  if(s[i].isupper()):  m=m+s[i].lower()  elif s[i].isalpha():  m=m+s[i].upper()  else:  m=m+'$'  print(m) | 3 |
| 30. | data = ["P", 20, "R", 10, "5", 30]  Times=0  Alpha=""  Add=0  for c in range(1,6,2):  Times=Times+c  Alpha=Alpha + data[c-1] + "S"  Add = Add + data[c]  print(Times, Add, Alpha) | 3 |
|  | **SECTION D** |  |
| 31. | a. Write a program to input a number and check whether it is a perfect number or not.  b. Write a program to input a number and find the sum of its digits . | **4** |
| 32. | Write a program to find and print the grade of a student when the user inputs their percentage. Grades are allocated as given in the table below: | 4 |
|  | **SECTION E** |  |
| 33. | a. Write a program to input ‘n’ numbers in to a list L and copy all elements ending with 7 to another list named ‘end7List’  b. Write a program to input a string and count the number special characters in it. | 3+2 |
| 34. | 1. Write a program to input a list L with ‘n’ elements and replace every element divisible by 5 with 5 and others with 10   b. Write a program to input a string and reverse it. | 3+2 |
| 35. | Write a program to create a dictionary “employee” with name and salary of ‘n’ students as key : value pairs. Find the number of employees getting salary more than 5000. | 5 |