



OSDAV Public School, Kaithal
First Unit Test (May,2024)
Class :XII
Subject :Computer Science

SET-A

Time: 1 hr

M.M. : 30

General Instructions:-

- I. All questions are compulsory.
- II. This Paper contains 4 sections
 - A) Consist 4 question carrying 1 mark each
 - B) Consist 5 questions carrying 2 Marks each
 - C) Consist 4 questions carrying 3 Marks each
 - D) Consist 1 question carrying 4 Marks each

| Q.No. | Questions | Marks |
|--------------------------|---|-------|
| Section A(1X4=4) | | |
| 1 | Which one of the following have the highest precedence in the expression? a) Exponential b) Addition c) Multiplication d) Parentheses | 1 |
| 2 | What is the average value of the code that is executed below ? >>>grade1 = 80 >>>grade2 = 90 >>>average = (grade1 + grade2) / /2 a) 85 b) 85.1 c) 95 d) 95.0 | 1 |
| 3 | What is the output of the following? x = "osdav" for I in x: print(I) | 1 |
| 4 | Write a statement in Python to open a text file STORY.TXT for reading | 1 |
| Section B(2X5=10) | | |
| 5 | Write a function count digits in Python to read the text file "DATA.TXT" and display count | 2 |
| 6 | Explain all file modes in for binary file in Python for Data Handling. | 2 |
| 7 | Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code. a = int(input("Value:")) b = 0 for c in range(1, a, 2) b += c if c%2 = 0: Print(c*3) Else: print(c*b) | 2 |
| 8 | Consider the following function calls with respect to the function definition. Identify which of these will cause an error and why? (3) def calculate(a, b=5, c=10): return a*b-c (i) calculate(12, 3) (ii) calculate(c=50, 35) (iii) calculate(20, b=7, a=15) (iv) calculate(x=10, b=12) | 2 |
| 9 | Write definition of a method writcsv() to write multiple records given in a static nested list in a CSV FILE | 2 |

| | | |
|-------------------------|---|---|
| 10 | <p>What possible output(s) is/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 start and end.</p> <pre>import random POINTS=[20,40,10,30,15]; POINTS=[30,50,20,40,45] start=random.randint(1,3) end=random.randint(2,4) for c in range(start,end+1): print(POINTS[c],"#")</pre> <p>(i) 50#20# (ii) 40# 30# (iii) 50#40#20# (iv) 20#40#45#</p> | 3 |
| 11 | <p>a) Observe the following code and answer the questions that follow: (2)</p> <pre>File = open("Mydata", "a") _____ #Blank 1 File.close()</pre> <p>(i) What type (Text/Binary) of file is Mydata? (ii) Fill in Blank 1 with a statement to write "ABC" in the file "Mydata".</p> <p>b) Name the Python Library modules which need to be imported to invoke the following functions: (1)</p> <p>(i) load () (ii) pow ()</p> | 3 |
| 12 | <p>State and define the purpose of local and global variable in a function with the help of a suitable example</p> | 3 |
| 13 | <p>Write a function LShift(Arr,n) in Python, which accepts a list Arr of numbers and n is a numeric value by which all elements of the list are shifted to left.</p> <p>Sample Input Data of the list Arr= [10,20,30,40,12,11], n=2 Output Arr = [30,40,12,11,10,20]</p> | 3 |
| Section D(4x2=8) | | |
| 14 | <p>Write a function MODIFYBINARY() in Python which should update a binary file as will increase the marks of students by 5 if marks of students are greater than 80</p> | 4 |



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| Q.N. | Questions | Marks |
|--------------------------|---|-------|
| Section A(1X5=5) | | |
| 1 | What is the output of the following? x = "osdavkaithal" for I in x: print(I,end="#"") | 1 |
| 2 | Write a statement in Python to open a binary file student.dat so that new contents can be added at the end of it. | 1 |
| 3 | Which one of the following have the highest precedence in the expression? a) Exponential b) Addition c) Multiplication d) Parentheses | 1 |
| 4 | Which is the correct operator to find remainder when x divided by y a) x/y b) x//y c) x%y d) None of the mentioned | 1 |
| Section B(2X5=10) | | |
| 5 | Write a function countwords () in Python to read the text file "story.TXT" and count the number of words starting from 'm' or 'M' in the file. | 2 |
| 6 | Explain all file modes in Data File Handling in Python for binary file handling. | 2 |
| 6 | Rewrite the following Python code after removing all syntax error(s). Underline the corrections done. def main(): r = input('enter any radius: ') a = pi * math.pow(r,2) print("Area = " + a) | 2 |
| 7 | Consider the following function calls with respect to the function definition. Identify which of these will cause an error and why? def si(p, r=5, t=10): return p*r*t/100 (i) si(1200, 3) (ii) si(r=50, 35) (iii)si(2000, r=7, t=15) (iv) si(r=10, r=12) | 2 |
| 8 | Find and write the output of the following Python code: L1 = [500,800,600,200,900] START = 1 SUM = 0 for C in range(START,4): SUM = SUM + L1[C] print(C,":",SUM) SUM = SUM + L1[0]*10 print(SUM). | 2 |

| Section C(3x4=12) | | |
|--------------------------|---|----------|
| 11 | <p>What possible outputs(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 Lower and Upper.</p> <pre>import random AR=[20,30,40,50,60,70]; Lower =random.randint(1,3) Upper =random.randint(2,4) for K in range(Lower, Upper +1): print (AR[K],end="##")</pre> <p>(i) 10##40##70# (ii) 30##40##50# (iii) 50##60##70# (iv)40##50##70#</p> | 3 |
| 12 | <p>a) Observe the following code and answer the questions that follow: (2)</p> <pre>File = open("Mydata", "a") _____ #Blank1 File.close()</pre> <p>(i) What type (Text/Binary) of file is Mydata? (ii) Fill in Blank 1 with a statement to write "ABC" in the file "Mydata".</p> <p>b) Name the Python Library modules which need to be imported to invoke the following functions: (1)</p> <p>(i) load () (ii) pow ()</p> | 3 |
| 13 | Write a user-defined function named csvreader() that will read the contents of a CSV FILE and display it on screen. | 3 |
| 14 | Write an algorithm to solve a postfix expression with help of a suitable example | 3 |
| Section D(4x2=8) | | |
| 15 | Write a program to search a roll no in a binary file and modify its name of using tell and seek functions | 4 |



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| Q.No. | Questions | Marks |
|--------------------------|---|-------|
| Section A(1X4=4) | | |
| 1 | Which one of the following have the highest precedence in the expression? d) Parentheses | 1 |
| 2 | What is the average value of the code that is executed below ? >>>grade1 = 80 >>>grade2 = 90 >>>average = (grade1 + grade2) / 2 a) 85 | 1 |
| 3 | What is the output of the following? x = "osdav" for I in x: print(I) o s d a v | 1 |
| 4 | Write a statement in Python to open a text file STORY.TXT for reading F=open("STORY.TXT","r") | 1 |
| Section B(2X5=10) | | |
| 5 | Write a function count digits in Python to read the text file "DATA.TXT" and display count def countdigit(): c=0 f=open("data.txt",r) str=f.read() for a in str: if a.isdigit(): c+=1 print("total digits",c) | 2 |
| 6 | Explain all file modes in for binary file in Python for Data Handling. "rb","ab","wb", "rb+","ab+","wb+" | 2 |
| 7 | Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code. | 2 |

| | | |
|-----------|---|----------|
| | <pre>a[i]=a[i+1] arr[n-1]=y</pre> | |
| | Section D(4x2=8) | |
| 14 | <p>Write a function MODIFYBINARY() in Python which should update a binary file as will increase the marks of students by 5 if marks of students are greater than 80</p> <pre>def modifybinary(): f = open("Studentdetails.dat", 'rb+') rollno = int(input("Enter roll no whoes marks you want to update")) try: while True: pos=f.tell() rec = pickle.load(f) if rec[marks]==80: rec[marks]+=5 f.seek(pos) pickle.dump(rec,f) #print(rec) except EOFError: f.close()</pre> | 4 |



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| Q.N. | Questions | Marks |
|--------------------------|---|-------|
| Section A(1X5=5) | | |
| 1 | What is the output of the following? <pre>x = "osdavkaithal" for I in x: print(I,end="#"") o#s#d#a#v#k#a#i#t#h#a#l#</pre> | 1 |
| 2 | Write a statement in Python to open a binary file student.dat so that new contents can be added at the end of it. F=open("student.dat","ab") | 1 |
| 3 | Which one of the following have the highest precedence in the expression? D)Parentheses | 1 |
| 4 | Which is the correct operator to find remainder when x divided by y c) x%y | 1 |
| Section B(2X5=10) | | |
| 5 | Write a function countwords () in Python to read the text file "story.TXT" and count the number of words starting from 'm' or 'M' in the file. def countmy(): <pre>f= open("DATA.TXT","r") count =0 x=f.read() word= x.split() for i in word: If i[0]=="m" or"M": count+=1 print("total words starting with m",count)</pre> | 2 |
| 6 | Explain all file modes in Data File Handling in Python for binary file handling. "rb","ab","wb", "rb+","ab+","wb+" | 2 |
| 6 | Rewrite the following Python code after removing all syntax error(s). Underline the corrections done. def main(): r = input('enter any radius: ') a = pi * math.pow(r,2) print("Area = " + a) | 2 |
| 7 | Consider the following function calls with respect to the function definition. Identify which of these will cause an error and why? def si(p, r=5, t=10): | 2 |

| | | |
|--------------------------|---|---|
| | <p>return p*r*t/100 (i) si(1200, 3) (ii) si(r=50, 35) invalid as p is not getting any value (iii)si(2000, r=7, t=15) (iv) si(r=10, r=12) as r is getting 2 values</p> | |
| 8 | <p>Find and write the output of the following Python code: L1 = [500,800,600,200,900] START = 1 SUM = 0 for C in range(START,4): SUM = SUM + L1[C] print(C,":",SUM) SUM = SUM + L1[0]*10 print(SUM).</p> <p>3:1600 6600</p> | 2 |
| Section C(3x4=12) | | |
| 11 | <p>What possible outputs(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 Lower and Upper. import random AR=[20,30,40,50,60,70]; Lower =random.randint(1,3) Upper =random.randint(2,4) for K in range(Lower, Upper +1): print (AR[K],end="#"") (ii) 30#40#50# Max value of lower=3 upper=4</p> | 3 |
| 12 | <p>a) Observe the following code and answer the questions that follow: (2) File = open("Mydata", "a") _____ #Blank 1 File.close() (i) What type (Text/Binary) of file is Mydata?=> Text (ii) Fill in Blank 1 with a statement to write "ABC" in the file "Mydata". File.write("abc") b) Name the Python Library modules which need to be imported to invoke the following functions: (1) (i) load () => pickle (ii) pow ()=>math</p> | 3 |
| 13 | <p>Write a user-defined function named csvreader() that will read the contents of a CSV FILE and display it on screen. import csv f=open("studet.csv","r") stu=csv.reader(f) for a in stu: print(a)</p> | 3 |
| 14 | <p>Write an algorithm to solve a postfix expression with help of a suitable example Step 1: Start Step 2: Check all symbols from left to right and repeat steps 3 & 4 for each symbol of expression 'E' until all symbols are over. (i) If the symbol is an operand, push it onto a stack. (ii) If the symbol is an operator then:</p> | 3 |

| | | |
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| | <p>(iii) Pop the top two operands from the stack and apply an operator in between them.</p> <p>(iv) Evaluate the expression and place the result back on the stack.</p> <p>Step 3: Set result equal to a top element on the stack.</p> <p>Step 4: stop</p> <p>3,4,+,2,5,+,*</p> <p>Push 3</p> <p>Push 4</p> <p>Push +</p> <p>Solve 3+4=7</p> <p>Push 7</p> <p>Push 2</p> <p>Push 5</p> <p>Push +</p> <p>Solve 2+5=7</p> <p>Push *</p> <p>Push 7*7=49</p> <p>Pop 49</p> | |
| Section D(4x2=8) | | |
| 15 | <p>Write a program to search a roll no in a binary file and modify its name of using tell and seek functions</p> <pre>def Update(): f = open("Studentdetails.dat", 'rb+') rollno = int(input("Enter roll no whoes marks you want to update")) try: while True: pos=f.tell() rec = pickle.load(f) if rec[0]==rollno: um = input("Enter Name") rec[2]=um f.seek(pos) pickle.dump(rec,f) #print(rec) except EOFError: f.close()</pre> | 4 |