



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

SET-A

Time: 1 hr

M.M. : 30

General Instructions:-

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 questions carrying 4 Marks

Q.No.	Questions	Marks
Section A(1X4=4)		
1	The software that controls the internal operations of a computer is known as _____ software.	1
2	Arrange the memory units in ascending order YB,KB,MB,BYTE,PB,EB	1
3	Identify the type of software from the given list Firefox, MSWord, WinZip,windows	1
4	Convert $(647)_8 = (?)_{16}$	1
Section B(2X4=10)		
5	Write the Full form of Following: 1. EPROM 2. DRAM 3. ASCII 4. ISCI	2
6	State the difference between • = and == • / and //	2
7	Identify valid and invalid identifiers, state reason also for invalid Alpha123 import Ro_han Ra_hat Hei_ght Alpha@123	2
8	Write the program to find the area of triangle using hero's formula	2
9	Draw logic circuit for algebraic expression $F=x'yz+x(y+z)$	2
Section C(3x4=12)		
11	<ul style="list-style-type: none">• How many types of comments there are in python explain with the help of example?• Define indentation	3
12	State and prove Demorgan's law algebraically	3
13	Write a program to find result sheet of a student	3
14	Convert $(129)_{10} = ()_2 = ()_8 = ()_{16}$	3
Section D(4x1=4)		
16	Write a python program to find sum and reverse of a number and find whether number is palindrome or not	4



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Q.No.	Questions	Marks
Section A(1X4=4)		
1	Which language processor executes the whole program in one go?	1
2	Write equivalent memory units of the following: 96 GB = _____ KB 1KB = _____ Bytes	1
3	Write a few examples of system software software.	1
4	Convert $(672)_8 = (?)_{16}$	1
Section B(2X5=10)		
5	Write the application software used to do the following tasks: 1. To type an application 2. To calculate result 3. To prepare a presentation 4. To develop software	2
6	Give full form of SRAM EEPROM UTF ISCII.	2
7	State the difference between • * and ** • / and %	2
8	Write the program to find the area of right angled triangle	2
9	Identify valid and invalid identifiers, state reason also for invalid lalpha While Ro han Ra_hat Hei_ght Alpha123	2
Section C(3x4=12)		
10	How many types of words there are in Python Explain with the help of example	3
11	State and prove absorption law with the help of truth table	3
12	Write a python script/program to make a calculator	3
13	Convert $-(127)_{10} = ()_2 = ()_8 = ()_{16}$	3
Section D(4x1=4)		
14	Write a python program to enter a 3 digit number and find whether its Armstrong or not.	4



OSDAV Public School, Kaithal
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Q.No.	Questions	Marks
Section A(1X4=4)		
1	The software that controls the internal operations of a computer is known as System software.	1
2	Arrange the memory units in ascending order YB,KB,MB,BYTE,PB,EB=>Byte,KB,MB,PB,EB,Yb	1
3	Identify the type of software from the given list Firefox=>webbrowser MSWord=> application Software WinZip=> Utility Software Windows=> System Software	1
4	Convert $(647)_8 = (1A7)_{16}$	1
Section B(2X4=10)		
5	Write the Full form of Following: 1. EPROM=> erasable programmable read-only memory 2. DRAM=>dynamic Random access Memory 3. ASCII=>American Standard code for information interchange 4. ISCII =>Indian Standard code for information interchange	2
6	State the difference between • = is assignment operator and == is a relational operator • / gives answer in decimal and // gives integer answer	2
7	Identify valid and invalid identifiers, state reason also for invalid Alpha123 => Valid Import=> invalid as it is a reserve word Ro_han=> valid Ra_hat=> valid Hei_ght=>valid Alpha@123=> invalid,@ is not allowed	2
8	Write the program to find the area of triangle using hero's formula Import math a=int(input("enter a ")) b=int(input("enter b ")) c=int(input("enter c ")) s=(a+b+c)//2 area=math.sqrt(s*(s-a)*(s-b)*(s-c)) print("area=",area)	2
9	Draw logic circuit for algebraic expression $F=x'yz+x(y+z)$	2

Section C(3x4=12)		
11	<ul style="list-style-type: none"> How many types of comments there are in python explain with the help of example? There are 2 types of comments in python. Single line starts with #, multiline enclosed with " " Define indentation It refers to the usage of spaces or tabs at the beginning of a line of code to define its scope and grouping within the program's structure. 	3
12	<p>State and prove Demorgan's law algebraically</p> <p>1. $(x+y)' = x' \cdot y'$ As $a+a'=1$ let $a = (x+y)$ $a' = x' \cdot y'$ $x+y + (x' \cdot y') = 1$ $(x+y+y')(x+y+x')$ $(1+x)(1+y)$ $1 \cdot 1 = 1$</p> <p>2. $(x \cdot y)' = x' + y'$ As $a \cdot a' = 0$ $(xy)(x'+y') = 0$ $xyx' + xyy'$ $0 + 0 = 0$</p>	3
13	<pre> Write a program to find result sheet of a student sub1=int(input("Enter marks of the first subject: ")) sub2=int(input("Enter marks of the second subject: ")) sub3=int(input("Enter marks of the third subject: ")) sub4=int(input("Enter marks of the fourth subject: ")) sub5=int(input("Enter marks of the fifth subject: ")) avg=(sub1+sub2+sub3+sub4+sub5)/5 if(avg>=90): print("Grade: A") elif(avg>=80&avg<90): print("Grade: B") elif(avg>=70&avg<80): print("Grade: C") elif(avg>=60&avg<70): print("Grade: D") else: print("Grade: F") </pre>	3
14	Convert $(129)_{10} = (10000001)_2 = (201)_8 = (81)_{16}$	3
Section D(4x1=4)		
16	Write a python program to find sum and reverse of a number and find whether number is palindrome or not	4

```
n=int(input("Enter number:"))
rev=0
r1=n%10
n1=n//10
r2=n1%10
n2=n1//10
r3=n2%10
n3=n2//10
rev=r1*1000+r2*100+r3*10+n3
if(n==rev):
    print("The number is a palindrome!")
else:
    print("The number isn't a palindrome!")
```



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Q.No.	Questions	Marks
Section A(1X4=4)		
1	Which language processor executes the whole program in one go?=> compiler	1
2	Write equivalent memory units of the following: 96 GB = 96x2 ¹⁰ KB 1KB = 2 ¹⁰ Bytes	1
3	Write a few examples of system software software. Operating System,language Translator	1
4	Convert (672) ₈ = (1BA) ₁₆	1
Section B(2X5=10)		
5	Write the application software used to do the following tasks: 1. To type an application=>MSWord 2. To calculate result=> MS Calc 3. To prepare a presentation=> Ms PowerPoint 4. To develop software => Language(Python)	2
6	Give full form of 1. SRAM=>Static dynamic Random access Memory 2. EEPROM=> Electrically erasable programmable read-only memory 3. UTF=>UTF (Unicode Transformation Format) 4. ISCII =>Indian Standard code for information interchange	2
7	State the difference between • * used for multiplication and ** for power • / for decimal division and % for remainder	2
8	Write the program to find the area of right angled triangle Import math a=int(input("enter a ")) b=int(input("enter b ")) area=a*b/2 print("area=",area)	2
9	Identify valid and invalid identifiers, state reason also for invalid lalpha=>invalid While=> invalid Ro han=>invalid Ra_hat=>valid Hei_ght=> valid Alpha123=> valid	2
Section C(3x4=12)		

10	<p>How many types of words there are in Python Explain with the help of example 2 type of words Reserveword=> examples=>if,else etc. Identifier=> variable and literals</p>	3																				
11	<p>State and prove absorption law with the help of truth table</p> <table border="1" data-bbox="236 300 879 591"> <thead> <tr> <th>X</th> <th>Y</th> <th>XY</th> <th>X + XY</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	X	Y	XY	X + XY	0	0	0	0	0	1	0	0	1	0	0	1	1	1	1	1	3
X	Y	XY	X + XY																			
0	0	0	0																			
0	1	0	0																			
1	0	0	1																			
1	1	1	1																			
12	<p>Write a python script/program to make a calculator</p> <pre data-bbox="236 676 1310 1261"> select = int(input("Select operations form 1, 2, 3, 4 :")) number_1 = int(input("Enter first number: ")) number_2 = int(input("Enter second number: ")) if select == 1: print(number_1, "+", number_2, "=", number_1+number_2) elif select == 2: print(number_1, "-", number_2, "=", number_1-number_2) elif select == 3: print(number_1, "*", number_2, "=", number_1*number_2) elif select == 4: print(number_1, "/", number_2, "=", number_1/number_2) else: print("Invalid input") </pre>	3																				
13	<p>Convert $-(127)_{10} = (111111)_2 = (177)_8 = (7F)_{16}$</p>	3																				
Section D(4x1=4)																						
14	<p>Write a python program to enter a 3 digit number and find whether its Armstrong or not.</p> <pre data-bbox="236 1487 1390 1886"> n=int(input("Enter number:")) rev=0 r1=n%10 n1=n//10 r2=n1%10 n2=n1//10 rev=r1**3+r2**3+n2**3 if(n==rev): print("The number is an armstronge!") else: print("The number isn't an armstronge!") </pre>	4																				