



Date:09/12/2024
GRADE: XI

TERM II EXAMINATION-2024-25
INFORMATICS PRACTICES(065)

Max marks:70
Time: 3 Hour

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 21 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 03 Short Answer type questions carrying 03 marks each.
6. Section D has 02 Long Answer type questions carrying 05 marks each.
7. Section E has 04 questions carrying 04 marks each.

Qn.No	SECTION A	Marks
1.	State True or False "Python is a cross platform and case sensitive language." True	1
2.	Identify the valid variable name. a) stud_no b) stud num c) 1studnum d) stud-num	1
3.	What will be the output of the following python list operation? data =[10,20,30,40,20,60,70] print(count(20)) a) [20] b) 2 c) 3 d) [10,20,30,40,70]	1
4.	Keys of a dictionary must be_____ a)Similar b)Unique c) Odd numbers d)Even numbers	1
5.	What will be the output of the following? A=[1,2,3,4,5,6,7,8,9] print(A[:3]) a) [1,4,7] b)[8,9] c) [1,3,5,7,9] d) [1,2,3]	1
6.	To create an empty list we use . a) l=[] b) l="" c) l=[1,2] d) l=()	1
7.	What will be the output of the following? A=list("India") print(A) ("l", "n", "d", "i", "a") b) ["India"] c) ["l", "n", "d", "i", "a"] d) None of the above	1
8.	_____command is used to remove the last item from the list. a)remove() b)pop() c)del d)popitem()	1
9.	_____refers to the ability of machines to perform cognitive task likethinking ,perceiving,learning,problem solving and decision making. a) Artificial Intelligence b) Virtual Reality c)Cloud computing d)NLP	1

10.	What is the value of an expression 100/25 . a) 4 b) 4.0 c) 2.5 d) none of these	1
11.	Which of the following is not used as loop in Python? for loop b) while loop c) do-while loop d) both a and b	1
12.	How many times will the loop run? i=2 while(i>0): i=i-1 1 b) 3 c) 0 d) 2	1
13.	Which is the smallest unit of information? a) A bit b) A byte c) A block d) A nibble	1
14.	Python code can run on a variety of platforms,it means Python is a language. a)Graphical b) Cross-platform c)independent d) all of these	1
15.	The mode of Python gives instant result of typed statement. a) Intractive b) Script c) Both a and b d) None of these	1
16. technology makes users feel as if they truly are in a virtual environment. a) NLP b) AR c) VR d) ML	1
17. are programable machines that are able to cary out actions autonomously. Grids b) clouds c)Robotics d) Robots	1
18.	Dictionaries are..... data types of Python. a) mutable b) immutable c) simple d)all of these	1
19.	Names given to different parts of a Python program are..... a) Functions b) identifiers c) Keywords d) literals	1
Q20 and 21 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		
20.	Assertion : List datatype in python contain items of different datatypes and are separated with a comma(,). Reason: <code>itemlist=('Bread',6,5.5,'A')</code> is an example of a list datatype c. A is True but R is False	1

21.	<p>Assertion: Indentation is a very important aspect to build the structure of a program.</p> <p>Reason: Indentation refers to the white spaces and tabs that are used at the beginning of a statement to form a block of code. Multiple statements with the same indent are called a block of code.</p> <p>a. Both A and R are true and R is the correct explanation for A</p>	1
SECTION B		
22.	<p>Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code.</p> <pre> Num = 20 for i in range(1,Num,3): if i%2==0: print(i*2) else print(i*3) </pre>	2
23.	<p>a) What will be the output of the following string operation?</p> <pre> list=['H','E','L','L','O','@','P','Y','T','H','O','N'] print(list[2:10:2]) print(list[6:1:-1]) print(list[3:8]) print(list[-8:-2:2]) </pre> <pre> ['L', 'O', 'P', 'T'] ['P', '@', 'O', 'L', 'L'] ['L', 'O', '@', 'P', 'Y'] ['O', 'P', 'T'] </pre>	2
24.	<p>What are the features of python programming.</p> <ul style="list-style-type: none"> I. Easy to Learn and Use II. Interpreted Language III. Dynamically Typed IV. Platform-Independent V. Extensive Libraries VI. Object-Oriented VII. Scalability VIII. Strong Community Support 	2
25.	<p>a) Define Artificial Intelligence</p> <p>AI, or Artificial Intelligence, refers to the simulation of human intelligence by machines, especially computer systems. It enables systems to perform tasks such as learning, reasoning, problem-solving, and decision-making.</p> <p>b) Define BigData</p> <p>Big Data refers to large and complex datasets that cannot be processed using traditional methods. It is characterized by high Volume (amount),</p>	2

	Velocity (speed of generation), and Variety (different types of data).	
26.	<p>a) Write a python program to read two numbers and print the largest among two numbers and draw the flowchart.</p> <p style="text-align: center;">OR</p> <p>b) Write a python program to read a list l=[10,20,30,40] ,and add element 50 into the list then find the length,lowest value and count the number 20.</p>	2
27.	<p>Predict the output of the following.</p> <p>a. for i range(20,30,2): print(i*2)</p> <p>40 44 48 52 56</p> <p>b. L=[1,2,3,4,5,6,7,8,9,10] del L[3:] L[1]=22 print(L)</p> <p>[1, 22, 3]</p>	2
28.	<p>Write a python program to accept a number from the user and test whether it is negative, positive or zero. Display appropriate message.</p> <pre>n=int(input("Enter a number")) if(n<0): print("The number is -ve") elif(n>0): print("The number is +ve") else: print("The number is zero")</pre>	2
SECTION C		
29.	<p>a. Write a python program to print the grade of a student. Read a mark first if the mark is greater than 95 the grade is A, the mark is in between 80 to 95 grade is B , the mark is in between 70 to 80 grade is C and less than 70 is D.</p> <p>b. Draw a flowchart for the same.</p> <pre>mark=int(input("Enter a mark")) if (mark>=95): print("Grade is A") elif (mark>=80 and mark<95): print("Grade is B") elif (mark>=70 and mark<80): print("Grade is C") else: print("Grade is D")</pre>	3

	(Flowchart)	
30.	<p>Differentiate assembler, compiler and interpreter.</p> <p>Assembler:</p> <ul style="list-style-type: none"> • Converts assembly language into machine code. • Translates one instruction at a time. • Output is directly executable. <p>Compiler:</p> <ul style="list-style-type: none"> • Converts high-level language into machine code. • Translates the entire program at once. • Produces an executable file. <p>Interpreter:</p> <ul style="list-style-type: none"> • Converts high-level language into machine code line by line. • Executes code directly without generating an executable file. • Slower than a compiler as it processes during runtime. 	3
31.	<p>a) What is a dictionary? Write a statement in Python to declare a dictionary named month whose keys are Jan, Feb, Mar and values are 31, 28, 30 respectively. Explain dictionary structure. Month={'Jan':31,'Feb':28,'Mar':30}</p> <p>b) Predict the output :</p> <pre>x = 3 if x == 0: print ("Am I learning python?", end = ' ') elif x == 3: print("Or learning python?", end = ' ') else : print ("Or learning python 4 cbse?") print("yes python is Free software")</pre> <p>Or learning python? yes python is Free software</p>	3
SECTION D		
32.	<p>i. What is the output of the following code snippet?</p> <pre>x = [10,20,30,40] for i in x: if i%2==0: print(i)</pre> <p>10 20 30 40</p> <p>ii. a=2 b= 3 a,b=b+5,b- 1print(a,b)</p>	5

	<p>8 2</p> <p>iii. <code>a=[1,2,3]</code> <code>print(a*3)</code></p> <p>[1, 2, 3, 1, 2, 3, 1, 2, 3]</p> <p>iv. <code>a={"mango","apple"}:"mango",("apple","banana"):"apple"}</code> <code>print(a["mango","apple"])</code></p> <p>mango</p> <p>v. <code>l=[12,3,22,"Rachana","Sagar"]</code> <code>print(l[:-2])</code></p> <p>[12, 3, 22]</p>	
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33.	<p>Explain about the different generations of computer.</p> <p>The evolution of computers is classified into five generations based on technology and hardware advancements:</p> <ol style="list-style-type: none"> 1. First Generation (1940–1956): <ul style="list-style-type: none"> ○ Used vacuum tubes for circuitry. ○ Large, expensive, and consumed a lot of power. ○ Examples: ENIAC, UNIVAC. 2. Second Generation (1956–1963): <ul style="list-style-type: none"> ○ Used transistors, making computers smaller, faster, and more reliable. ○ Supported assembly language. 3. Third Generation (1964–1971): <ul style="list-style-type: none"> ○ Used integrated circuits (ICs). ○ Increased speed and efficiency. ○ Supported high-level programming languages. 4. Fourth Generation (1971–Present): <ul style="list-style-type: none"> ○ Used microprocessors, making computers compact and affordable. ○ Introduction of personal computers (PCs). 5. Fifth Generation (Present and Beyond): <ul style="list-style-type: none"> ○ Focuses on artificial intelligence (AI), robotics, and quantum computing. ○ Uses advanced technologies like neural networks. 	5
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SECTION E

34.	<p>Consider the following dictionary StateCapital:</p> <pre>stateCapital={"Assam":"Guwahati","Bihar":"Patna","Maharashtra":"Mumbai","Rajasthan":"Jaipur"}</pre> <p>Find the output of the following statements:</p> <ol style="list-style-type: none"> a) <code>print(stateCapital.get("Bihar"))</code> b) <code>print(stateCapital.keys())</code> c) <code>print(len(stateCapital))</code> 	4
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	<pre>d) del stateCapital["Assam"] print(stateCapital) Patna dict_keys(['Assam', 'Bihar', 'Maharashtra', 'Rajasthan']) 4 {"Bihar": "Patna", "Maharashtra": "Mumbai", "Rajasthan ": "Jaipur"}</pre>	
35.	<p>I. Give the data type of the following variables:</p> <p>a) n='Reva' b) t=13+6j c) val=[100,98,99,'ajit'] d) dt=('jan','june',5,6)</p> <p>Ans:</p> <p>a. string b. complex c. list d. tuple</p> <p>II. Write the output of the following code:</p> <pre>s= 0 for i in range (10,2, -2): s = s + i print ("sum is = ", s)</pre> <p>Ans: -sum is 28</p>	4
36.	<p>Find out the output of the following programs.</p> <p>i. num=7</p> <pre>for a in range (1,11): print(num,"X",a,"=",num*a)</pre> <p>7 X 1 = 7 7 X 2 = 14 7 X 3 = 21 7 X 4 = 28 7 X 5 = 35 7 X 6 = 42 7 X 7 = 49 7 X 8 = 56 7 X 9 = 63 7 X 10 = 70</p> <p>ii. a=5</p> <pre>while a>0: print("hello") a=a-3 print("loop over")</pre>	4

	hello hello loop over	
37.	What are operators? Explain different operators and write an example program. Arithmetic Logic Conditional relational	4

*****END*****

