



सतं त्वं पूषन् अपावृणु
केन्द्रीय विद्यालय संगठन

SESSION 2021-22

**CLASS- XI
COMPUTER SCIENCE**



केन्द्रीय विद्यालय संगठन

KENDRIYA VIDYALAYA SANGATHAN



अध्ययन सामग्री

STUDY MATERIAL

कक्षा – ग्यारवीं

CLASS-XI

संगणक विज्ञान

COMPUTER SCIENCE

सत्र 2021-22 (टर्म -2)

SESSION 2021-22(TERM-2)



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TABLE OF CONTENTS

SLNO	UNIT/CHAPTER	PAGE
1	TERM 2: Unit II: Computational Thinking and Programming – 1 (Part-1)	
2	TERM 2Unit II: Computational Thinking and Programming – 1 (Part-2)	
3	TERM 2Unit III: Society, Law and Ethics (Part-1)	
4	TERM 2Unit III: Society, Law and Ethics (Part-2)	
	SAMPLE PAPER-1	
	SAMPLE PAPER-2	



Computer Science
CLASS - XI
Code No. 083
2021-22

1. Learning Outcomes

Student should be able to

- a) develop basic computational thinking
- b) explain and use data types
- c) appreciate the notion of algorithm
- d) develop a basic understanding of computer systems - architecture, operating system and cloud computing
- e) explain cyber ethics, cyber safety and cybercrime
- f) Understand the value of technology in societies along with consideration of gender and disability issues

2. Distribution of Marks

Unit No.	Unit Name	Marks	Periods	
			Theory	Practical
I	Computer Systems and Organisation	10	10	5
II	Computational Thinking and Programming - 1	45	50	35
III	Society, Law and Ethics	15	20	---
	Total	70	80	40

		Term-1	Term-2
		Marks	Marks
I	Computer Systems and Organisation	10	---
II	Computational Thinking and Programming - 1	25	20
III	Society, Law and Ethics	---	15
		35	35



3. Unit wise Syllabus

TERM 1:

Unit I: Computer Systems and Organisation

- Basic Computer Organisation: Introduction to computer system, hardware, software, input device, output device, CPU, memory (primary, cache and secondary), units of memory (Bit, Byte, KB, MB, GB, TB, PB)
- Types of software: system software (operating systems, system utilities, device drivers), programming tools and language translators (assembler, compiler & interpreter), application software
- Operating system (OS): functions of operating system, OS user interface
- Boolean logic: NOT, AND, OR, NAND, NOR, XOR, truth table, De Morgan's laws and logic circuits
- Number system: Binary, Octal, Decimal and Hexadecimal number system; conversion between number systems.
- Encoding schemes: ASCII, ISCII and UNICODE (UTF8, UTF32)

Unit II: Computational Thinking and Programming – 1

- Introduction to problem solving: Steps for problem solving (analysing the problem, developing an algorithm, coding, testing and debugging). representation of algorithms using flow chart and pseudo code, decomposition
- Familiarization with the basics of Python programming: Introduction to Python, features of Python, executing a simple "hello world" program, execution modes: interactive mode and script mode, Python character set, Python tokens (keyword, identifier, literal, operator, punctuator), variables, concept of l-value and r-value, use of comments
- Knowledge of data types: number (integer, floating point, complex), boolean, sequence (string, list, tuple), none, mapping (dictionary), mutable and immutable data types
- Operators: arithmetic operators, relational operators, logical operators, assignment operator, augmented assignment operators, identity operators (is, is not), membership operators (in, not in)
- Expressions, statement, type conversion & input/output: precedence of operators, expression, evaluation of expression, python statement, type conversion (explicit & implicit conversion), accepting data as input from the console and displaying output
- Errors: syntax errors, logical errors, runtime errors
- Flow of control: introduction, use of indentation, sequential flow, conditional and iterative flow control
- Conditional statements: if, if-else, if-elif-else, flowcharts, simple programs: e.g.: absolute value, sort 3 numbers and divisibility of a number
- Iterative statements: for loop, range function, while loop, flowcharts, break and continue statements, nested loops, suggested programs: generating pattern, summation of series, finding the factorial of a positive number etc
- Strings: introduction, indexing, string operations (concatenation, repetition, membership & slicing), traversing a string using loops, built-in functions: len(), capitalize(), title(), lower(), upper(), count(), find(), index(), endswith(), startswith(), isalnum(), isalpha(), isdigit(), islower(), isupper(), isspace(), lstrip(), rstrip(), strip(), replace(), join(), partition(), split()



TERM 2:

Unit II: Computational Thinking and Programming – 1

- Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list
- Tuples: introduction, indexing, tuple operations (concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple
- Dictionary: introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del(), clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them
- Introduction to Python modules: Importing module using 'import <module>' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median, mode)

Unit III: Society, Law and Ethics

- Digital Footprints
- Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes
- Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache)
- Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime
- Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying.
- Safely accessing web sites: malware, viruses, Trojans, adware
- E-waste management: proper disposal of used electronic gadgets
- Indian Information Technology Act (IT Act)
- Technology & Society: Gender and disability issues while teaching and using computers



TERM 2: Unit II: Computational Thinking and Programming – 1 (Part-1)

- Lists: introduction, indexing, list operations (concatenation, repetition, membership & slicing), traversing a list using loops, built-in functions: len(), list(), append(), extend(), insert(), count(), index(), remove(), pop(), reverse(), sort(), sorted(), min(), max(), sum(); nested lists, suggested programs: finding the maximum, minimum, mean of numeric values stored in a list; linear search on list of numbers and counting the frequency of elements in a list
- Tuples: introduction, indexing, tuple operations(concatenation, repetition, membership & slicing), built-in functions: len(), tuple(), count(), index(), sorted(), min(), max(), sum(); tuple assignment, nested tuple, suggested programs: finding the minimum, maximum, mean of values stored in a tuple; linear search on a tuple of numbers, counting the frequency of elements in a tuple

LIST

List: It is a collections of items and each item has its own index value. Index of first item is 0 and the last item is n-1. Here n is number of items in a list.

Indexing of list

0	1	2	3	4	index
80	60	70	85	75	value
-5	-4	-3	-2	-1	Negative index

Creating a list: Lists are enclosed in square brackets [] and each item is separated by a comma.

Initializing a list

Passing value in list while declaring list is initializing of a list
e.g.

```
list1 = ['English', 'Hindi', 1997, 2000]
list2 = [11, 22, 33, 44, 55 ]
list3 = ["a", "b", "c", "d"]
```

Blank list creation

A list can be created without element
List4=[]

Access Items From A List

List items can be accessed using its index position.
e.g.

```
list =[3,5,9]
print(list[0])
print(list[1])
print(list[2])
print('Negative indexing')
print(list[-1])
print(list[-2])
print(list[-3])
```

Iterating/Traversing Through A List

List elements can be accessed using looping statement.
e.g.



```
list =[3,5,9]
for i in range(0, len(list)):
    print(list[i])
```

Output

```
3
5
9
```

Slicing of A List

List elements can be accessed in subparts.

e.g.

```
list =['I','N','D','I','A']
print(list[0:3])
print(list[3:])
print(list[:])
```

Output

```
['I', 'N', 'D']
['I', 'A']
['I', 'N', 'D', 'I', 'A']
```

Updating / Manipulating Lists

We can update single or multiple elements of lists by giving the slice on the left-hand side of the assignment operator.

e.g.

```
list = ['English', 'Hindi', 1997, 2000]
print ("Value available at index 2 : ", list[2])
list[2:3] = 2001,2002 #list[2]=2001 for single item update
print ("New value available at index 2 : ", list[2])
print ("New value available at index 3 : ", list[3])
```

Output

```
('Value available at index 2 : ', 1997)
('New value available at index 2 : ', 2001)
('New value available at index 3 : ', 2002)
```

Add Item to A List

append() method is used to add an Item to a List.

e.g.

```
list=[1,2]
print('list before append', list)
list.append(3)
print('list after append', list)
```

Output

```
('list before append', [1, 2])
('list after append', [1, 2, 3])
```

NOTE :- extend() method can be used to add multiple item at a time in list.

eg - list.extend([3,4])

Add Two Lists



e.g.

```
list = [1,2]
list2 = [3,4]
list3 = list + list2
print(list3)
```

OUTPUT

```
[1,2,3,4]
```

Delete Item From A List

e.g.

```
list=[1,2,3]
print('list before delete', list)
del list [1]
print('list after delete', list)
```

Output

```
('list before delete', [1, 2, 3])
('list after delete', [1, 3])
```

e.g.

```
del list[0:2] # delete first two items
del list # delete entire list
```

* Linear Search

```
list_of_elements = [4, 2, 8, 9, 3, 7]
x = int(input("Enter number to search: "))
found = False
for i in range(len(list_of_elements)):
    if(list_of_elements[i] == x):
        found = True
        print("%d found at %dth position"%(x,i))
        break
if(found == False):
    print("%d is not in list"%x)
```

* Frequency of an element in list import collections

```
my_list = [101,101,101,101,201,201,201,201]
print("Original List : ",my_list)
ctr = collections.Counter(my_list)
print("Frequency of the elements in the List : ",ctr)
```

Basic List Operations

Python Expression	Results	Description
<code>len([4, 2, 3])</code>	3	Length
<code>[4, 2, 3] + [1, 5, 6]</code>	<code>[4, 2, 3, 1, 5, 6]</code>	Concatenation
<code>['cs!'] * 4</code>	<code>['cs!', 'cs!', 'cs!', 'cs!']</code>	Repetition
<code>3 in [4, 2, 3]</code>	True	Membership
<code>for x in [4,2,3] : print (x,end = ' ')</code>	4 2 3	Iteration



Important methods and functions of List

Function	Description
<code>list.append()</code>	Add an Item at end of a list
<code>list.extend()</code>	Add multiple Items at end of a list
<code>list.insert()</code>	insert an Item at a defined index
<code>list.remove()</code>	remove an Item from a list
<code>Del list[index]</code>	Delete an Item from a list
<code>list.clear()</code>	empty all the list
<code>list.pop()</code>	Remove an Item at a defined index
<code>list.index()</code>	Return index of first matched item
<code>list.sort()</code>	Sort the items of a list in ascending or descending order
<code>list.reverse()</code>	Reverse the items of a list
<code>len(list)</code>	Return total length of the list.
<code>max(list)</code>	Return item with maximum value in the list.
<code>min(list)</code>	Return item with min value in the list.
<code>list(seq)</code>	Converts a tuple, string, set, dictionary into list.
<code>count(element)</code>	Counts number of times an element/object in the list
<code>sorted(seq)</code>	Function returns a sorted list of the specified iterable object.

TUPLE

Tuple: It is a sequence of immutable objects. It is just like list. Difference between the tuples and the lists is that the tuples cannot be changed unlike lists. Lists uses square bracket whereas tuples use parentheses.

Creating A Tuple:

A tuple is enclosed in parentheses () for creation and each item is separated by a comma.

e.g.

```
tup1 = ('comp sc', 'info practices', 2017, 2018)
```

```
tup2 = (5,11,22,44)
```

NOTE:- Indexing of tuple is just similar to indexing of list.

Accessing Values from Tuples

Use the square brackets for slicing along with the index or indices to obtain the value available at that index.

e.g.

```
tup1 = ("comp sc", "info practices", 2017, 2018)
```

```
tup2 = (5,11,22,44,9,66)
```

```
print ("tup1[0]: ", tup1[0])
```

```
print ("tup2[1:5]: ", tup2[1:5])
```

Output

```
('tup1[0]: ', 'comp sc')
```

```
('tup2[1:5]: ', (11, 22, 44, 9))
```



Iterating Through A Tuple

Element of the tuple can be accessed sequentially using loop.

```
e.g.
tup = (5,11,22)
for i in range(0,len(tup)):
    print(tup[i])
```

Output

5
11
22

Updating Tuples

Tuples are immutable,that’s why we can’t change the content of tuple.It’s alternate way is to take contents of existing tuple and create another tuple with these contents as well as new content.

```
E.g.
tup1 = (1, 2)
tup2 = ('a', 'b')
tup3 = tup1 + tup2
print (tup3)
```

Output

(1, 2, 'a', 'b')

Delete Tuple Elements

Direct deletion of tuple element is not possible but shifting of required content after discard of unwanted content to another tuple.

```
e.g.
tup1 = (1, 2,3)
tup3 = tup1[0:1] + tup1[2:]
print (tup3)
```

Output (1, 3)

NOTE : Entire tuple can be deleted using del statement.

```
e.g.
del tup1
```

Basic Tuples Operations

Python Expression	Results	Description
len((4, 2, 3))	3	Length
(4, 2, 3) + (1, 5, 6)	(4, 2, 3, 1, 5, 6)	Concatenation
('cs!') * 3	('cs!', 'cs!', 'cs!')	Repetition
5 in [4, 2, 3]	False	Membership
for x in (4,2,3): print (x,end = ' ')	4 2 3	Iteration



Tuple Functions

S.No.	Function & Description
1	tuple(seq) Converts a list into tuple.
2	min(tuple) Returns item from the tuple with min value.
3	max(tuple) Returns item from the tuple with max value.
4	len(tuple) Gives the total length of the tuple.
5	cmp(tuple1, tuple2) Compares elements of both tuples.

MCQs, ASSERTION REASONING, CASE STUDY

1	Which of the following statement will create list? (A) L1=list() (B) L1=[1,2,3,4] (C) Both of the above (D) None of the above Ans: (C)
2	Write the output of the following code : list("welcome") (A) ['w', 'e', 'l', 'c', 'o', 'm', 'e'] (B) ('w', 'e', 'l', 'c', 'o', 'm', 'e') (C) ['welcome'] (D) None of the above Ans: (A)
3	Write the output of the following code : >>> L=['w','e','l','c','o','m','e'] >>> print(len(L)) (A) 7 (B) 8 (C) 9 (D) None Ans: (A)
4	Write the output of the following code : >>> L=["Amit","Anita","Zee","Longest Word"] >>> print(max(L)) (A) Zee (B) Longest Word (C) Error (D) None of the above Ans: (A)
5	Write the output of the following code : >>>L=[1,2,3,4,5,[6,7,8]] >>>print(L[5]) a. [6, 7, 8] b. 6, 7, 8 c. Error d. 6



	Ans: (A)
6	Write the output of the following code : <pre>L=list("www.csiplearninghub.com") print(L[20 : -1])</pre>
	a. ['c', 'o'] b. ['c', 'o', 'm'] c. (com) d. Error Ans: (A)
7	Write the output of the following code : <pre>>>>L=list("www.csiplearninghub.com") >>>print(L[20 : 0])</pre>
	a. Error b. No Value c. None d. [] Ans: (D)
8	Write the output of the following code : <pre>L=["Amit","Sumit","Naina"] print(L*2)</pre>
	a. ['Amit', 'Sumit', 'Naina', 'Amit', 'Sumit', 'Naina'] b. ["Amit", "Sumit", "Naina"] c. Error d. None of the above Ans: (A)
9	Write the output of the following code : <pre>L=["Amit","Sumit","Naina"] print(L**2)</pre>
	a. Error b. ["Amit","Sumit","Naina"]["Amit","Sumit","Naina"] c. ["Amit","Sumit","Naina"] d. ["Amit","Sumit","Naina","Amit","Sumit","Naina"] Ans: (A)
10	Write the output of the following code : <pre>L=[0.5 * x for x in range(4)] print(L)</pre>
	a. [0.0, 0.5, 1.0, 1.5] b. (0,.5, 1, 1.5) c. [0.0, 0.5, 1.0, 1.5, 2.0] d. Error Ans: (A)
11	Write the output of the following code : <pre>L=[1,2,3,4,5] for i in L: print(i,end=" ") i=i+1</pre>
	a. 1, 2, 3, 4, 5 b. 1, 3, 5 c. Error d. None of the above



	Ans: (A)
12	Which command is used to add an element in List named L1
	a. L1.add(4) b. L1.append(4) c. L1.new(4) d. None of the above Ans: (B)
13	Index value in list and string start from 0(T/F)
	a. True b. False Ans: (A)
14	del statement can delete the following from the List?
	a. Single Element b. Multiple Elements c. All elements along with List object d. All of the above Ans: (D)
15	What type of error is returned by the following statement? T = [1,2,3,4] print(T.index(9))
	a. IndexError b. TypeError c. ValueError d. None of the above Ans (C)
16	Which mathematical operator is used for repetition?
	a. * b. ** c. + d. // Ans: (A)
17	Which of the following is not list operation?
	a. Indexing b. Slicing c. Dividing d. Concatenation Ans: (C)
18	Which of the following is true about List data type in Python?
	a. List is a Sequence data type b. List is mutable c. List can have elements of different data type d. All of the above



	Ans: (d)
19	List can have elements of _____ data types.
	a. Same b. Different c. Both of the above d. None of the above Ans: (B)
20	Which operator helps to check whether an element is present in list or not?
	a. + b. in c. ** d. None of the above Ans: (B)
21	sort () function Sorts the elements of the given list in-place(T/F)
	a. True b. False Ans: (A)
22	Which of the following function creates the new list?
	a. sort() b. sorted() c. reverse() d. All of the above Ans: (B)
23	Which of the following will give output as [21,2,9,7] ? if list L = [1,21,4,2,5,9,6,7]
	a. print(L[1 : 8 : 2]) b. print(L[1 : : 2]) c. Both of the above d. None of the above Ans: (B)
24	Write the output of the following : L = [11, 21, 31, 41] L.extend([51,62,73,84]) print(len(L))
	a. 8 b. 4 c. 5 d. Error Ans: (A)



25	Both the print statement will produce the same result.(T/F) L = ["Amit", "Ananya", "Parth"] print(L[-1]) print(L[-1][-1])
	a. True b. False Ans: (A)

1	Tuples are _____ a. Mutable b. Immutable c. Mutable to some extent d. None of the above Ans: (B)
---	--

2	Tuples can contain elements of any data type.(T/F) a. True b. False Ans: (A)
---	---

3	In tuples values are enclosed in _____ a. Square brackets b. Curly brackets c. Parenthesis d. None of the above Ans: (C)
---	---

4	Write the output of the following. A = tuple("Python") print(A) a. (python) b. ("Python") c. ('P', 'y', 't', 'h', 'o', 'n') d. None of the above Ans: (C)
---	--

5	len() function returns the number of elements in tuple.(T/F) a. True b. False Ans: (A)
---	--

6	Write the output of the following: A = list(tuple("Python")) print(A) a. ('P', 'y', 't', 'h', 'o', 'n') b. ['P', 'y', 't', 'h', 'o', 'n'] c. none of the above d. Error Ans: (B)
---	---



7	Which of the following is not a function of tuple?
	a. update() b. min() c. max() d. count() Ans: (A)
8	Which of the following is/are features of tuple?
	a. Tuple is immutable b. Tuple is a sequence data type. c. In tuple, elements are enclosed in Parenthesis. d. All of the above Ans: (D)
9	Which of the following is not a tuple?
	a. P = 1,2,3,4,5 b. Q = ('a', 'b', 'c') c. R = (1, 2, 3, 4) d. None of the above Ans: (D)
10	Which of the following statement will create an empty tuple?
	a. P = () b. Q = tuple() c. Both of the above d. None of the above Ans: (C)
11	Which of the following is a tuple with single element?
	a. t = (1,) b. t = 1, c. Both of the above d. None of the above Ans: (C)
12	Write the output of the following: <pre>>>>t = (1) >>>type(t)</pre>
	a. <class 'int'> b. <class 'float'> c. <class 'tuple'> d. <class 'list'> Ans: (A)
13	What is the length of the given tuple? >>> t1=(1,2,(3,4,5))
	a. 1 b. 2 c. 3 d. 4 Ans: (C)
14	Which of the following statement will return an error. T1 is a tuple.



	<p>a. T1 + (23) b. T1 + [3] c. Both of the above d. None of the above</p> <p>Ans: (C)</p>
15	<p>Which mathematical operator is used to replicate a tuple?</p>
	<p>a. Addition b. Multiplication c. Exponent d. Modulus</p> <p>Ans: (B)</p>
16	<p>Which of the following function return the frequency of particular element in tuple?</p>
	<p>a. index() b. max() c. count() d. None of the above</p> <p>Ans: (C)</p>
17	<p>Write the output of the following :</p> <pre>>>> t1=(1,2,3,4,5,6,7) >>> t1[t1[1]] + t1[t1[-4]]</pre>
	<p>a. 8 b. 9 c. 6 d. 7</p> <p>Ans: (A)</p>
18	<p>Which function takes tuple as argument?</p>
	<p>a. max() b. min() c. sum() d. All of the above</p> <p>Ans: (C)</p>
19	<p>What type of error is returned by following code :</p> <pre>a=("Amit", "Sumit","Ashish","Sumanta") print(a.index("Suman"))</pre>
	<p>a. SyntaxError b. ValueError c. TypeError d. NameError</p> <p>Ans: (B)</p>
20	<p>Write the output of the following.</p> <pre>a=(23,34,65,20,5) print(a[0]+a.index(5))</pre>
	<p>a. 28 b. 29 c. 27 d. 26</p> <p>Ans: (C)</p>



TERM 2 Unit II: Computational Thinking and Programming – 1 (Part-2)

- Dictionary: introduction, accessing items in a dictionary using keys, mutability of dictionary (adding a new item, modifying an existing item), traversing a dictionary, built-in functions: len(), dict(), keys(), values(), items(), get(), update(), del(), clear(), fromkeys(), copy(), pop(), popitem(), setdefault(), max(), min(), count(), sorted(), copy(); suggested programs : count the number of times a character appears in a given string using a dictionary, create a dictionary with names of employees, their salary and access them
- Introduction to Python modules: Importing module using 'import ' and using from statement, Importing math module (pi, e, sqrt, ceil, floor, pow, fabs, sin, cos, tan); random module (random, randint, randrange), statistics module (mean, median, mode)

CONCEPT, BULLET POINTS, ETC

Dictionary is a collection of elements which is unordered, changeable and indexed.
Dictionary has keys and values.
Doesn't have index for values. Keys work as indexes.
Dictionary doesn't have duplicate member means no duplicate key.
Dictionaries are enclosed by curly braces { }
The key-value pairs are separated by commas (,)
A dictionary key can be almost any Python type, but are usually numbers or strings.
Values can be assigned and accessed using square brackets [].
Keys of a dictionary must be of immutable types, such as string, number, tuple.
A dictionary operation that takes a key and finds the corresponding value, is called lookup.
There are two methods to delete elements from a dictionary: (i) using del statement (ii) using pop() method
To check the existence of a key in dictionary, two operators are used (i) in (ii) not in
Python modules are .py files that contain Python code.
The Python import statement imports code from one module into another program.
The import statement allows you to import all the functions from a module into your code
Python has a built-in math module that you can use for mathematical tasks.
Python Random module is an in-built module of Python which is used to generate random numbers.
random.randint() method is used to generate random integers between the given range.
random.random() method is used to generate random integers between 0.0 to 1.
The statistics module provides functions to mathematical statistics of numeric data.
The mean() method calculates the arithmetic mean of the numbers in a list.
The median() method returns the middle value of numeric data in a list.
The mode() method returns the most common data point in the list.

MCQs, ASSERTION REASONING, CASE STUDY:

1	In order to store values in terms of key and value we use what core data type
	(A) list



	(B) tuple (C) class (D) dictionary
Ans	(D) dictionary

2	What is the output of the following code? <pre>a={1:"A",2:"B",3:"C"} print(a.setdefault(3))</pre>
	(A) {1: 'A', 2: 'B', 3: 'C'} c) d) (B) C (C) {1: 3, 2: 3, 3: 3} (D) No method called setdefault() exists for dictionary
Ans	(B) C

3	Which of the following statements create a dictionary?
	(A) d = { } (B) d = {"john":40, "peter":45} (C) d = {40:"john", 45:"peter"} (D) All of the mentioned
Ans	(D) All of the mentioned

4	Read the code shown below carefully and pick out the keys? <pre>d = {"john":40, "peter":45}</pre>
	(A) "john", 40, 45, and "peter" (B) "john" and "peter" (C) 40 and 45 (D) d = (40:"john", 45:"peter")
Ans	(B) "john" and "peter"

5	What will be the output?
---	--------------------------



	<pre>d = {"john":40, "peter":45} "john" in d</pre>
	(A) True (B) False (C) None (D) Error
Ans	(A) True

6	<p>What will be the output?</p> <pre>d1 = {"john":40, "peter":45} d2 = {"john":466, "peter":45} d1 == d2</pre>
	(A) True (B) False (C) None (D) Error
Ans	(B) False

7	<p>What will be the output?</p> <pre>d1 = {"john":40, "peter":45} d2 = {"john":466, "peter":45} d1 > d2</pre>
	(A) True (B) False (C) Error (D) None
Ans	(C) Error

8	<p>What is the output? <code>d = {"john":40, "peter":45}</code></p> <pre>d["john"]</pre>
	(A) 40 (B) 45 (C) "john"



	(D) "peter"
Ans	(A) 40

9	Suppose d = {"john":40, "peter":45}, to delete the entry for "john" what command do we use:
	(A) d.delete("john":40) (B) d.delete("john") (C) del d["john"] (D) del d("john":40)
Ans	(C) del d["john"]

10	Suppose d = {"john":40, "peter":45}. To obtain the number of entries in dictionary which command do we use? a) d.size() b) len(d) c) size(d) d) d.len()
	(A) d.size() (B) len (C) size (D) d.len()
Ans	(B) len

11	What will be the output? d = {"john":40, "peter":45} print(list(d.keys()))
	(A) ["john", "peter"] (B) ["john":40, "peter":45] (C) ("john", "peter") (D) ("john":40, "peter":45)
Ans	(A) ["john", "peter"]

12	Which of the following is correct with respect to above Python code? d = {"a":3, "b": 7} print(list(d.keys()))
	(A) a dictionary d is created.



	(B) a and b are the keys of dictionary d. (C) 3 and 7 are the values of dictionary d (D) All of the above.
Ans	(D) All of the above.

13	Which one of the following is correct?
	A. In python, a dictionary can have two same keys with different values. B. In python, a dictionary can have two same values with different keys C. In python, a dictionary can have two same keys or same values but cannot have two same key-value pair D. In python, a dictionary can neither have two same keys nor two same values.
Ans	B. In python, a dictionary can have two same values with different keys.

14	What will be the output of above Python code? <pre>d1={"abc":5,"def":6,"ghi":7} print(d1[0])</pre>
	A. abc B. 5 C. {"abc":5} D. Error
Ans	D. Error

15	What will the below Python code do? <pre>dict={"Phy":94,"Che":70,"Bio":82,"Eng":95} dict.update({"Che":72,"Bio":80})</pre>
	A. It will create new dictionary as dict={"Che":72,"Bio":80} and old dict will be deleted. B. It will throw an error as dictionary cannot be updated. C. It will simply update the dictionary as dict={"Phy":94,"Che":72,"Bio":80,"Eng":95} D. It will not throw any error but it will not do any changes in dict
Ans	C. It will simply update the dictionary as dict={"Phy":94,"Che":72,"Bio":80,"Eng":95}



16	What will be the output of above Python code? <pre>d1={"abc":5,"def":6,"ghi":7} print(d1[0])</pre>
	A. abc B. 5 C. {"abc":5} D. Error
Ans	D. Error

17	Which of the following will delete key_value pair for key="tiger" in dictionary? <pre>dic={"lion":"wild","tiger":"wild","cat":"domestic","dog":"domestic"}</pre>
	A. <code>del dic["tiger"]</code> B. <code>dic["tiger"].delete()</code> C. <code>delete(dic["tiger"])</code> D. <code>del(dic["tiger"])</code>
Ans	A. <code>del dic["tiger"]</code>

18	Which of the following will give error? Suppose <code>dict1={"a":1,"b":2,"c":3}</code>
	A. <code>print(len(dict1))</code> B. <code>print(dict1.get("b"))</code> C. <code>dict1["a"]=5</code> D. None of these.
Ans	D. None of these.

19	Which of the following Python codes will give same output if (i) <code>dict.pop("book")</code> (ii) <code>del dict["book"]</code> (iii) <code>dict.update({"diary":1,"novel":5})</code> <code>dict={"diary":1,"book":3,"novel":5}</code>
	A. i, ii, iii B. i, ii C. i, iii



	D. ii, iii
Ans	B. i, ii

20	Keys of the dictionary must be :
	A. Similar B. Unique C. Can be similar or unique D. All of these
Ans	B. Unique

21	Which of these about a dictionary is false?
	A. The values of a dictionary can be accessed using keys B. The keys of a dictionary can be accessed using values C. Dictionaries aren't ordered D. Dictionaries are mutable
Ans	B. The keys of a dictionary can be accessed using values

22	Which of the following is not a declaration of the dictionary?
	A. {1: 'A', 2: 'B'} B. dict([[1,"A"],[2,"B"]]) C. {1,"A",2"B"} D. { }
Ans	C) {1,"A",2"B"}

23	What will be the output of the following Python code snippet? <pre>a={1:"A",2:"B",3:"C"} print(a.get(1,4))</pre>
	A. 1 B. A C. 4 D. Invalid syntax for get method
Ans	B. A

24	What will be the output of the following Python code snippet?
----	---



	<pre>a={1:"A",2:"B",3:"C"} print(a.get(5,4))</pre>
	A. 1 B. A C. 4 D. Invalid syntax for get method
Ans	C. 4

25	What will be the output of the following Python code snippet? <pre>a={1:"A",2:"B",3:"C"} a.setdefault(4,"D") print(a)</pre>
	A. {1: 'A', 2: 'B', 3: 'C', 4: 'D'} B. None C. Error D. [1,3,6,10]
Ans	A. {1: 'A', 2: 'B', 3: 'C', 4: 'D'}

26	What will be the output of the following Python code? <pre>a={1:"A",2:"B",3:"C"} b=a.copy() b[2]="D" print(a)</pre>
	A. Error, copy() method doesn't exist for dictionaries B. {1: 'A', 2: 'B', 3: 'C'} C. {1: 'A', 2: 'D', 3: 'C'} D. "None" is printed
Ans	B. {1: 'A', 2: 'B', 3: 'C'}

27.	What will be the output of the following Python code? <pre>a={1:"A",2:"B",3:"C"} a.clear()</pre>
-----	---



	<pre>print(a)</pre>
	A. None B. { None:None, None:None, None:None} C. { 1:None, 2:None, 3:None} D. { }
Ans	D. { }

28.	What will be the output of the following Python code? <pre>a={1:5,2:3,3:4} a.pop(3) print(a)</pre>
	A. {1: 5} B. {1: 5, 2: 3} C. Error, syntax error for pop() method D. {1: 5, 3: 4}
Ans	B. {1: 5, 2: 3}

29.	What will be the output of the following Python code? <pre>a={1:"A",2:"B",3:"C"} for i in a: print(i,end=" ")</pre>
	A. 1 2 3 B. 'A' 'B' 'C' C. 1 'A' 2 'B' 3 'C' D. Error, it should be: for i in a.items():
Ans	A. 1 2 3

30.	What will be the output of the following Python code? <pre>>>> a={1:"A",2:"B",3:"C"} >>> a.items()</pre>
	A. Syntax error



	B. dict_items([('A'), ('B'), ('C')]) C. dict_items([(1,2,3)]) D. dict_items([(1, 'A'), (2, 'B'), (3, 'C')])
Ans	D. dict_items([(1, 'A'), (2, 'B'), (3, 'C')])

31.	What is the output of the following code? <pre>a={1:"A",2:"B",3:"C"} for i,j in a.items(): print(i,j,end=" ")</pre>
	A. 1 A 2 B 3 C B. 1 2 3 C. A B C D. 1:"A" 2:"B" 3:"C"
Ans	A. 1 A 2 B 3 C

32.	What is the output of the following code? <pre>a={1:"A",2:"B",3:"C"} for i,j in a.items(): print(i,j,end=" ")</pre>
	A. 1 A 2 B 3 C B. 1 2 3 C. A B C D. 1:"A" 2:"B" 3:"C"
Ans	A. 1 A 2 B 3 C

33.	The _____ keyword is used to import other modules into a Python script.
	A. find B. None C. import D. import as
Ans	C. import

34.	What is the use of "from...import" Statement in Python?
-----	---



	<p>A. The "from module import function" statement is used to import all the function from a Python module.</p> <p>B. The "from module import function" statement is used to import a specific function from a Python module.</p> <p>C. Both A and B</p> <p>D. None of the above</p>
Ans	<p>B. The "from module import function" statement is used to import a specific function from a Python module.</p>

35.	<p>Which of the following python built-in module you can use for mathematical tasks.</p>
	<p>A. random</p> <p>B. math</p> <p>C. import</p> <p>D. statistics</p>
Ans	<p>B. math</p>

36.	<p>Which of the following is not a math module function?</p>
	<p>A. tan(x)</p> <p>B. sin(x)</p> <p>C. cos(x)</p> <p>D. mean(x)</p>
Ans	<p>D. mean(x)</p>

37.	<p>What is displayed on executing <code>print(math.fabs(-3.4))</code>?</p>
	<p>A. -3.4</p> <p>B. 3.4</p> <p>C. 3</p> <p>D. -3</p>
Ans	<p>B. 3.4</p>

38.	<p>What is the output of <code>print(math.factorial(4.5))</code>?</p>
	<p>A. 24</p> <p>B. 120</p>



	C. Error D. 24.0
Ans	C. Error

39.	What does <code>math.sqrt(X, Y)</code> do? a b) c) error d)
	A. calculate the Xth root of Y B. calculate the Yth root of X C. Error D. return a tuple with the square root of X and Y
Ans	C. Error

40.	To include the use of functions which are present in the random library, we must use the option:
	A. <code>import random</code> B. <code>random.h</code> C. <code>import.random</code> D. <code>random.random</code>
Ans	A. <code>import random</code>

41.	What is the output of the function shown below if the random module has already been imported? <code>random.randint(3.5,7)</code>
	A. Error B. Any integer between 3.5 and 7, including 7 C. Any integer between 3.5 and 7, excluding 7 D. The integer closest to the mean of 3.5 and 7
Ans	A. Error

42.	The _____ module provides functions to mathematical statistics of numeric data.
	A. <code>math</code> B. <code>random</code> C. <code>statistics</code> D. none of the above
Ans	A. <code>statistics</code>



43.	Which method of statistics module calculates the arithmetic mean of the numbers in a list.
	A. mean() B. median() C. mode() D. none of the above
Ans	A. mean()

44.	Which method of statistics module returns the middle value of numeric data in a list.
	A. mean() B. median() C. mode() D. none of the above
Ans	B. median()

45.	Which method of statistics module returns the most common data point in the list.
	A. mean() B. median() C. mode() D. none of the above
Ans	C. mode()

46.	What will be output of the below code: <pre>>>> import statistics >>> statistics.mode([2,5,3,2,8,3,9,4,2,5,6])</pre>
	A. 2 B. 3 C. 5 D. 6
Ans	A. 2

Assertion and Reasoning :

In the question given below, there are two statements marked as Assertion (A) and Reason (R). Mark your answer as per the options provided.



47.	Assertion(A): Dictionaries are enclosed by curly braces { } Reason(R): The key-value pairs are separated by commas (,)
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
Ans	B. Both A and R are true but R is not the correct explanation of A.

48.	Assertion(A): The pop() method can be used to delete elements from a dictionary. Reason(R): The pop() method deletes the key-value pair and returns the value of deleted element.
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
Ans	A. Both A and R are true and R is the correct explanation of A.

49.	Assertion(A): clear() method removes all elements from the dictionary Reason(R): len() function cannot be used to find the length of a dictionary.
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
Ans	C. A is true but R is false.

50.	Assertion(A): keys() of the dictionaries must be unique. Reason(R): The keys of a dictionary can be accessed using values.
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false.



	D. A is false but R is true.
Ans	C. A is true but R is false.

51.	Assertion(A): A dictionary consists of a collection of key-value pairs. Reason(R): Each key-value pair maps the key to its associated value.
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
Ans	A. Both A and R are true and R is the correct explanation of A.

52.	Assertion(A): The random module is a built-in module to generate the pseudo-random variables. Reason(R): The randrange() function is used to generate a random number between the specified range in its parameter.
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
Ans	B. Both A and R are true but R is not the correct explanation of A.

53.	Assertion(A): The randint() method returns an integer number selected element from the specified range. Reason(R): The syntax for randint() is : random.randint(start: stop)
	A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.



Ans	C. A is true but R is false.
-----	------------------------------

CASE STUDY QUESTIONS:

54. In python, dictionary is an unordered collection of data values that stores key: value pair instead of single value as an element.

Each key is separated from its value by a colon (:), the items are separated by commas, and the whole thing is enclosed in curly braces. An empty dictionary without any items is written with just two curly braces, like this: {}.

1.	Which of the following methods returns a sorted sequence of the keys in the dictionary?
	A. sorted() B. fromkeys() C. update() D. items()
Ans	A. sorted()

2.	Predict the output: Dic={"Ansh" : 25, "Ritu" : 30} print(Dic["Ritu"])
	A. 25 B. 30 C. 27 D. 55
Ans	B. 30

3.	State true/False Clear() method is used to remove the elements of the dictionary ,also it will delete both elements and a dictionary.
	A. True B. False



Ans	B. False
-----	----------

4.	Which of the following statements create a dictionary? A. d = {} B. d = {"rajan":40, "akshay":45} C. d = {40:"somya", 45:"sanchi"} D. All of the mentioned
Ans	D. All of the mentioned

55. Based on the following code answer the questions

```
import _____ #1  
AR=[20,30,40,50,60,70]  
FROM=random.randint(1,3)  
TO=random.randint(2,4)  
for K in range(FROM,TO+1):  
    print (AR[K],end="#"")
```

1.	What module should be imported To execute the above code #1? (I) math (II) random (iii) pickle (iv) csv
	A. math B. random C. pickle D. csv
Ans	B. random

2.	What will Be the maximum value of the variables FROM and TO?
	A. 3,4 B. 4,3 C. 2,4 D. 4,2
Ans	A. 3,4

3.	What will Be the minimum value of the variables FROM and TO?
	A. 2,1 B. 1,2 C. 1,3 D. 1, 4



Ans	B. 1,2
-----	--------

4.	What possible outputs(s) are expected to be displayed on screen at the time of execution of the program?
	A. 10#40#70# B. 30#40#50# C. 50#60#70# D. 40#50#70#
Ans	B. 30#40#50#

56. Consider the following code and answer the questions that follow:

Book={1:'Thriller', 2:'Mystery', 3:'Crime', 4:'Children Stories'}

Library ={'5':'Madras Diaries','6':'Malgudi Days'}

1.	Ramesh needs to change the title in the dictionary book from 'Crime' to 'Crime Thriller'. He has written the following command: Book['Crime']='Crime Thriller' But he is not getting the answer. Help him choose the correct command:
	A. Book[2]='Crime Thriller' B. Book[3]='Crime Thriller' C. Book[2]='('Crime Thriller')' D. Book[3]='('Crime Thriller')'
Ans	B. Book[3]='Crime Thriller'

2.	The command to merge the dictionary Book with Library the command would be:
	A. d=Book+Library B. print(Book+Library) C. Book.update(Library) D. Library.update(Book)
Ans	D. Library.update(Book)

3.	What will be the output of the following line of code: print(list(Library))
	A. ['5','Madras Diaries','6','Malgudi Days'] B. ('5','Madras Diaries','6','Malgudi Days')



	C. ['Madras Diaries', 'Malgudi Days'] D. ['5', '6']
Ans	D. ['5', '6']

4.	<p>In order to check whether the key 2 is present in the dictionary Book, Ramesh uses the following command:</p> <pre>2 in Book</pre> <p>He gets the answer 'True'. Now to check whether the name 'Madras Diaries' exists in the dictionary Library, he uses the following command:</p> <pre>'Madras Diaries' in Library</pre> <p>But he gets the answer as 'False'. Select the correct reason for this:</p>
	<p>A. We cannot use the in function with values. It can be used with keys only.</p> <p>B. We must use the function Library.values() along with the in operator</p> <p>C. We can use the Library.items() function instead of the in operator</p> <p>D. Both b and c above are correct.</p>
Ans	B. We must use the function Library.values() along with the in operator.



TERM 2 Unit III: Society, Law and Ethics (Part-1)

- Digital Footprints
- Digital society and Netizen: net etiquettes, communication etiquettes, social media etiquettes
- Data protection: Intellectual Property Right (copyright, patent, trademark), violation of IPR (plagiarism, copyright infringement, trademark infringement), open source softwares and licensing (Creative Commons, GPL and Apache)
- Cyber-crime: definition, hacking, eavesdropping, phishing and fraud emails, ransomware, preventing cyber crime

Sno	Question
Q1.	What is Digital Footprint? (i) A scanned image of your foot. (ii) A photograph of your shoe (iii) All the information online about a person that is stored online. (iv) Having a blog, facebook or twitter page Ans: (iii)
Q2.	How many types of digital footprints. (i) 2 (ii) 3 (iii) 1 (iv) None of these Ans (i) 2
Q3.	What is the information not share online? (i) Your fast name and last name. (ii) Your photograph. (iii) The name of your school or city. (iv) All of the above. Ans (iv)
Q4.	Which of the following is not a type of cybercrime? (i) Data theft (ii) Forgery (iii) Damage to data and systems (iv) Installing antivirus for protection. Ans(iv)
Q5.	Which of the following is not a typical characteristic of ethical hackers? (i) Excellent knowledge of windows (ii) Understands the process of exploiting network vulnerabilities (iii) Patience, persistence and perseverance (iv) Has highest level of security for organization. Ans (iv)
Q6.	What is the most important activity in system hacking? (i) Information gathering (ii) Cracking passwords (iii) Escalating privileges (iv) Covering tracks Ans(ii)
Q7.	Which is the following is not done by cyber criminals? (i) Unauthorized account access (ii) Mass attack using Trojans as botnets. (iii) Email spooling and spamming (iv) Report vulnerability in any system Ans (iv)
Q8.	Which is the name of the IT law that India is having in the Indian legislature? (i) India's Technology (IT) Act, 2000 (ii) India's Digital Information (DIT) Act, 200



	(iii) India's Information Technology (IT) Act, 2000 (iv) The Technology Act, 2008 Ans(iii)
Q9.	Passwords are used to improve the _____ of a network. (i) Performance (ii) Reliability (iii) Security (iv) Longevity Ans(iii)
Q10.	The full form of Malware is (i) Malfunctioned software (ii) Multipurpose software (iii) Malicious software (iv) Malfunctioning of security Ans(iii)
Q11	The transformation of key business processes through the use of digital or Internet technologies is known as _____ (i) E-business (ii) E-Commerce (iii) Digital Business (iv). Both A and C Ans(iii)
Q12	A _____ community is one where the interaction takes place over a computer network, mainly the Internet. (i) Online (ii) Virtual (iii)Internet (iv)All of the above Ans(iv)
Q13	_____ has specific objectives to increase profits when increasing its benefits to society. (i) Digital Business (ii) Social Network (iii)Social Enterprise (iv)Virtual Community Ans(iii)
Q14.	Social networks are organized primarily around _____. (i) Brands (ii) People (iii)Discussions (iv) interests
Q15.	Which social network is considered the most popular for social media marketing? (i) Twitter (ii) Facebook (iii) Linkdin (iv) Whats App



	Ans(ii)
Q16	<p>Which of the following is an important aspect of creating blogs and posting content?</p> <ul style="list-style-type: none">(i) Using a witty user name(ii) Posting at least once a month to the blog(iii) Social Media Optimization(iv) All of the above <p>Ans(iv)</p>
Q17	<p>Which of the following is the correct depiction of Digital Marketing?</p> <ul style="list-style-type: none">(i) E-mail Marketing(ii) Social Media Marketing(iii) Web Marketing(iv) All of the above <p>Ans(iv)</p>
Q18	<p>Which of the following is not specifically required by the search engines?</p> <ul style="list-style-type: none">(i) Poor user experience(ii) Keyword stuffing(iii) Buying links(iv) All of the above <p>Ans:(iv)</p>
Q19	<p>Which of the following features corresponds to the role of the lead nurturing platform?</p> <ul style="list-style-type: none">(i) A/B Testing(ii) Campaigning(iii) Landing Page Creation(iv) All of the above <p>Ans (iv)</p>
Q20	<p>Which of the following is the most common delivery channel in terms of mobile marketing?</p> <ul style="list-style-type: none">(i) Graphic(ii) Text(iii) Voice call(iv) Search engine marketing <p>Ans(ii)</p>
Q21.	<p>Which of the following is not threat?</p> <ul style="list-style-type: none">(i) Virus(ii) Hacker(iii) Hard disk failure(iv) Operating system <p>Ans(iii)</p>
Q22.	<p>Legal rights related to invention are called as-----</p> <ul style="list-style-type: none">(i) Patent(ii) Utility(iii) a Trade secrets(iv) Trade Marks <p>Ans(i)</p>



Q23.	<p>Q.13. Intellectual property can termed as following type of property-----</p> <ul style="list-style-type: none">(i) Disposable(ii) Tangible(iii) measurable(iv) Intangible <p>Ans(iv)</p>
Q24.	<p>A software that can be freely accessed and modified.</p> <ul style="list-style-type: none">(i) Synchronous Software(ii) Package Software(iii) OSS(iv) Middleware <p>Ans(iii)</p>
Q25	<p>Open Source Software can be used for commercial purpose.</p> <ul style="list-style-type: none">(i) True(ii) False <p>Ans(i)</p>
Q26.	<p>OSI stands for?</p> <ul style="list-style-type: none">(i) Open Source Index(ii) Open Source Image(iii) Open Source Initiative(iv) Open Source Instant <p>Ans(iii)</p>
Q27.	<p>Which of the following is not an open source software?</p> <ul style="list-style-type: none">(i) LibreOffice(ii) Microsoft Office(iii) GNU image manipulation(iv) MySQL <p>Ans(ii)</p>
Q28.	<p>The users must agree to the _____ terms and agreements when they use an open source software.</p> <ul style="list-style-type: none">(i) System(ii) License(iii) Community(iv) Programmer



<p>Q29.</p>	<p>An example of a web design OSS.</p> <ul style="list-style-type: none">(i) Nvu(ii) KOffice(iii) AbiWorld(iv) Open Office <p>Ans(i)</p>
<p>Q30.</p>	<p>_____ is a person who deliberately sows discord on the internet by starting quarrels or upsetting people, by posting inflammatory or off topic messages in an online community.</p> <ul style="list-style-type: none">(i) Netizen(ii) Digital Citizen(iii) Internet troll(iv) None of the above <p>Ans(i)</p>
<p>Q31.</p>	<p>What does digital etiquette mean?</p> <ul style="list-style-type: none">(i) Making the most of your time online(ii) Increasing your technological skills(iii) Minding your manners in cyberspace <p>Ans(iii)</p>
<p>Q32.</p>	<p>When do you need to use etiquette?</p> <ul style="list-style-type: none">(i) When you are on your cell phone(ii) When you send emails(iii) When you send emails(iv) All of the above <p>Ans(iv)</p>
<p>Q33.</p>	<p>When writing email, using ALL CAPS means:</p> <ul style="list-style-type: none">(i) Your email is very important.(ii) You are typing very quickly.(iii) You are shouting.(iv) You are an experienced email writer. <p>Ans(iii)</p>
<p>Q34.</p>	<p>When posting pictures online, you should consider:</p> <ul style="list-style-type: none">(i) Whether or not others in the picture would want that picture posted(ii) How the picture makes you look to others(iii) Whether or not the picture could get anyone into trouble(iv) All of the above <p>Ans(iv)</p>
<p>Q35.</p>	<p>Blogging is a great way to tell people off when they make you mad or bother you.</p> <ul style="list-style-type: none">(i) True(ii) False <p>Ans(ii)</p>



TERM 2 Unit III: Society, Law and Ethics (Part-2)

- Cyber safety: safely browsing the web, identity protection, confidentiality, cyber trolls and bullying.
- Safely accessing web sites: malware, viruses, trojans, adware
- E-waste management: proper disposal of used electronic gadgets
- Indian Information Technology Act (IT Act)
- Technology & Society: Gender and disability issues while teaching and using computers

CONCEPT, BULLET POINTS, ETC

What is Cyber safety ?

It refers to the safe and responsible use of internet to ensure safety and security of personal information and not posing threat to anyone else's information.

Identity Protection :

Protection against theft of personal information over Cyber Space without consent, usually for financial gain is known as Identity Protection.

What is Identity Theft ?

Identity Theft is a type of fraud that involves using someone else's identity to steal money or gain other benefits. Online identity theft refers to an act of stealing someone's personal information such as name, login details etc. and then posing as that person online.

Practices to ensure confidentiality of information:-

- (1) use firewall wherever possible
- (2) control browser settings to block tracking
- (3) browse privately wherever possible
- (4) be careful while posting on internet
- (5) ensure safe sites while entering crucial information
- (6) carefully handle emails
- (7) do not give sensitive information on wireless networks
- (8) avoid using public computers

What is Cyber-crime ?

Any criminal offense that is facilitated by, electronic communications or information systems, including any electronic device, computer, or the internet is referred to as cyber-crime.

What is Cyber Trolls ?

Derogatory messages or comments posted online targeting people are called cyber trolls.

What is Cyber Bullying ?



Harassing, demeaning, embarrassing, defaming or intimidating someone using modern technologies like internet, cell phones, instant messengers, social networks etc., called cyber bullying.

What is Cyber stalking ?

This is a form of online harassment where the victim is exposed to a large number of online messages and emails.

Usually, these following people know their victims and instead of turning to offline hunting, they use the internet to track them.

Commonly used Social Networking Sites:-

- (i) Facebook
- (ii) twitter
- (iii) LinkedIn
- (iv) Instagram

What is Digital Footprint?

A digital footprint is a trail of data you create while using the Internet. It includes the websites you visit, emails you send, and information you submit to online services. These are of two types:

- i) An active digital footprint is where the user has deliberately shared information about themselves either by using social media sites or by using websites.
- ii) A passive digital footprint is made when information is collected from the user without the person knowing this is happening.

What you should do while using social media ?

- (1) Be authentic
- (2) Use a disclaimer
- (3) Don't pick fight online
- (4) Protect your identity
- (5) Don't use fake names
- (6) Respect your audience
- (7) Respect other's sentiments

Tips for Safe Web Browsing:

1. Common sense-(never respond to spam & disclose personal information).
2. Use an antivirus & Firewall-It provide real-time malware protection.
3. Create strong passwords
4. Mind your downloads -Be sure to review all pre-checked boxes prompted at download & un-check any extra applications which we don't want to install.
5. Stay updated- Update operating system, Applications & Anti-virus



Adware: Adware is software that generates revenue for its developer by automatically generating online advertisements in the user interface of the software or on a screen presented to the user during the installation process. The software may generate two types of revenue: one is for the display of the advertisement and another on a "pay-per-click" basis, if the user clicks on the advertisement.

Malware: Malware, or malicious software, is any program or file that is harmful to a computer user. Malware includes computer viruses, worms, Trojan horses and spyware. These malicious programs can perform a variety of functions, including stealing, encrypting or deleting sensitive data, altering or hijacking core computing functions and monitoring users' computer activity without their permission.

Virus: A computer virus is a type of malicious code or program written to alter the way a computer operates and that is designed to spread from one computer to another. A virus operates by inserting or attaching itself to a legitimate program or document that supports macros in order to execute its code.

Trojans: In computing, a Trojan horse is a program that appears harmless, but is, in fact, malicious. A Trojan can perform unexpected changes to computer settings and unusual activity, even when the computer is idle.

E-waste: Whenever an electronic device covers up its working life, or becomes unusable due to technological advancements or becomes non-functional, it is not used anymore and comes under the category of e-waste or electronic waste.

E-Waste Management

As the technology is changing day by day, more and more electronic devices are becoming non-functional and turning into e-waste. Managing such non-functional electronic devices is termed as e-waste management. It is reusing and recycling of e-waste which is no longer in use and can be salvaged for some of its components.

Ways to dispose off e-waste:

1. Give Back to Your Electronic Companies and Drop Off Points
2. Visit Civic Institutions
3. Donating Your Outdated Technology
4. Sell Off Your Outdated Technology
5. Give Your Electronic Waste to a Certified E-Waste Recycler

Information Technology Act, 2000

The Information Technology Act, 2000 (also known as ITA-2000, or the IT Act) is an Act of the Indian Parliament notified on 17 October 2000. It is the primary law in India dealing with cybercrime and electronic commerce.

A major amendment was made in 2008 and now it is called the IT (Amendment) Act 2008.

Gender and disability issues while teaching/using computers:

Gender Issues

1. Preconceived notions – Notions like “boys are better at technical and girls are good at humanities.



2. Lack of interest
3. Lack of motivation
4. Lack of role models
5. Lack of encouragement in class
6. Not girl friendly work culture

These issues can be handled in following ways:

1. There should be more initiative program for girls to take computer subject.
2. Film and tv censor board should ensure fair representation of female role models in tv or cinema
3. In practical room they should be more helped and assisted.

Disability Issues:

1. Unavailability of teaching materials/aids
2. Lack of special needs teachers
3. Lack of supporting curriculum

Possible Solution for the same:

- Enough teaching aids must be prepared for specially abled students
- Must employ special needs teachers
- Curriculum should be designed with students with specially abled students in mind.

MCQs, ASSERTION REASONING, CASE STUDY

1	Which of the following are the best security measures that should be taken against phishing attacks ? a. Never open unknown or suspicious email attachments. b. Never share your personal information such as email, credit card number, etc on unknown sites. c. Both a and b d. None of these Ans: c
2	When a person is harassed repeatedly by being followed, called or be written to he/ she is a target of (a) Bullying (b) Stalking (c) identity theft (d) phishing Ans: b
3	6. IT Act of the Indian Parliament notified on _____ a. 17 January 2001 b. 25 October 2002 c. 17 October 2000 d. 25 April 2000 Ans: c



4	<p>What is the name of the IT Law that India is having in the Indian legislature ?</p> <ol style="list-style-type: none">India's Technology (IT) Act, 2000India's Digital Information Technology (DIT) Act, 2000India's Information Technology (IT) Act, 2000The Technology Act, 2008 <p>Ans: c</p>
5	<p>Sarah's classmate sent her a message on Facebook "You are a Loser". Sarah is a victim of:</p> <ol style="list-style-type: none">PhishingEavesdroppingCyberbullyingTrolling <p>Ans: c</p>
6	<p>What can happen when you give your personal data (email, address, photos you post...) in exchange for free apps and services?</p> <ol style="list-style-type: none">Nothing can happen. Your data is not allowed to be passed on to anyoneIt isn't really used, it's just compulsory to ask for that informationWhen giving your email you're automatically entered in a lottery where you can win somethingEverything you do online is of value and is used by companies looking to target their advertising <p>Ans:d</p>

1	<p>Assertion (A) : The information which was posted by you in online can be seen by everyone who is online because internet is the world's biggest information exchange tool. Reason (R) : Don't give or post any personal information like your name, address of the school/office / home, phone numbers, age, sex, credit card details etc., Choose the correct answer:</p> <ol style="list-style-type: none">Both A and R are true and R is correct explanation of ABoth A and R are true and R is not correct explanation of AA is true but R is false.A is false but R is True <p>Ans: a)</p>
2	<p>Assertion (A): According to research conducted by Symantec, nearly 8 out of 10 individuals are subject to the different types of cyber bullying in India. Reason (R) : Don't give or post any personal information like your name, address of the school/office / home, phone numbers, age, sex, credit card details etc., Choose the correct answer:</p> <ol style="list-style-type: none">Both A and R are true and R is correct explanation of ABoth A and R are true and R is not correct explanation of AA is true but R is false.A is false but R is True <p>Ans: b)</p>
3	<p>Assertion (A): The digital footprint is created automatically when you work on internet and providing data in any form. Reason (R) : The active digital footprint is created unintentionally without the user's consents. Choose the correct answer:</p> <ol style="list-style-type: none">Both A and R are true and R is correct explanation of ABoth A and R are true and R is not correct explanation of AA is true but R is false.A is false but R is True <p>Ans: c)</p>



1	Cyberbullying is the act of intimidating, harassment, defaming, or any other form of mental degradation through the use of electronic means or modes such as social media.
(a)	True
(b)	False
Ans: (a) True	
2	Rohan said some abusive words for Shyam in the class. This a type of cyber bullying.
(a)	True
(b)	False
Ans: (b) False	
3	It is okay to post some negative comments about someone to defame him/ her.
(a)	True
(b)	False
Ans: (b) False	
4.	It is a better way to dispose off the e-waste in an open field area.
(a)	True
(b)	False
Ans: (b) False	
5	Cyber law helps protect users from harm by enabling the investigation and prosecution of online criminal activity.
(a)	True
(b)	False
Ans: (a) True	

Case study based questions

1	<p>Smridh has recently changed his school so he is not aware of the people, but someone is posting negative ,demeaning comments on his social media profile. He is also getting repeated mails from unknown people. Everytime he goes online, he finds someone chasing him online.</p> <p>i. Smridh is a victim of :</p> <ul style="list-style-type: none">a. Eavesdroppingb. Stolen identityc. Phishingd. Cyber stalking <p>Ans: d</p> <p>ii. The action that Smridh should take :</p> <ul style="list-style-type: none">a. He should ONLY share with his friendsb. He should NOT share with anyone as it can cause serious problemc. He should immediately report to the policed. He should bring to the notice of his parents and school authorities. <p>Ans: d</p> <p>iii. is a set of moral principles that governs the behaviour of a group or individual and regulates the use of computers.</p> <ul style="list-style-type: none">a. Copyrightb. Computer ethicsc. Property rightsd. Privacy law <p>Ans: b</p>
2	<p>After practicals, Atharv left the computer laboratory but forgot to sign off from his email account. Later, his classmate Revaan started using the same computer. He is now logged in as Atharv. He sends inflammatory email messages to few of his classmates using Atharv's email account.</p> <p>i. Revaan's activity is an example of which of the following cyber crime?</p> <ul style="list-style-type: none">a. Hackingb. Identity theftc. Cyber bullying



d. Plagiarism

Ans: b

ii.If you post something mean about someone, you can just delete it and everything will be Ok .

- a.True
- b. False

Ans: b

iii. Anonymous online posts/comments can _____ be traced back to the author.

- a. Always
- b. Never
- c. Sometimes

Ans: a

SAMPLE PAPER -1

KENDRIYA VIDYALAYA SANGATHAN, JAMMU REGION

COMPUTER SCIENCE (083)

SAMPLE PAPER

TERM 2 EXAMINATION 2021-22

CLASS-XI

Time:- 1.5 Hours

Max. Mark:35

General instructions:-

1. This Question Paper Contains 4 Parts A,B,C,D.
2. Attempt 11 questions in Part-A and all questions in Part-B, C and D.
3. Each Question in Part A carry 1 Mark, in Part B, C and D carry 2 Marks.

Part-A

Simple MCQ Based Questions

1. Which of the following statement will create list?

- (A) L1=list()
- (B) L1=[1,2,3,4]
- (C) Both of the above
- (D) None of the above

2. Write the output of the following code:

```
>>>L=[1,2,3,4,5,[6,7,8]]
>>>print(L[5])
```

- a. [6, 7, 8]
- b. 6, 7, 8
- c. Error
- d. 6

3. Write the output of the following code:

```
L=[1,2,3,4,5]
for i in L:
```



```
print(i,end=" ")
```

```
i=i+1
```

- a. 1, 2, 3, 4, 5
- b. 1, 3, 5
- c. Error
- d. None of the above

4. In tuples values are enclosed in _____

- a. Square brackets
- b. Curly brackets
- c. Parenthesis
- d. None of the above

5. Write the output of the following.

```
A = tuple("Python")  
print(A)
```

- a. (python)
- b. ("Python")
- c. ('P' , 'y' , 't' , 'h' , 'o' , 'n')
- d. None of the above

6. Write the output of the following.

```
a=(23,34,65,20,5)  
print(a[0]+a.index(5))
```

- a. 28
- b. 29
- c. 27
- d. 26

7. Dictionaries in python are _____.

- a. **Mutable data type**
- b. **Non-Mutable data type**
- c. **Mapping data type**
- d. **Both a and c**

8. Write the output of the following :

```
d1 = {"a" : 50, "b" : 50}  
d2 = {"a" : 500, "b" : 50}  
print(d1 > d2)
```

- a. **True**
- b. **False**
- c. **Error**
- d. **None of the above**

9. Which of the following is feature of Dictionary?

- a. **Keys are unique within a dictionary.**



- b. Keys must be of an immutable data type.
- c. Dictionary is mutable.
- d. All of the above

10. Which of the statements is used to import all names from a module into the current calling module?

- (a) import
- (b) from
- (c) import *
- (d) dir()

11. Which of the following random module functions generates an integer?

- (a) random()
- (b) randint()
- (c) uniform()
- (d) all of these

12. Digital footprints are also known as _____

- (a) Digital data
- (b) Plagiarism
- (c) Digital tattoos
- (d) Digital print

13. Anyone who uses digital technology along with Internet is a _____

- (a) Digital citizen
- (b) Netizen
- (c) Both of the above
- (d) None of the above

14. Online posting of rumours, giving threats online, posting the victim's personal information, comments aimed to publicly ridicule a victim is termed as _____

- (a) Cyber bullying
- (b) Cyber crime
- (c) Cyber insult
- (d) All of the above

15. _____ is a person who deliberately sows discord on the Internet by starting quarrels or upsetting people, by posting inflammatory or off topic messages in an online community.

- (a) Netizen
- (b) Digital Citizen
- (c) Internet troll
- (d) None of the above

PART-B

Reasoning Assertion Based Questions

16. Choose the correct statement

Assertion (A) : Items in dictionaries are unordered.

Reason (R) : We may not get back the data in the same order in which we had entered the data initially in the dictionary.

a. A is true but R is false



- b. A is false but R is true
- c. Both A and R are false
- d. Both A and R are true and R is the correct explanation of A

17. Choose the correct statement

Assertion (A) : Digital footprint is the trail of data we leave behind when we visit any website (or use any online application or portal) to fill-in data or perform any transaction.

Reason (R) : While online, all of us need to be aware of how to conduct ourselves, how best to relate with others and what ethics, morals and values to maintain.

- A. Both A and R are true and R is the correct explanation of A
- B. Both A and R are true but R is not the correct explanation of A
- C. A is true but R is false
- D. A is false but R is true E. Both A and R are false

18. Choose the correct statement

Assertion (A) and another are labelled as Reason(R) :

Assertion (A): Code of the software will be protected by a copyright

Reason(R): Copyright grants legal rights to creators for their original works like writing, photograph, audio recordings, video, sculptures, architectural works, computer software, and other creative works like literary and artistic work.

- (1)Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true and (R) is not the correct explanation of (A)
- (3) (A) is true. (R) Is False
- (4) (A) is False. (R) Is True

19. Assertion (A): We cannot access more than one element of Series without slicing . Reason

(R): More than one element of series can be accessed using a list of positional index or labeled index.

- (A) Both A and R are true and R is the correct explanation of A.
- (B) Both A and R are true and R is not the correct explanation of A.
- (C) A is true but R is false.
- (D) A is false but R is true.



(E) Both A and R are false.

20. Read Statements 1 and 2 and select correct option

Statement 1: Harassing using modern technologies like internet etc., is called Cyber Bullying

Statement 2: Cyber Bullying is not a Cybercrime

- A) Both Statements 1 and 2 are True
- B) Statement 1 is True but Statement 2 is False
- C) Both Statements 1 and 2 are False
- D) Statement 1 is False but Statement 2 is True

21. Choose the correct statement :

Statement A : Dictionaries are mutable.

Statement B : Contents of the dictionary can not changed after it has been created

- a. Statement A is True
- b. Statement B is True
- c. Both the statements are True
- d. Statement A is True and Statement B is False

PART-C

(CASE STUDY Based Questions)

22. Lalit is a game programmer and he is designing a game where he has to use different python functions as much as possible. Apart from other things, following functionalities are to be implemented in the game.

(1) He is simulating a dice where random number generation is required.

(2) Since the program becomes too lengthy, Lalit wants a separate section where he can store all the functions used in the game program.

Lalit is feeling difficulty in implementing the above functionalities. Help him by giving answers following questions:

Q.1: To implement functionality (1) which module can be used:

- (A) random
- (B) randomise
- (C) randint
- (D) math

Q.2: In functionality (2), Lalit should use

- (A) in-built functions



- (B) He should write another Python program
- (C) He should use a module with all the required functions
- (D) He should make a separate section in the same Python program

23. One student who is learning Python, is making a function-based program to find the roots of a quadratic equation. He wrote the program but he is getting some error. Help him to complete the task successfully:

```
from ..... import sqrt           LINE-1
Def quad(b,c,a=1):                 LINE-2
    x = b*b-4*a*c 4                 LINE-3
    if x < 0:                       LINE-4
        return "Sorry,complex root(s)" LINE-5
    d = sqrt(x)                     LINE-6
    r1 = (-b + d)/(2*a)             LINE-7
    r2 = (-b - d)/(2*a)             LINE-8
        return r1,r2                LINE-9
print(quad(1,1,2))                 LINE-10
root = quad(3)                     LINE-11
rt = quad(2,1)                     LINE-12
```

- Q.1: Which python module should be used in line 1
- (A) random
 - (B) CMath
 - (C) math
 - (D) Either (B) or (C)
- Q.2: Which statement is correct with reference to above program
- (A) Two return statements are used and a function can use only one return statement
 - (B) Required module is not given
 - (C) Syntax error in line 4
 - (D) Error in line 11

Part-D

CCT Based Question

24. Write the output of the following:

```
T = [1,2,3,4]
T1=T
T[0] = "A"
print(T)
print(T1)
```

- a. `['A', 2, 3, 4]`
- b. `['A', 2, 3, 4]`
- c. `[1, 2, 3, 4]`
- d. Error

25. Write the output of the following:



```
a=(6,8,9,"Sumanta",1)
for i in a:
    print(str(i)*2)
```

a.
66
88
99
SumantaSumanta

b.
66
88
88
Error

c.
Error

d.
66
88
99
SumantaSumanta
Error

26. Which of the following will give output as [23,2,9,75] .
If L=[6,23,3,2,0,9,8,75]

- A. print(list1[1:7:2])
- B. print(list1[0:7:2])
- C. print(list1[1:8:2])
- D. print(list1[0:8:2])

27. Predict the output:
List1=[13, 18, 11, 16, 13, 18, 13]
print(List1.index(18))
print(List1.count(18))
List1.append(List1.count(13))
print(List1)

- a. 1
2
[13,18,11,16,13,18,13,3]
- b. 2
2
[13,18,11,16,13,18,13]
- c. Any of the above
- d. None of these



SAMPLE PAPER-2

KENDRIYA VIDYALAYA SANGATHAN JAMMU REGION

Class: XI Session: 2021-22
Computer Science (Code 083)
(Theory: Term-2)

Maximum Marks: 35

Time Allowed: 90 Minutes

General Instructions:

- The question paper is divided into 3 Sections - A, B, and C.
- Section A consists of 25 Questions (1-20). Attempt any 15 questions.
- Section B consists of 24 Questions (21-40). Attempt any 15 questions.
- Section C consists of 6 case study based Questions (41-46). Attempt any 5 questions.
- All questions carry equal marks

Q.No.	SECTION –A
	This section consists of 20 questions(1 to 20). Attempt any 15 questions from this section. Choose the best possible option.
1	Which of the following is a valid declaration of a list ? a. list1 = [23, 45, 11, 'a', 't'] b. list1 = {23, 45, 11, 'a', 't'} c. list1 = (23, 45, 11, 'a', 't') d. list1 = [23, 45, 11, a ,t]
2	Which of the following modules is used for sqrt() function in python ? a. random b. math c. string d. none of these
3	Suppose t = (1, 2, 4, 3), which of the following is incorrect? a) print(t[3]) b) t[3] = 45 c) print(max(t)) d) print(len(t))
4	Read the code shown below carefully and pick out the keys? d = {"john":40, "peter":45} a) "john", 40, 45, and "peter" b) "john" and "peter" c) 40 and 45 d) d = (40:"john", 45:"peter")
5	Suppose d = {"john":40, "peter":45}, to delete the entry for "john" what command do we use a) d.delete("john":40) b) d.delete("john") c) del d["john"]. d) del d("john":40)
6	What data type is the object below ?



	<p>L = [1, 23, 'hello', 1]</p> <p>a) list b) dictionary c) array d) tuple</p>
7	<p>To add a new element to a list we use which command ?</p> <p>a) list1.add(5) b) list1.append(5) c) list1.addLast(5) d) list1.addEnd(5)</p>
8	<p>Rohan said some abusive words for Shyam in the class. This a type of cyber bullying.</p> <p>(a) True (b) False</p>
9	<p>What can happen when you give your personal data (email, address, photos you post...) in exchange for free apps and services?</p> <p>a) Nothing can happen. Your data is not allowed to be passed on to anyone b) It isn't really used, it's just compulsory to ask for that information c) When giving your email you're automatically entered in a lottery where you can win something d) Everything you do online is of value and is used by companies looking to target their advertising</p>
10	<p>What is the name of the IT Law that India is having in the Indian legislature ?</p> <p>a. India's Technology (IT) Act, 2000 b. India's Digital Information Technology (DIT) Act, 2000 c. India's Information Technology (IT) Act, 2000 d. The Technology Act, 2008</p>
11	<p>Assertion (A): The digital footprint is created automatically when you work on internet and providing data in any form. Reason (R) : The active digital footprint is created unintentionally without the user's consents. Choose the correct answer:</p> <p>a) Both A and R are true and R is correct explanation of A b) Both A and R are true and R is not correct explanation of A c) A is true but R is false. d) A is false but R is True</p>
12	<p>Which of the following is a better way to dispose off the e-waste ?</p> <p>a. Donating Your Outdated Technology b. Sell Off Your Outdated Technology c. Give Your Electronic Waste to a Certified E-Waste Recycler d. All of these</p>
13	<p>Given a list L1 = [3,4,5,25,22,[2,1,3],55] What will be the output of the following statement: L2[: :-2]</p>



	<ul style="list-style-type: none">a. [55,22,5,3]b. [3,5,22,55]c. [4,25,55]d. None of these
14	Any information created by us that exists in digital form is <ul style="list-style-type: none">a. digital footprintb. internet footprintc. cyber footprintd. web footprint
15	Using someone's twitter handle to post something will be termed as <ul style="list-style-type: none">a. fraudb. online stealingc. identity theftd. phishing
16	Which one of the following is the default extension of python file ? <ul style="list-style-type: none">a. .exeb. .pyc. .docd. .p
17	You can repeat the elements of the tuple using which operator ? <ul style="list-style-type: none">a. **b. +c. *d. //
18	Which of the following is not a cyber crime ? <ul style="list-style-type: none">a. Installing antivirus software in your systemb. Hacking of personal information from someone's accountc. Identity theftd. online scam
19	Keys in a dictionary are mutable. <ul style="list-style-type: none">a. Trueb. False
20	How can you access the elements of a dictionary ? <ul style="list-style-type: none">a. By using keysb. By using indexc. Both a and bd. By using positional value

SECTION –B

This section consists of 20 questions(21 to 40).

Attempt any 15 questions from this section. Choose the best possible option.

21	Sonia found that her picture posted in a social networking site has been merged with an unknown person and published. What should she do ? <ul style="list-style-type: none">a. Ignore the instance
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	<ul style="list-style-type: none">b. Report it to the cyber cellc. Try to delete the postd. Enjoy the instance
22	Feasible method to manage e-waste is/ are <ul style="list-style-type: none">a. Reducingb. Reusingc. Recyclingd. All of these
23	Which of the following is not a protection against malwares ? <ul style="list-style-type: none">a. Antivirusb. AVGc. Visiting authentic sitesd. Removing unused files
24	Online posting of rumours, giving threats online, posting the victim's personal information, comments aimed to publicly ridicule a victim is termed as _____ <ul style="list-style-type: none">a. Hackingb. Cyber bullyingc. Crackingd. Phishing
25	What is the output of following code : L = [5, 8] print (L * 3) <ul style="list-style-type: none">a. Syntax errorb. [5,8,5,8,5,8]c. [15,24]d. [8,11]
26	Which of the following is not a function of dictionary : <ul style="list-style-type: none">a. items()b. values()c. keys()d. index()
27	Which keyword is used to import a module in a program ? <ul style="list-style-type: none">a. impb. importc. defd. all of these
28	In order to store values in terms of key and value we use what core data type (A) list (B) tuple (C) class (D) dictionary
29	(A) d.delete("john":40)



	<p>(B) <code>d.delete("john")</code></p> <p>(C) <code>del d["john"]</code></p> <p>(D) <code>del d("john":40)</code></p>
30	<p>Which of the following is correct with respect to above Python code?</p> <pre>d = {"a":3, "b": 7} print(list(d.keys()))</pre> <p>(A) a dictionary d is created.</p> <p>(B) a and b are the keys of dictionary d.</p> <p>(C) 3 and 7 are the values of dictionary d</p> <p>(D) All of the above.</p>
31	<p>Which one of the following is correct?</p> <p>A. In python, a dictionary can have two same keys with different values.</p> <p>B. In python, a dictionary can have two same values with different keys</p> <p>C. In python, a dictionary can have two same keys or same values but cannot have two same key-value pair</p> <p>D. In python, a dictionary can neither have two same keys nor two same values.</p>
32	<p>Which of the following will give error?</p> <p>Suppose <code>dict1={"a":1,"b":2,"c":3}</code></p> <p>A. <code>print(len(dict1))</code></p> <p>B. <code>print(dict1.get("b"))</code></p> <p>C. <code>dict1["a"]=5</code></p> <p>D. None of these.</p>
33	<p>Keys of the dictionary must be :</p> <p>A. Similar</p> <p>B. Unique</p> <p>C. Can be similar or unique</p> <p>D. All of these</p>
34	<p>What will be the output of the following Python code?</p> <pre>a={1:"A",2:"B",3:"C"} a.clear() print(a)</pre> <p>A. None</p> <p>B. { None:None, None:None, None:None }</p> <p>C. { 1:None, 2:None, 3:None }</p> <p>D. { }</p>



35	The _____ keyword is used to import other modules into a Python script. A. find B. None C. import D. import as
36	Which of the following python built-in module you can use for mathematical tasks. A. random B. math C. import D. statistics
37	Which of the following is not a math module function? A. tan(x) B. sin(x) C. cos(x) D. mean(x)
38	Assertion(A): Dictionaries are enclosed by curly braces { } Reason(R): The key-value pairs are separated by commas (,) A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true
39	Assertion(A): The pop() method can be used to delete elements from a dictionary. Reason(R): The pop() method deletes the key-value pair and returns the value of deleted element A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.
40	Assertion(A): clear() method removes all elements from the dictionary Reason(R): len() function cannot be used to find the length of a dictionary. A. Both A and R are true and R is the correct explanation of A. B. Both A and R are true but R is not the correct explanation of A. C. A is true but R is false. D. A is false but R is true.



SECTION –C	
Case Study Based Questions	
This section consists of 06 questions(41 to 46). Attempt any 5 questions from this section. Choose the best possible option.	
	Suppose a list is given as Example = ['h','e','l','l','o'] Answer the questions based on the list
41	what is len(list Example)? a) 5 b) 4 c) None d) Error
42	What is Example[-1] ? a) Error b) None c) 'o' d) 'h'
43	Which function can be used to add one more element at the end of the list ? a) append() b) insert() c) add() d) insertinto()
44	What will be the output for the following: Example[2: : 2] a) ['h','e','l','l','o'] b) ['e','l','l','o'] c) ['l','l','o'] d) ['l','o']
45	Which function will delete all the elements of the list ? a) del b) drop() c) clear() d) remove()



46

What will be the output for the following code:

```
print(Example+"2")
```

- a. ['h','e','l','l','o','2']
- b. ['h','e','l','l','o',2]
- c. ['h','e','l','l','o','h','e','l','l','o']
- d. None of these

---XXX---