DATE: 5.12.2020   **CLASS: XII-B3, J1**
Time: 3 Hours   **M. Marks: 70**

General Instructions:

1. This question paper contains two parts A and B. Each part is compulsory.

2. Both Part A and Part B have choices.

3. Part-A has 2 sections:

   a. Section – I is short answer questions, to be answered in one word or one line.

   b. Section– II has two case studies questions. Each case study has 4 case-based

sub-parts. An examinee is to attempt any 4 out of the 5 subparts.

4. Part - B is Descriptive Paper.
5. Part- B has three sections
a. Section-I is short answer questions of 2 marks each in which two question have internal options.
b. Section-II is long answer questions of 3 marks each in which two questions have internal options.
c. Section-III is very long answer questions of 5 marks each in which one question has internal option.
6. All programming questions are to be answered using Python Language only

Q. No.	Part-A	Marks
	SECTION - I	
	Select the most appropriate option out of the options given for each question. Attempt any 15 questions from question no 1 to 21.	
1.	Out of the following find those identifiers, which can not be used for naming a variable / functions in a Python program a. Days*Rent b. FOR c. A_price d. 2Clients	1
2.	Given the lists L=[1,3,6,82,5,7,11,92], write the output of print(L[3:],L[:3])	1
3.	Write the type of tokens from the following: a. for b. Name	1

4.	Give the output of the following code:
	``python
	t = ('a','b','c','d')
	print(max(t))
	print(min(t))
	``
		1

5.	Write a statement in Python to declare a dictionary whose keys are 10, 11, 12 and values are October, November and December respectively.	1
6.	The tree topology is said to be a combination of _____ and _____ topologies	1
7.	Write any two aggregate functions used in SQL.	1
8.	Name the transmission media best suitable for connecting to different geographical location n from various states.	1
9.	Rearrange the following terms in the decreasing order of data transfer rates. Gbps, Mbps, Tbps, Kbps, bps	1
10.	Write the expanded form of CDMA.	1
11.	Which of the following is a DML command? a. SELECT b. ALTER. c. CREATE. d. None of the above	1
12.	Identify the type of the following: A="777" a. String b. Tuple c. List d. Integer	1
13.	Give the output for the following: bts="i like my book" print(bts[5:10])	1
14.	What is the default value for a functions that does not return any value explicitly? a. None. b. int c. double d. null	1
15.	What is stand alone computer? a) A computer that is not connected to a network b) A computer that is being used as a server c) A computer that does not have any peripherals attached to it d) A computer that is used by only one person	1
16.	What is the value of print(abs(-3.22))?	1
17.	In which topology a defect in a main cable affect all the system in the network?	1
18.	Write the full-form of http?	1
19.	Write the output of the following. Name='This is a string' print(Name[5:12:2])	1
20.	Each and every system act as a _____ and also _____ in P2P network.	1

21.	Write the output of the following: T=(2,3,4,67,45) T=40, print(sum(T),max(T))	1

Section-II

Both the Case study based questions are compulsory. Attempt any 4 sub parts from each question. Each question carries 1 mark

22.	A supermarket TXT is found to use a SQL database, so as a head cashier of the market, Mr. Vihaan has decided that **.** **Name of the table: SOFTDRINK** **Name of the database: TXT** **The attribute SOFTDRINK** **drinkcode – numeric** **dname – varchar- character of size 40** **price – numeric** **calories – numeric** **TABLE : SOFTDRINK** | DRINKCODE	DNAME	PRICE	CALORIES | |---|---|---|---| | 101 | Lime and lemon | 20.00 | 120 | | 102 | Apple drink | 18.00 | 120 | | 103 | Nature nectar | 15.00 | 115 | | 104 | Green Mango | 15.00 | 140 | | 105 | Mango shake | 20.00 | 135 | | 106 | Orange shot | 12.00 | 150 |	

TABLE : SOFTDRINK

DRINKCODE	DNAME	PRICE	CALORIES
101	Lime and lemon	20.00	120
102	Apple drink	18.00	120
103	Nature nectar	15.00	115
104	Green Mango	15.00	140
105	Mango shake	20.00	135
106	Orange shot	12.00	150

	a) write the name of the table of the above.	**1**
	b) write degree of the above table.	**1**
	c) which field doesnot contain only numeic on softdrink table.	**1**
	d) Maximum number of characters entered in dname field is _____.	**1**
	e) How many number of records are there in the above table?	**1**

23	Ranjan Kumar of class 12 is writing a program to create a CSV file "file3.csv" which will contain user name and password for some entries. He has written the following code. As a programmer, help him to successfully execute the given task.
	
	``
	import _____ # line 1
	with _____("file3.csv",'w',newline="") as fl: # line 2
	     Writer.csv.write(csvfille, delimiter="")
	      whileTrue:
	        roll=_____(input('rollno:')) # line 3
	
	        name=input('Name:')
	        total=int(input('Total:'))
	     data=_____#Line4
	        Writer.writerow(_____)#Line5
	``	

	ch=input('Doyouwanttocontinue:(y/n)') ifch=='n': break	
	a)Whatmodulehehastoimport?[#Line1]	**1**
	b)Which function is used to open CSV file? [#Line2]	**1**
	c) to get the input for roll number [#Line3]	**1**
	d)Ranjan Kumarwishestoappendalltheinputdataintoalist.[#Line4]	**1**
	e)Whatisthestatementrequiredtowritethedataontoacsvfile.[#Line5]	**1**
	PART B	
	Section-I	

24.	Given str1 = 'Hello' and str2 = 'Bye', what is the output produced by the following expressions?
	a. 'Let us all Say' + str1
	b. 3*str1 + 4*str2
	
	(OR)
	
	Rewrite the following code after removing all syntax errors.Underline where the
	corrections made.
	Num=20
	for V in range(0,Num,0)
	   if Num%2=0:
	      print(V*5)
	  Elif V%3==0:
	     print(V+6)
	  else
	   print(V)
		2

25	ExpandthetermsnamelyFTP,GSM,WAN,WWW	2
26	Predict the output of the following: def check(n1=1,n2=2): n1=n1+n2 n2=n2+1 print(n1,n2) check() check(2,1)	2
27	Write any two commands for DML and DDL in SQL (Each two)	2
28	Explaintheuseofglobalkeywordusedinafunctionwiththehelpofasuitableexample	2
29	Underlineeachcorrectionaftercorrectingthecodegivenbelow: STRING = "WELCOME NOTE = "" for S in range[0,8]: print(STRING(S))	2

	print(S STRING)	
30	**Evaluatethefollowingexpressions:** a)6*3+4**2//5–8 b)10>5and7>12ornot18>3	2
31	Rewrite the following code fragment using for loop. a=10 while a> 3 : print(a) a= a-2	2

32	Write the output of the following:
	for i in [0,1,2,3,4]:
	  if(i>=2):
	      break
	  print(i)
	print("end")
		2

33	Distinguishcircuitswitchingandpacketswitching. Or DifferentiatebetweenVirusesandWormsincontextofnetworkinganddatacommunicationthreats	2
	SECTION - II	

34	Whatwillbetheoutputoffollowingcode:
	defAlter(x,y=10,z=20):
	      sum=x+y+z
	      print(sum)
	Alter(10,20,30)
	Alter(20,30)
	Alter(100)
		3

35.	Write a function in python to count the number of lines in a text file "poem.txt" which is starting with an alphabet 'M' or 'm'. Or A text file contains alphanumeric text (say "csbook.txt") .Write a program that reads the text file and prints only the numbers or digits from the file.	3
36.	Write the outputs of the SQL queries (i) to (iii) based on Book and issue tables.	3

Table : Book

Book_id	Book_name	Author_name	Publisher	Price	Type	Quantity
C0001	Fast Cook	Lata Kapoor	EPB	355	Cookery	5
F0001	The Tears	William Hopkins	First Publi.	650	Fiction	20
T0001	My First c++	Brain & Brooke	FPB	350	Text	10
T0002	C++ Brain works	A.W. Rossaine	TDH	350	Text	15
F0002	Thunderbolts	Anna Roberts	First Publ.	750	Fiction	50

Table : issued

Book_Id	Quantity Issued
T0001	4
C0001	5
F0001	2

i.Select Count(*) from Book;   ii.Select Max(Price) from book where quantity >=15;

iii.Select book_name, author_name from book where publisher='FPB';

37.	Write a function in python, Push(Employee) and Pop(Employee) to add a new Employee and delete a Employee from a List of Employee Names, considering them to act as push and pop operations of the Stack data structure. OR Write a function in python, Push(Employee) and Show(Employee) to add a new Employee and display Employee names from a List of Employee, considering them to act as push and show operations of the Stack data structure.	3
	SECTION-III	
38	WorkalotConsultantsaresettingupasecurednetworkfortheirofficecampusat4Gurgaonfortheirday-to-dayofficeandweb-basedactivities.Theyareplanningtohaveconnectivitybetween3buildingsandtheheadofficesituatedinMumbai.Answerthequestions(i)to(v)aftergoingthroughthebuildingpositionsinthecampusandotherdetails,whicharegivenbelow:	5

Distances between various buildings:

Green to Red	110 m
Green to Blue	45 m

Blue to Red	65 m
Gurgaon Campus to HO	1760 KM

Number of Computers:

Green	32
Red	150
Blue	45
HO	10

i. Suggest the most suitable place to house the server of this organization. Also give a reason to justify your suggested location.

ii. Suggest a suitable device to secure the data moving in and out of the established network

iii. Suggest a connection medium to connect Gurgaon office with HO.

iv. Suggest the placement of the following devices with justification: Switch & Repeater

v. The organization is planning to provide a high speed link with its head office situated in MUMBAI using a wired connection. Which of the following cables will be most suitable for this job?

a. Optical Fibre b. Co-axial cable c. Ethernet Cable

39.

Write the SQL queries for (a) to (f).

Table : Book

Book_id	Book_name	Author_name	Publisher	Price	Type	Quantity
C0001	Fast Cook	Lata Kapoor	EPB	355	Cookery	5
F0001	The Tears	William Hopkins	First Publi.	650	Fiction	20
T0001	My First c++	Brain & Brooke	FPB	350	Text	10
T0002	C++ Brain works	A.W. Rossaine	TDH	350	Text	15
F0002	Thunderbolts	Anna Roberts	First Publ.	750	Fiction	50

Table : issued

Book_Id	Quantity Issued
T0001	4
C0001	5
F0001	2

(a) To show book name, Author name and price of books of TDH Publisher.

(b) To list the name of the books of text type

(c) To Display author name and price of the books in descending order of their

Quantity.

(d) To increase the price of all books of EPB publishers by 50.

(f) To insert a new row in the table issued having the following data.

F0003, 1

5

40.

Write a Python script to store a given dictionary entries containing details of students in a binary file "file.dat".

	(OR) Consider the following CSV file (emp.csv): 1,Peter,3500 2,Scott,4000 3,Harry,5000 4,Michael,2500 5,Sam,4200 Write Python function DISPEMP() to read the content of file emp.csv and display only those records where salary is 4000 or above.	5

PRACTICAL: (2X 5)

1. Write a program to remove all the lines that contain the character 'a' in that file and write
   other lines into file.

<mark>content of the an. text</mark>

welcome to Aditya

I am learning Python

this is my school

2.

create a binary file with roll number , name and marks . input a roll number and update
the marks.