Series ISWK P1

083/1/1

Code No.

SET-1

Roll No. | | | | | | | |

Candidates must write the Code on the title page of the answer-book.

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.

COMPUTER SCIENCE

Time allowed: 3 hours Maximum Marks: 70

Qn No.	Part A	Marks Allocated
	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	Which of the following is an assignment operator? i. **= ii. =+ iii. != iv. %	1
2	Write the type of tokens from the following. i. + ii. for	1
3	Name the python library module which is to be imported to invoke the following functions. i. fabs()	1

	ii. randrange()	
4	Rewrite the following python code after removing all syntax error(s). Underline the corrections done. def circlearea() r=input('Enter the radius:') a=pi*math.pow(r,2) print("AREA="+a)	1
5	Find the output of the following code: T1=(10,30,15,9,25,12) s=1 t=100 for k in range(s, len(tup)): t=t+T1[k] print(T1[k],"$",t) print(t)	1
6	Write the Full Form of FIFO.	1
7	Identify the odd one out in Python from the following. a) IF b) else c) while d) elif	1
8	Expand: HTML	1
9	Write any two date and time functions.	1
10	Write a statement in Python to create a dictionary ICC with "INDIA", "ENGLAND", "AUSTRALIA" as keys and "VIRAT", "MORGAN" and "FINCH" as values.	1
11	What do you mean by throughput?	1
12	Given the tuple SalaryList = (5025,4985,3990,4150,3735,6390,1750) write the output of the following code: print(SalaryList[4:]) print(MarkList[-5:])	1
13	What is the output of the following statement: SELECT NULL + 20, 30 + 0;	1
14	Find the valid identifier(s) from the following a) Weight# b) ELSE c) for d) Cat1	1
15	What will be the output of the following code? Points= (12,5,10,8,7,3,15,2,20,2,5,12,10,8,7) print (Points.index(10))	1
16	Write any two string functions used in SQL with examples.	1
17	Which of the following is a DDL command? a) INSERT b) DELETE c) DELETE d) DROP	1
18	Define: Cybercrime.	1
19	What is the date format in MySQL?	1
20	What will be the output of the following code? >>>math.ceil(11.85) >>>math.sqrt(225)	1
21	Expand: XML	1

	Section-II **Both the Case study based questions are compulsory.**	
22	Consider the following table and answer the questions given below: **Table : EMPLOYEE** **ENO | NAME | DOJ | DOB | GENDER | DCODE** 1001 | George K | 2013-09-02 | 1991-09-01 | MALE | D01 1002 | Ryma Sen | 2012-12-11 | 1990-12-15 | FEMALE | D03 1003 | Mohitesh | 2013-02-03 | 1987-09-04 | MALE | D05 1007 | Anil Jha | 2014-01-17 | 1984-10-19 | MALE | D04 1004 | Manila Sahai | 2012-12-09 | 1986-11-14 | FEMALE | D01 1005 | R SAHAY | 2013-11-18 | 1987-03-31 | MALE | D02 1006 | Jaya Priya | 2014-06-09 | 1985-06-23 | FEMALE | D05	4
	Identify candidate keys from the above table.	
	What is the degree and cardinality of the above table after adding 3 rows and removing 1 column?	
	Insert a record in the above table for ENO : 1015, NAME : JOHNSON and DOJ : 22/May/2005	
	Remove the column DCODE from the table.	
	Find output of the following: SELECT NAME, GENDER FROM EMPLOYEE WHERE DCODE IN ('D01','D02','D05') AND DOB LIKE "%-09-%"	

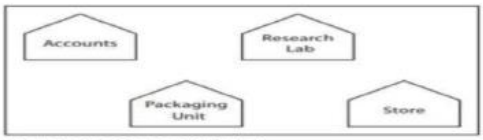
23	import _____ #Line1
	F=open("cust.csv",_____) #Line2 to open file for read operation
	dt = writer(f)
	while True:
	sno= int(input("Enter Serial No:"))
	cust_name = input("Enter customer name:")
	city = input("Enter city:")
	amt = int(input("Enter amount:"))
	dt.writerow([sno, cust_name, city, amt])
	print("Record has been added.")
	print("Want to add more record?Type YES!!!")
	ch = input()
	ch = ch.upper()
	if ch=="YES":
	print("**********")
	else:
	break
	F._____ #Line3 to close the file
	record = list()
	with open('cust.csv', _____) as f: #Line4 to open file for read operation
	data = csv._____(f) #Line5 to setup reader operation
	for row in data:
	record.append(row)
		4

	Fill in the blank in Line1	
	Fill in the blank in Line2	
	Fill in the blank in Line3	

	Fill in the blank in Line4	
	Fill in the blank in Line5	
	Part – B	
	Section – I	
24	What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the minimum values that can be assigned to each of the variables Low and High import random Num = [5,10,15,20,25,30,35,40,45,50] Low=random.randint(2,4) High=random.randint(Low,6) For J in range (Low, High+1): print(Num[J],"*") (i) 20*25*30* (ii) 20*25*30*35* (iii) 25*30*35*40* (iv) 25*30*35*40*45*	2
25	Explain about domain and views in dbms.	2
26	Expand the following terms: a. POP b. PPP c. GPRS d. WAN	2
27	Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code. Num = input("Number:") Sum = 0 for i in range(10,Num,3) Sum+=i if i%2=0: print (i*2) Else: print (i*3 print Sum)	2
28	Write a short note on worms and phishing.	2
29	What is the use of rowcount variable in python mysql connectivity.	2

30	Find and write the output of the following Python code:
	def makenew(mystr):
	newstr = ""
	count = 0
	for i in mystr:
	if count%2 != 0:
	newstr = newstr + str(count)
	else:
	if i.islower():
	newstr = newstr + i.upper()
	else:
	newstr = newstr + i
	count += 1
	newstr = newstr + mystr[:1]
	print("The new string is:", newstr)
		2

<table>
<tr><td></td><td>makenew("sTUdeNT")</td><td></td></tr>
<tr><td>31</td><td>Explain about function with default argument in python.</td><td>2</td></tr>
<tr><td>32</td><td>Evaluate the following expressions:
a) 20 * 5 ** 2 + (10 – 3)
b) 70 > 25 and 20 > 45 or 30 < 50</td><td>2</td></tr>
<tr><td>33</td><td>Explain the check constraint in mysql with example.</td><td>2</td></tr>
<tr><td></td><td>Section – II</td><td></td></tr>
<tr><td>34</td><td>rite outputs for SQL queries (i) to (iii), which are based on the following tables, CUSTOMERS and PURCHASES:
CUSTOMERS
<table>
<tr><td>CNO</td><td>CNAME</td><td>CITY</td></tr>
<tr><td>C1</td><td>SANYAM</td><td>DELHI</td></tr>
<tr><td>C2</td><td>SHRUTI</td><td>DELHI</td></tr>
<tr><td>C3</td><td>MAHER</td><td>MUMBAI</td></tr>
<tr><td>C4</td><td>SAKSHI</td><td>CHENNAI</td></tr>
<tr><td>C5</td><td>RITESH</td><td>INDORE</td></tr>
<tr><td>C6</td><td>RAHUL</td><td>DELHI</td></tr>
<tr><td>C7</td><td>AMEER</td><td>CHENNAI</td></tr>
<tr><td>C8</td><td>MINAKSHI</td><td>BANGALORE</td></tr>
<tr><td>C9</td><td>ANSHUL</td><td>MUMBAI</td></tr>
</table>
PURCHASES
<table>
<tr><td>SNO</td><td>QTY</td><td>PUR_DATE</td><td>CNO</td></tr>
<tr><td>S1</td><td>15</td><td>2018-11-25</td><td>C2</td></tr>
<tr><td>S2</td><td>10</td><td>2018-11-10</td><td>C1</td></tr>
<tr><td>S3</td><td>12</td><td>2018-11-10</td><td>C4</td></tr>
<tr><td>S4</td><td>7</td><td>1019-01-12</td><td>C7</td></tr>
<tr><td>S5</td><td>11</td><td>2019-02-12</td><td>C2</td></tr>
<tr><td>S6</td><td>10</td><td>2018-10-12</td><td>C6</td></tr>
<tr><td>S7</td><td>5</td><td>2019-05-09</td><td>C8</td></tr>
<tr><td>S8</td><td>20</td><td>2019-05-09</td><td>C3</td></tr>
<tr><td>S9</td><td>8</td><td>2018-05-09</td><td>C9</td></tr>
<tr><td>S10</td><td>15</td><td>2018-11-12</td><td>C5</td></tr>
<tr><td>S11</td><td>6</td><td>2018-08-04</td><td>C7</td></tr>
</table>
i)SELECT MAX(CITY) FROM CUSTOMERS;
ii) SELECT MIN(PUR_DATE) FROM PURCHASES;
iii) SELECT CNAME, CITY, PUR_DATE FROM CUSTOMERS, PURCHASES WHERE CUSTOMERS.CNO=PURCHASE.CNO AND CITY IN (‘MUMBAI’, “CHENNAI”);</td><td>3</td></tr>
<tr><td>35</td><td>Write a function in Python DELETEQ(Array), where Array is a Queue implemented by a list of numbers. The function returns the value deleted from the Queue.</td><td>3</td></tr>
<tr><td>36</td><td>Write a function CountAM() in Python, which should read each character of a text file BOOK.TXT, should count and display the occurrence of vowels (A or M - including small cases too).</td><td>3</td></tr>
<tr><td>37</td><td>Write a python method/function SumEven(M, N) to find and display the sum of all even numbers which are between the range M and N.</td><td>3</td></tr>
</table>

	Section – III	
38	Riana Medicos Centre has set up its new centre in Dubai. It has four buildings as shown in the diagram given below:  Distances between various buildings are as follows: Accounts to Research Lab 55 m Accounts to Store 150 m Store to Packaging Unit 160 m Packaging Unit to Research Lab 60 m Accounts to Packaging Unit 125 m Store to Research Lab 180 m Number of computers: Accounts 25 Research Lab 100 Store 15 Packaging Unit 60 As a network expert, provide the best possible answer for the following queries: (i) Suggest the type of network established between the buildings. (ii) Suggest the most suitable place (i.e., building) to house the server of this organization. (iii) Suggest the placement of the following devices with justification: (a) Repeater (b) Hub/Switch (iv) Suggest a system (hardware/software) to prevent unauthorized access to or from the network. Also suggest a suitable cable layout for above setup.	5
39	Write SQL commands for the following on the basis of given table library: **Table : Library** No | Title | Author | Type | Pub | Qty | Price 1 | Data structure | Lipschutz | Ds | Mcgraw | 4 | 217 2 | Computer studies | French | Fnd | Galgoria | 2 | 75 3 | Advanced pascal | Schildt | Prog | Mcgraw | 4 | 350 4 | Dbms dummies | Palmer | Dbms | Pustakm | 5 | 130 5 | Mastering c++ | Gurewich | Prog | Bpb | 3 | 295 6 | Guide network | Freed | Net | Zpress | 3 | 200 7 | Mastering foxpro | Seigal | Dbms | Bpb | 2 | 135 8 | Dos guide | Norton | Os | Phi | 3 | 175 9 | Basic for beginners | Morton | Prog | Bpb | 3 | 40 10 | Mastering window | cowart | os | Bpb | 1 | 225 i) Select all the prog type published by BPB. ii) Display a list all books with price more than 130 and sorted by qty. iii) Display all the books sorted by price in ascending order. iv) Display the Book type and total price of all the books in each book type. v) Display the details of books which consists of “Guide”.	5
40	A binary file “Student.dat” has structure (rollno, sname, sclass, aggregate). Write a function CountAgg() in Python that would read contents of the file “Students.dat” and display the details of those students whose aggregate mark is more than 90. Also display number of students whose aggregate mark is more than 90.	5

All the Best

I.VERY SHORT ANSWER: - 15x1=15