

INFORMATICS PRACTICES (065)**SAMPLE PAPER**

Session: 2022-23

Class: XI

Time: 3 HOURS

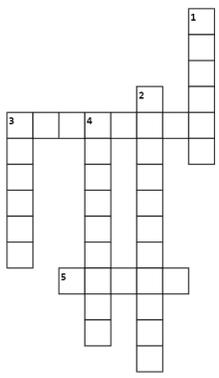
M.M.: 70

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A has 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
8. All programming questions are to be answered using Python Language only.

SECTION A		
1	Identify the interface that allows user to run program or give instructions to the computer in the form of icons, menus and other visual options. (i) Graphical User Interface (ii) Character User Interface (iii) Touch Based Interface (iv) Voice Based Interface	1
2	1074 ZB = _____ ? (i) 1 YB 50ZB (ii) 1EB 50ZB (iii) 1YB 50 PB (iv) 1PB 50 TB	1
3	_____ involves fetching data from storage devices for its processing. (i) Data Storage (ii) Data capturing (iii) Data Retrieval (iv) Data Deletion	1
4	Nimish has joined an organization which uses only Open Source Software. Help him to identify which software he cannot use in his organization. (i) Python (ii) Libre Office (iii) JAVA (iv) Tally	1
5	Identify the incorrect identifier from the following: (i) none (ii) None (iii) nan (iv) NaN	1
6	Shilpi is teaching Arithmetic operators in Python. One of her student wrote the following statement: $'7'+5$ Predict the output of the above mentioned statement: (i) 75 (ii) 12 (iii) TypeError (iv) 77777	1
7	Identify the correct command which will produce the output given below: $[0,-2,-4,-6,-8]$ (i) list(range(-2,-8,-2)) (ii) list(range(0,-8,-2)) (iii) list(range(-2,-10,-2)) (iv) list(range(0,-10,-2))	1
8	Consider the attributes (RollNumber, SName, SDateofBirth, GUID) of the table Student. According to you, which of the following option is the correct representation of the table after executing the following query:	1

	<p>categories of MYSQL helps him in doing the same:</p> <p>(i) DML (Data Manipulation Language) (ii) DDL (Data Definition Language) (iii) DCL (Data Control Language) (iv) TCL (Transaction Control Language)</p>	
15	<p>Ms. Ruchi has developed a web application using MySQL and Python. To run this application online, she availed a pre-configured Apache server from cloud having MySQL and Python pre-installed. Which type of cloud computing model she has used:</p> <p>(i) IaaS (ii) PaaS (iii) SaaS (iv) DaaS</p>	1
16	<p>“Imagine what if our bulbs, fans and refrigerator also become a part of LAN or Internet. Think about of the advantages and tasks that can be accomplished if all these devices with smart connectivity features are able to communicate amongst themselves and we are also able to communicate with them using computers or smart phones.” In your opinion, which feature are we talking about in the above context?</p> <p>(i) AR (ii) VR (iii) WoT (iv) IoT</p>	1
<p>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as :</p> <p>i) Both A and R are true and R is the correct explanation for A ii) Both A and R are true and R is not the correct explanation for A iii) A is true but R is False iv) A is false but R is true</p>		
17	<p>Assertion: Comments are executed by interpreter. Reasoning: Comments are used to add a remark or a note in the source code.</p>	1
18	<p>Assertion: A database can have only one table in MySQL. Reasoning: If a piece of data is stored in two places in the databases, then storage space is wasted.</p>	1
SECTION B		
19	<p>Deleting digitally stored data means changing the details of data at bit level, which can be very time consuming. Therefore, when any data is simply deleted, its address entry is marked as free, and that much space is shown as empty to the user, without actually deleting the data. In case data gets deleted accidentally or corrupted, there arises a need to recover the data. Recovery of the data is possible only if the contents/memory space marked as deleted have not been overwritten by some other data.</p> <p>i) Can you recover the data once deleted? Justify ii) Give any one security threat involved when we throw away electronic gadgets that are non-functional.</p> <p style="text-align: center;">Or</p> <p>Write down the type of memory needed to do the following:</p> <p>i) To execute the program ii) To store the instructions which cannot be overwritten</p>	2
20	<p>Predict the output of the following:</p> <pre>w,x,y,z = 5,6,7,8 w,x,y,z = w*w, w*x, x*y, y*z print(w, x, y, z)</pre>	2
21	<p>Find errors in the following code fragment.(Rewrite the program underlining the correction)</p> <pre>x= int(input("Enter value of x:")) for in range [0,10]: if x=y: print(x + y) else:</pre>	2

	value pair to set up a dictionary. Form a dictionary to create at least 5 records of World Heritage Sites.																	
28	<p>i) Give any two examples of RDBMS software.</p> <p>ii) Write MySQL command, which is used to open an already existing database "Alumni".</p> <p>iii) Ms. Mansi has created a database, a month ago, but he is not sure whether the database still exists or not. Write the command to help her.</p>	3																
29	<p>Suppose there are five students in a class each having unique roll number. Students have been given an option to choose only one of the skill based subjects. The class representative has prepared a Relation 'Skill_Subjects_Preferences' with Roll_No as Primary Key as shown below:</p> <p style="text-align: center;">Table: Skill_Subjects_Preferences</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Roll_No</th> <th>Preference</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>Artificial Intelligence</td> </tr> <tr> <td>18</td> <td>Beauty and Wellness</td> </tr> <tr> <td>19</td> <td>Handicrafts</td> </tr> <tr> <td>19</td> <td>Design and Thinking</td> </tr> <tr> <td>20</td> <td>Information Technology</td> </tr> <tr> <td>21</td> <td>Null</td> </tr> <tr> <td>Null</td> <td>Marketing</td> </tr> </tbody> </table> <p>Answer the following:</p> <p>i) Roll number 21 is not interested in any of the skill based subject. Can a NULL value be assigned to that student's preference field? Justify.</p> <p>ii) Roll no 19 has given two preferences. Which property of RDBMS is violated here?</p> <p>iii) Marketing was not chosen by any student. Is it possible to have this tuple in the Skill_Subjects_Preferences relation? Justify.</p> <p style="text-align: center;">Or</p> <p>Solve the crossword given below:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>Across</p> <p>3. It is a collection of tables</p> <p>5. It is a row in a relation</p> <p>Down</p> <p>1. It is the number of attributes in a relation</p> <p>2. It is the number of rows in a relation</p> <p>3. It is a set of values from which an attribute can take a value in each row</p> <p>4. It is a column in a relation</p> </div> </div>	Roll_No	Preference	15	Artificial Intelligence	18	Beauty and Wellness	19	Handicrafts	19	Design and Thinking	20	Information Technology	21	Null	Null	Marketing	3
Roll_No	Preference																	
15	Artificial Intelligence																	
18	Beauty and Wellness																	
19	Handicrafts																	
19	Design and Thinking																	
20	Information Technology																	
21	Null																	
Null	Marketing																	
30	<p>What is Grid Computing? Explain its two types.</p> <p style="text-align: center;">Or</p> <p>i) Name any two areas where the concept of block chain technology can be useful.</p> <p>ii) Differentiate between Virtual Reality and Augmented Reality.</p>	3																
SECTION D																		

31	<p>The record of salesman (Name, Item Sold, sale of three quarters and Commission) is stored in the following list: Sale=[‘Amit’, ‘Laptop’, [35000,42000,85000],20000]</p> <p>Write Python statements to retrieve the following information from the list Sale:</p> <ol style="list-style-type: none"> Print the sale of 2nd Quarter. Add 56000 as sale of 4th quarter. Change value of product from Laptop to Tablet Delete Commission from the list Print minimum sale <p style="text-align: center;">Or</p> <p>Consider the following dictionary: states={‘D’: ‘Delhi’, ‘K’: ‘Kerala’, ‘T’: ‘Tamil Nadu’, ‘B’: ‘Bihar’}</p> <p>Write Python statements for the following:</p> <ol style="list-style-type: none"> To insert (‘M’: ‘Mumbai’) in the dictionary states. To return the value corresponding to the key ‘T’ To return the length of the dictionary states. To delete the item from the dictionary corresponding to the key ‘K’ To delete the dictionary ‘states’ 	5																									
32	<p>Consider the table ‘Teacher_Details’ given below and write suitable SQL queries of the following:</p> <p style="text-align: center;">Table: Teacher_Details</p> <table border="1" data-bbox="378 915 1248 1089"> <thead> <tr> <th>T_ID</th> <th>T_Name</th> <th>T_DOJ</th> <th>T_Subject</th> <th>Num_of_Periods</th> </tr> </thead> <tbody> <tr> <td>1001</td> <td>Bharti</td> <td>2018-10-15</td> <td>Hindi</td> <td>27</td> </tr> <tr> <td>1002</td> <td>Pratima</td> <td>NULL</td> <td>NULL</td> <td>32</td> </tr> <tr> <td>1003</td> <td>Savitri</td> <td>2012-11-13</td> <td>Hindi</td> <td>29</td> </tr> <tr> <td>1004</td> <td>Aashna</td> <td>2020-02-24</td> <td>English</td> <td>28</td> </tr> </tbody> </table> <ol style="list-style-type: none"> Display the T_Name and Num_of_Periods by increasing the number of periods each by 1. Display T_Name of all those teachers whose date of joining is after 1st Jan 2019. Display T_ID and T_Name of all those teachers whose number of periods are in the range of 25 to 30. (both values included) Display the details of all those teachers who have not assigned any subject. Display the details of all those teachers whose subject is either Hindi or Science 	T_ID	T_Name	T_DOJ	T_Subject	Num_of_Periods	1001	Bharti	2018-10-15	Hindi	27	1002	Pratima	NULL	NULL	32	1003	Savitri	2012-11-13	Hindi	29	1004	Aashna	2020-02-24	English	28	5
T_ID	T_Name	T_DOJ	T_Subject	Num_of_Periods																							
1001	Bharti	2018-10-15	Hindi	27																							
1002	Pratima	NULL	NULL	32																							
1003	Savitri	2012-11-13	Hindi	29																							
1004	Aashna	2020-02-24	English	28																							
33	<ol style="list-style-type: none"> A relation ‘Order’ has the following attributes: (Order_No, Order_Name, Order_date, Order_Qty, Order_price) <ol style="list-style-type: none"> Write a command to insert a single row in the table mentioned above. (Assume appropriate values) Name the attribute which should be taken as the Primary Key? Ms. Nia wants to retrieve non duplicate values from the attribute ‘T_Subject’ from the table ‘Teacher_Details’ mentioned in Q32. Which clause should she use to retrieve the same? Is Null same as ‘ ’ (a blank space in quotes) in MySQL? Write reason to support your answer. % and _ are used with _____ operator in MySQL. <p style="text-align: center;">Or</p> <ol style="list-style-type: none"> Ms. Riya has written the following Query: Select * from Item like ‘Price>=50 and Price<=70’; but, she is not getting the desired result. 	5																									

- a) Help her in writing the correct query.
- b) Once corrected, suggest her the alternate way of writing the same query.

ii) Consider a relation 'Person' given below:

Table: Person

PersonId	FirstName	LastName	Age
101	Harry	John	30
102	Peter	Helson	25
103	Daniel	Gaba	20
104	Lava	Sen	40

Write the output of the following SQL commands:

- a) Select PersonId from Person where Age between 30 and 40;
- b) Select Age+2 from Person where FirstName='Daniel';
- c) Select PersonId, Age from Person where LastName in ('Helson', 'Gaba');
- d) Select FirstName, Age from Person where LastName='John' or LastName='Sen';

iii) _____ is known as membership operator in MySQL.

SECTION E

- 34
- i) Suppose there is a computer with RAM but no secondary storage. Why we are not able to install software on that computer?
 - ii) Why cache memory is considered crucial for microprocessor performance?
 - iii) Suman has discarded old, broken and malfunctioning Hard Disk without taking care to delete data. Is it harmful in respect of security concern? Justify your answer.

1+1+2

Or (option for part iii only)

Match the following:

(i)	The set of instructions, data or programs used to operate computers and execute specific tasks	(a)	Abacus
(ii)	It was a mechanical device capable of doing simple arithmetic calculations only	(b)	Software
(iii)	In second generation of computer vacuum tubes were replaced by _____.	(c)	Pascaline
(iv)	It's a mechanical calculator which does addition and subtraction of two numbers directly and multiplication and division through repeated addition or subtraction.	(d)	Transistors

- 35
- i) What will be the output of following program:

```
dict1 = {"Rollno":20, "Marks":65}
dict2 = {"Rollno":20, "Marks":65}
print(dict1 == dict2)
```
 - ii) Name different types of comments in Python.
 - iii) Predict the output of the following:

```
quota = ["sports", "pwd", "ews", "gen"]
Marks= [58,70,45,69]
for k in range(len(quota)):
    if quota[k]=="sports":
        Marks[k]+=2
    if quota[k]=="ews":
        Marks[k]+=5
```

1+1+2

	<p>print(Marks)</p> <p style="text-align: center;">Or (option for part iii only)</p> <p>Name the function for the following:</p> <ul style="list-style-type: none">i) To declare empty dictionary.ii) To append the key value pair of the dictionary passed as the argument to the key value pair of the given dictionary?	
--	---	--

INFORMATICS PRACTICES (065)

SAMPLE PAPER

Session: 2022-23

Class: XI

MARKING SCHEME

Time: 3 HOURS

M.M.: 70

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A has 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
8. All programming questions are to be answered using Python Language only.

SECTION A					
1	(i) Graphical User Interface (Understanding)			1	
2	(i) 1 YB 50ZB (Apply)			1	
3	(iii) Data Retrieval (Understanding)			1	
4	(iv) Tally (Apply)			1	
5	(ii) None (Understanding)			1	
6	(iii) TypeError (Apply)			1	
7	(iv) list(range(0,-10,-2)) (Analyse)			1	
8	(i) (Analyse)			1	
		RollNumber	SName	SDateofBirth	GUID
		1	Atharv	2003-05-15	12354899
		2	Sudha	2002-02-28	NULL
9	(ii) Describe (Apply)			1	
10	(i) Select Distinct (Understanding)			1	
11	(iii) It is used with SELECT statements as well as with INSERT statements (Analyse)			1	
12	(ii) 4,20 (Analyse)			1	
13	(ii) Alternate Key (Analyse)			1	
14	(i) DML (Data Manipulation Language) (Analyse)			1	
15	(ii) PaaS (Analyse)			1	
16	(iv) IoT (Analyse)			1	
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as :					
i. Both A and R are true and R is the correct explanation for A					
ii. Both A and R are true and R is not the correct explanation for A					
iii. A is true but R is False					
iv. A is false but R is true					
17	(iv) A is false but R is true (Analyse)			1	
18	(iv) A is false but R is true (Analyse)			1	
SECTION B					
19	i) YES, by Data Recovery. Data recovery is a process of retrieving deleted, corrupted and lost data from secondary storage devices.			1	
	ii) If these storage devices fall into the hands of mischief-mongers, they can easily				

	<p>recover data from such devices; this poses a threat to data confidentiality. (Apply)</p> <p style="text-align: center;">Or</p> <p>i) RAM (Apply) ii) ROM</p> <p>(or any other relevant answer)</p>	<p>1</p> <p>1</p> <p>1</p>
20	<p>25 30 42 56 (Apply)</p> <p>(½ mark to be awarded for each correct value)</p>	2
21	<p>x= int(input("Enter value of x:")) (Apply)</p> <p>for in range (0,10):</p> <p> if x==y:</p> <p> print(x + y)</p> <p> else: # indentation error</p> <p> print(x-y)</p> <p>(½ mark to be awarded for each correction)</p> <p>(or any other relevant code)</p>	2
22	<p>length=30 (Apply)</p> <p>(i) breadth=40</p> <p>(ii) area=length*breadth</p>	<p>½</p> <p>½</p> <p>1</p>
23	<p>Cardinality: 4 (Analysis)</p> <p>Degree: 3</p> <p style="text-align: center;">Or</p> <p>i) Data Security (Knowledge)</p> <p>ii) High Performance</p> <p>(Or any other relevant answer)</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>
24	<p>Create table TEAM (Create)</p> <p>(</p> <p>TeamID int(1) Primary Key,</p> <p>TeamName varchar(10),</p> <p>MatchDate date,</p> <p>TeamParticipants int(2)</p> <p>);</p> <p>(1 mark for the correct structure of the table)</p> <p>(1 mark for choosing the correct data types and constraint)</p>	2
25	<p>i) <u>Doc_name</u> (Apply)</p> <p>Sanjeev</p> <p>ii) <u>Doc_name</u></p> <p>Deepak</p>	<p>1</p> <p>1</p>
SECTION C		
26	<p>i) False (Evaluate)</p> <p>ii) True</p> <p>iii) False</p>	½
27	<p>i) 021 is an invalid token (Create)</p> <p>ii) dict1={}</p> <p>for i in range(5):</p> <p> site=int(input("Enter name of the site"))</p> <p> location=input("Enter the location of the site")</p> <p> dict1[site]=location</p> <p>print(dict1)</p>	<p>1</p> <p>½</p> <p>½</p> <p>½</p> <p>½</p>

	(or any other relevant program)	
28	<p>i) Oracle and MYSQL (Understanding) (½ mark to be awarded for each example)</p> <p>(or any other relevant example)</p> <p>ii) Use Alumni; iii) Show databases;</p>	<p>1</p> <p>1</p> <p>1</p>
29	<p>i) Yes, as preference is not holding any constraint. (Apply)</p> <p>ii) No, Primary Key property is violated.</p> <p>iii) No, because Preference cannot be entered unless it has a corresponding value for Roll_No .</p> <p>(or any other relevant answer)</p> <p style="text-align: center;">Or</p> <div style="text-align: center;"> </div> <p style="text-align: right;">(Apply)</p> <p>(½ mark to be awarded to each word formation)</p>	<p>1</p> <p>1</p> <p>1</p>
30	<p>A grid is a computer network of geographically dispersed and heterogeneous computational resources. (Knowledge)</p> <p>Two types are:</p> <p>(i) Data grid, used to manage large and distributed data having the required multi-user access.</p> <p>ii) CPU or Processor grid, where processing is moved from one PC to another as needed or a large task is divided into subtasks, and allotted to various nodes for parallel processing.</p> <p>(or any other relevant answer)</p> <p style="text-align: center;">Or</p> <p>i) Digital Currency, Health Care. (Knowledge)</p> <p>ii) It just alters or augments the perception of the underlying physical world through additional information where as Virtual Reality (VR) is a three-dimensional, computer-generated situation that simulates the real world. The user can interact with and explore that environment by getting immersed in it while interacting with the objects and other actions of the user.</p> <p>(or any other relevant answer)</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>2</p>
SECTION D		
31	i) Sale[2][1] (Apply)	1

	<p>primary memory known as cache. iii) Yes, as it invites hackers/malware to see through your data. (Knowledge) (1 mark to be awarded for yes/no and rest 1 mark for the correct justification)</p> <p>(or any other relevant answer) Or (option for part iii only) (Apply)</p> <table border="1" data-bbox="375 415 1250 753"> <tr> <td data-bbox="375 415 444 485">(i)</td> <td data-bbox="444 415 1024 485">The set of instructions, data or programs used to operate computers and execute specific tasks</td> <td data-bbox="1024 415 1094 485">(b)</td> <td data-bbox="1094 415 1250 485">Software</td> <td data-bbox="1328 415 1383 485" rowspan="4">½ ½ ½ ½</td> </tr> <tr> <td data-bbox="375 485 444 554">(ii)</td> <td data-bbox="444 485 1024 554">It was a mechanical device capable of doing simple arithmetic calculations only</td> <td data-bbox="1024 485 1094 554">(a)</td> <td data-bbox="1094 485 1250 554">Abacus</td> </tr> <tr> <td data-bbox="375 554 444 623">(iii)</td> <td data-bbox="444 554 1024 623">In second generation of computer vacuum tubes were replaced by_____.</td> <td data-bbox="1024 554 1094 623">(d)</td> <td data-bbox="1094 554 1250 623">Transistors</td> </tr> <tr> <td data-bbox="375 623 444 753">(iv)</td> <td data-bbox="444 623 1024 753">It's a mechanical calculator which does addition and subtraction of two numbers directly and multiplication and division through repeated addition or subtraction.</td> <td data-bbox="1024 623 1094 753">(c)</td> <td data-bbox="1094 623 1250 753">Pascaline</td> </tr> </table>	(i)	The set of instructions, data or programs used to operate computers and execute specific tasks	(b)	Software	½ ½ ½ ½	(ii)	It was a mechanical device capable of doing simple arithmetic calculations only	(a)	Abacus	(iii)	In second generation of computer vacuum tubes were replaced by_____.	(d)	Transistors	(iv)	It's a mechanical calculator which does addition and subtraction of two numbers directly and multiplication and division through repeated addition or subtraction.	(c)	Pascaline	2
(i)	The set of instructions, data or programs used to operate computers and execute specific tasks	(b)	Software	½ ½ ½ ½															
(ii)	It was a mechanical device capable of doing simple arithmetic calculations only	(a)	Abacus																
(iii)	In second generation of computer vacuum tubes were replaced by_____.	(d)	Transistors																
(iv)	It's a mechanical calculator which does addition and subtraction of two numbers directly and multiplication and division through repeated addition or subtraction.	(c)	Pascaline																
35	<p>i) True (Apply) ii) Single Line comment and, Multi Line comment iii) [60, 70, 50, 69] (½ mark to be awarded for each correct value) Or (option for part iii only) (Knowledge)</p> <p>i) dict() ii) update()</p>	1 ½ ½ 2 1 1																	