

**COMMON PRE-BOARD EXAMINATION-2023**  
**INFORMATICS PRACTICES (065)**  
**MARKING SCHEME**

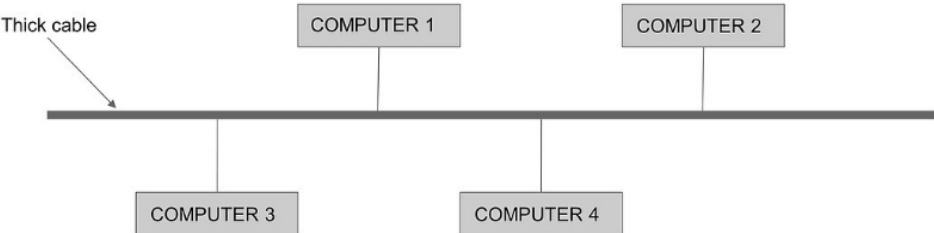
**Class: XII**  
**Date: 12/01/2023**

**Max. Marks: 70**  
**Time: 3 Hours**

**General instructions:**

1. This question paper has five sections, from A to E.
2. All questions are compulsory.
3. Section A contains 18 questions, each carries 01 mark.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions of 03 marks each.
6. Section D has 03 long answer type questions of 05 marks each.
7. Section E has 02 questions of 04 marks each.  
Internal choice is given in Q34 and Q35 against part iii only.
8. All programming questions should be answered using the Python language only.

<b>Section – A (1 MARK EACH)</b>		
1.	option b: Website	1
2.	option d : Phishing	1
3.	option c: sending an email to a friend	1
4.	option a : 26000	1
5.	option c: bc	1
6.	option d: plagiarism	1
7.	option a: print (Feb_Sal+Jan_Sal)	1
8.	option b: Trim()	1
9.	option a : 153.66	1
10.	option c: histh()	1
11.	option a: print(S.tail(4))	1
12.	option c: Patent	1
13.	option a: A hub connects different stations in a private network.	1
14.	option c: ucase	1
15.	option c: ORDER BY	1
16.	option b: E-waste	1

	<p>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</p> <p><b>a.</b> Both A and R are true and R is the correct explanation for A</p> <p><b>b.</b> Both A and R are true and R is not the correct explanation for A</p> <p><b>c.</b> A is True but R is False</p> <p><b>d.</b> A is false but R is True</p>	
17.	Option b : both A and R are true and R is not the correct explanation for A	1
18.	Option c: A is True but R is False	1
<b>Section – B 2 MARKS EACH</b>		
19.	<p>Advantage of Bus Topology:</p> <ol style="list-style-type: none"> <li>1. Cable required is least compared to other network topologies</li> <li>2. Bus topology can be easily extended on either side.</li> <li>3. It is cost effective.</li> </ol> <p><i>Any 1 advantage of bus topology - 1 mark for correct answer</i></p> <p>Illustration of four computers can be linked together using a network's bus topology.</p>  <p><i>1 mark for correct diagram</i></p> <p style="text-align: center;">OR</p> <p>A modem stands for Modulator/Demodulator. It works on the function process of Modulation and Demodulation. Modulation refers to converting analog signals to digital signal. Demodulation refers to the reverse process of modulation.</p> <p><i>1 mark for correct definition</i></p>	2

	<p>It is a device which connects dissimilar networks. It expands the functionality of routers. It is not a device but a node or workstation or computer connected to the network.</p> <p><i>1 mark for correct definition</i></p>	
20.	<p>Ans:</p> <p>a. Select length ('Happy Holidays'); (1 mark)</p> <p>b. Select upper ('Happy Holidays') (1 mark)</p>	2
21.	<p>Ans:</p> <p>The GROUP BY clause can be used to combine all those records that have identical values in a particular field or a group of fields. Whereas, the ORDER BY clause is used to display the records either in ascending or descending order based on a particular field. For ascending order ASC is used and for descending order, DESC is used. The default order is ascending order.</p> <p style="text-align: center;">OR</p> <p>II. select stream, max(agg) from employee group by stream;</p>	2
22.	<p>Ans: # print(S1[1:3]) ½ mark</p> <p>-----</p> <p>Feb 28 Mar 31 dtype: int64</p> <p>-----</p> <p>Ans: # print(S1[:5]) ½ mark</p> <p>Jan 31 Feb 28 Mar 31 Apr 30 May 31 dtype: int64</p> <p>-----</p> <p>Ans: # print(S1[3:3]) ½ mark</p> <p>Series([], dtype: int64)</p> <p>-----</p> <p>Ans: # print(S1["Jan":"May"]) ½ mark</p> <p>Jan 31 Feb 28 Mar 31 Apr 30 May 31</p>	2

	dtype: int64	
23.	<p>Ans: Intellectual Property Rights (IPRs) refer to the bundle of legal rights granted with the aim to protect the creations of the intellect of either an individual or a group or an organization individually or collectively.</p> <p>Intellectual property is divided into two broad classes: Industrial Property and Copyright. Industrial property includes patents, trademarks, industrial designs, and geographical indications; whereas copyright includes literary works, films, music, artistic works and architectural design and rights related to the same inclusive of rights of performers, artists, producers, and broadcasters.</p> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>i. No copyright violation</li> <li>ii. Share the expertise with others on the internet</li> <li>iii. Avoid cyber bullying</li> <li>iv. Respect other's privacy and diversity</li> </ul> <p><i>Any four net etiquettes – ½ mark each</i></p>	2
24.	<p>Ans: Sales A [50, 10] B [80, 20] C [12, 30] D [18, 40]</p>	2
25.	<p>Ans: (i) df.index (1/2 mark) Out[6]: RangeIndex(start=0, stop=2, step=1)</p> <p>df.columns (1/2 mark) Out[7]: RangeIndex(start=0, stop=3, step=1)</p> <p>(ii) df.size (1/2 mark) Out[8]: 6</p> <p>df.ndim (1/2 mark) Out[9]: 2</p>	2
<b>Section – C 3 MARKS EACH</b>		
26.	Ans:	3

```

for the right syntax to use near '! = 'HR'' at line 1
mysql> SELECT INSTR (LNAME, 'a') FROM EMPLOYEE WHERE DEPARTMENT<>'HR';
+-----+
| INSTR (LNAME, 'a') |
+-----+
|          2 |
|          5 |
+-----+
2 rows in set (2.22 sec)

mysql> SELECT POW(DAY(JOINING_DATE), MONTH(JOINING_DATE)) FROM EMPLOYEE WHERE SALARY >=200000;
+-----+
| POW(DAY(JOINING_DATE), MONTH(JOINING_DATE)) |
+-----+
|          19487171 |
|          441 |
|          400 |
+-----+
3 rows in set (0.48 sec)

mysql> SELECT * FROM EMPLOYEE WHERE MID(LNAME,4,2) = 'gh';
+-----+-----+-----+-----+-----+-----+
| E_ID | FNAME | LNAME | salary | joining_date | department |
+-----+-----+-----+-----+-----+-----+
| 1 | mansa | singh | 100000 | 2014-02-20 | HR |
| 1 | vaibhav | singh | 300000 | 2017-02-21 | HR |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.06 sec)

```

*1 mark each for correct output*

27.

Ans:

- i. batsman['innings']=[107,140,68,66]
- ii. batsman.loc[4,:]=[5,'Ms Dhoni','2006-2019',98,1617,98]
- iii. batsman.drop(['BNO','innings'],axis=1,inplace=True)

OR

- i. Df.T
- ii. df.dtypes
- iii. df.empty

*1 mark for each answer*

3

28.

ANS:

- a. df=pd.read\_csv("D:\\data.csv",names=['admno','firstname','lastname','class'])
- b. df=pd.read\_csv("D:\\data.csv",names=['admno','firstname','lastname','class'],header=None,skiprows=1)
- c. df=pd.read\_csv("D:\\data.csv",skiprows=[1,2,5,7,10])

3

29.

Ans:

- i. Cyberbullying
- ii. Phishing
- iii. Identity theft

3

	<p>1 mark for correct answer.</p> <p>OR</p> <p>e-Waste(electronic waste): It refers to the malfunctioning electronic products such as faulty computers, mobile phones, tv sets, toys, CFL, batteries etc. It contains poisonous substances such as lead, mercury, cadmium etc and may cause diseases if not properly managed. A small amount is recycled.</p> <p>Due to this our natural resources are contaminated(poisoned). Some of them can recycle properly. But it is a very big problem in front of the Government to collect segregate, recycle and disposal of e-Waste.</p> <p>e-Waste disposal methods:</p> <ol style="list-style-type: none"> <li>1. Reuse: Reusability has an important role of e-Waste management and can reduce the volume of e-Waste</li> <li>2. Incineration: It is the process of burning e-Waste at high temperature in a chimney</li> <li>3. Recycling of e-Waste: It is the process of making new products from this e-Waste.</li> <li>4. Landfilling: It is used to level pits and cover by thick layer of soil.</li> </ol>	
30.	<p>Ans:</p> <ol style="list-style-type: none"> <li>i. select round(bonus,1) from salesman;</li> <li>ii. select sname,length(sname) from salesman where bonus is not null;</li> <li>iii. select year(doj),sum(salary) from salesman group by year(doj);</li> </ol> <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> <li>i. <pre> +-----+   name     +-----+   Radhika     shyam      sanya    </pre> </li> <li>ii. select count(*) from worker group by gender;</li> <li>iii. select monthname(doj) from worker;</li> </ol>	3
<b>SECTION – D 5 MARKS EACH</b>		
31.	<p>a. ans: SELECT concat("Bread","&amp;","Butter");</p> <pre> +-----+   concat("Bread","&amp;","Butter")   </pre>	5

```

+-----+
| Bread&Butter      |
+-----+

```

b) SELECT instr("A picture is worth a thousand words","worth");

```

+-----+
| instr("A picture is worth a thousand words","worth") |
+-----+
|                               14 |
+-----+

```

c) SELECT truncate(465.4993,2);

```

+-----+
| truncate(465.4993,2) |
+-----+
|           465.49 |
+-----+

```

d) SELECT mod(17,2);

```

+-----+
| mod(17,2) |
+-----+
|           1 |
+-----+

```

e) SELECT substr("Born with a silver spoon in mouth",-5);

```

+-----+
| substr("Born with a silver spoon in mouth",-5) |
+-----+
| mouth                               |
+-----+

```

1 row in set (0.02 sec)

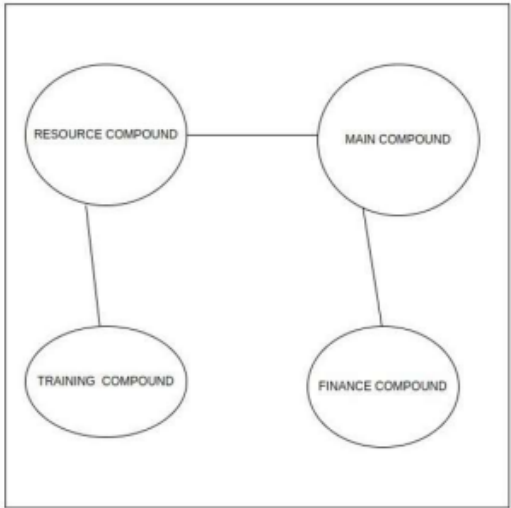
OR

a) Display the length of the string "Attendance is Mandatory".  
 Select length('Attendance is Mandatory');

b) Display the position of "to" in "Photographs".  
 Select instr('Photographs','to');

c) Display the day name of the week.  
 Select dayname(curdate());

d) Display the system date.

	<p>Select sysdate();</p> <p>f) Display the String "Break the ice" in uppercase. Select upper("break the ice");</p>	
32.	<p>ans:</p> <ol style="list-style-type: none"> <li>1. cable layout</li> </ol> <hr/>  <ol style="list-style-type: none"> <li>2. Bus topology</li> <li>3. Training compound.</li> <li>4. i. Repeater to be connected between Resource compound and Main compound as the distance is more than 70m. ii. Hub/Switch to be connected in every compound to network computers.</li> <li>5. ii. Optical Fiber</li> </ol>	5
33.	<pre>import matplotlib.pyplot as plt #Statement 1 apps=["Arogya Setu","WPS Office","Cam Scanner","WhatsApp","Telegram"] ps_rating=[3.9,4.5,4.6,4.2,4.3] plt.bar(apps,ps_rating,color='m',label='app rating') #Statement 2 Statement 3 plt.xlabel("Apps") plt.ylabel("Rating") #Statement 4 plt.show() #Statement 5</pre> <p>OR</p> <pre>import pandas as pd import matplotlib.pyplot as plt plt.hist([10,15,10,10,10,15,20,20,20,20,25,25],bins=10,color='b') plt.xlabel("score") plt.ylabel("frequency") plt.show()</pre>	3



	<b>SECTION - E (1+1+2)</b>	
34.	i. Select lower(cname) from garment; ii. Select min(price) from garment; iii. Select count(*) from garment group by size having size='M'; OR Select year(dop),count(*) from garment group by year(dop);	1+ 1+ 2
35.	Ans: i. print(SportsDay[SportsDay['second']>=10]) ii. print(SportsDay.tail(3)) iii. Index(['house'], dtype='object') OR import pandas as pd d={'vname':['A','B','C','E','F'],'ITEM':['chair','table','pen','eraser','sketch pen'],'area':['east','west','south','sw','se']} vendor=pd.DataFrame(d) print(vendor)	1+ 1+ 2