



COMMON PRE-BOARD EXAMINATION 2022-23

Subject: INFORMATICS PRACTICES (065)



Date:

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 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		
01	(b) Open data	1
02	(b) histogram	1
03	(d) S.tail(7)	1
04	(a) 3	1
05	(b) Webpages	1
06	(b) SMTP, POP3	1
07	(a) select day(now());	1
08	(a) You can edit the source code to customize it	1
09	(d) All of these	1
10	(c) DF.iloc[4:10, 3:7]	1
11	(c) import pandas as PD (PD must be in capital letter)	1
12	(d) All of these	1
13	(c) 30	1
14	(c) line()	1
15	(d) <DF>= pandas.read_csv(<File>)	1
16	(c) pd.Series()	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as		
a) Both A and R are true and R is the correct explanation for A		
b) Both A and R are true and R is not the correct explanation for A		
c) A is True but R is False		
d) A is false but R is True		
17	(a) Both A and R are true and R is not the correct explanation for A	1
18	a) A is True but R is False	1

Section- B		
19	<p>Repeater - The repeater is a device that amplifies the network over geographical distance</p> <p>GATEWAY: 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>OR</p> <p>LAN – Local Area Network Local area networks are limited to one specific area and cover limited distance. A network that spreads up to a building, office, organization or institute is known as Local Area Network</p> <p>MAN – Metropolitan Area Network This is an extended form of LAN. It can be spread over cities of one country. It can connect different cities of a country</p>	1+1
20	<p>A NaN</p> <p>B NaN</p> <p>0 NaN</p> <p>1 NaN</p>	$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2}$
21	<pre>import pandas as pd ser=pd.Series(x, index=["r1", "r2", "r3"])</pre>	1+1
22	Group by statement is used to group the rows that have the same value. Whereas Order by statement sort the result-set either in ascending or in descending order.	1+1
23	<p>Net Etiquettes refers to the proper manners and behaviour we need to exhibit while being online</p> <p>Avoid posting inflammatory or offensive comments online</p> <p>OR</p> <p>No, she should not SMS her pin number because bank never asks for such private information.</p> <p>Yes, because it can be a case of fraud so bank must be informed so that they can help and track down the fraudsters.</p>	1+1
24	<pre>Select Stream,count(*) from students group by Stream; Select * from students order by name desc;</pre>	1+1
25	<pre>import pandas as pd S=pd.Series(range(1,10,2),[['a', 'b', 'c', 'd', 'e']]) Or import pandas as pd S=pd.Series([1,3,5,7,9],[['a', 'b', 'c', 'd', 'e']])</pre>	1+1
Section- C		
26	<p>(a) select Area, count(*) from Salesman group by Area having count(*)>1</p> <p>(b) Select sum(sales) from Salesman</p> <p>(c) Select Sname, max(DOJ) from Salesman</p>	1+1+1
27	<p>(a) DF['fee']=[100,200,300])</p> <p>(b) DF=DF.T</p> <p>(c) del DF['fee']</p>	1+1+1
28	<p>(l) 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</p>	1+1+ 1

	<p>(II) Phishing is an unlawful activity where fake websites or emails that look original or authentic are presented to the user to fraudulently collect sensitive and personal details, particularly usernames, passwords, banking and credit card details.</p> <p>(III) Digital signatures work on a unique digital ID issued by an Certificate Authority (CA) to the user. Signing a document digitally means attaching that user's identify, which can be used to authenticate</p> <p>OR</p> <p>a) 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. A patent is usually granted for inventions. Unlike copyright, the inventor needs to apply (file) for patenting the invention. When a patent is granted, the owner gets an exclusive right to prevent others from using, selling, or distributing the protected invention.</p> <p>b) Presenting someone else's idea or work as one's own idea or work is called plagiarism. Copyright infringement is when we use other person's work without obtaining their permission to use or we have not paid for it, if it is being sold.</p> <p>c) A non-ethical hacker is the one who tries to gain unauthorised access to computers or networks in order to steal sensitive data with the intent to damage or bring down systems An ethical hacker may exploit a website in order to discover its security loopholes or vulnerabilities. He then reports his findings to the website owner</p>	
29	<p>(a) df.iloc[:2,-] - first two rows with all the columns</p> <p>(b) df.iloc[3,1]- forth row and second column</p> <p>(c) df.iloc[2:5,3:]- 3rd to 5th rows and from 4th column</p>	1+1+1
30	<p>(a) SMTP- Simple mail transfer protocol</p> <p>(b) FOSS- Free and Open Source Software</p> <p>(c) HTTP- Hypertext transfer protocol</p>	1+1+1
Section D		
31	<p>(a) import matplotlib as plt</p> <p>(b) plt.bar</p> <p>(c) ylabel("Rating")</p> <p>(d) plt.show()</p> <p>(e) statement 2</p>	5
32	<p>(a) Any proper cable layout</p> <p>(b) Research lab</p> <p>(c) Repeater (based on the layout selected) (ii) hub/switch in all the buildings</p> <p>(d) Firewall</p>	<p>1</p> <p>1</p> <p>$\frac{1}{2} + \frac{1}{2}$</p> <p>1</p>
33	<p>Write the output of the given queries_____</p> <p>(a) RDBMS MySQL</p> <p>(b) 09</p> <p>(c) CURRENT DAY NAME</p> <p>(d) 1600</p>	1 mark for each correct answer

	(e) curdate() will display the current date in the form of ('YYYY,DD,MM') while now() will display the current date along with the time.	
Section E		
34	(a) select name, month(DOB) from student; (b) select from student where DOB=(select (max(DOB) from student); (c) select class, avg(marks) from student group by class; (d) select count(distinct class) from student;	1 mark for each query
35	a) dic={'Ename':['Mohit','Joysree','Kabir'], 'ESal':[35000,42000,33000],'gender':['M','F','M']} df = pd.DataFrame(dic, index = [101, 102, 103]) b) df['ESal'].max() c) df.to_csv('C:/USER/IP/emp.csv') or c) print(df['ESal'].sum())	2+1+1