Series : AQ@QA

SET-4

प्रश्न-पत्र कोड
Q.P. Code   89

रोल नं.
Roll No.

परीक्षार्थी प्रश्न-पत्र कोड को उत्तर-पुस्तिका के मुख-पृष्ठ पर अवश्य लिखें ।
Candidates must write the Q.P. Code on the title page of the answer-book.

- कृपया जाँच कर लें कि इस प्रश्न-पत्र में मुद्रित पृष्ठ 15 हैं ।

- प्रश्न-पत्र में दाहिनें हाथ की ओर दिए गए प्रश्न-पत्र कोड को छात्र उत्तर-पुस्तिका के मुख-पृष्ठ पर लिखें ।

- कृपया जाँच कर लें कि इस प्रश्न-पत्र में 21 प्रश्न हैं ।

- **कृपया प्रश्न का उत्तर लिखना शुरू करने से पहले, उत्तर-पुस्तिका में प्रश्न का क्रमांक अवश्य लिखें ।**

- इस प्रश्न-पत्र को पढ़ने के लिए 15 मिनट का समय दिया गया है । प्रश्न-पत्र का वितरण पूर्वाह्न में 10.15 बजे किया जाएगा । 10.15 बजे से 10.30 बजे तक छात्र केवल प्रश्न-पत्र को पढ़ेंगे और इस अवधि के दौरान वे उत्तर-पुस्तिका पर कोई उत्तर नहीं लिखेंगे ।

- Please check that this question paper contains **15 printed pages.**

- Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.

- Please check that this question paper contains **21 questions.**

- **Please write down the Serial Number of the question in the answer-book before attempting it.**

- 15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.   ✳

सूचना प्रौद्योगिकी
INFORMATION TECHNOLOGY

निर्धारित समय : *1 घण्टा*
Time allowed : *1 hour*

अधिकतम अंक : *25*
Maximum Marks : *25*

सामान्य निर्देश :

(i)   कृपया निर्देशों को सावधानी से पढ़ें ।

(ii)   प्रश्नपत्र को 03 खंडों में बाँटा गया है – खण्ड-**क**, खण्ड-**ख** और खण्ड-**ग** ।

(iii) खण्ड-**क**, 5 अंक का है जिसमें रोज़गार कौशलों पर 6 प्रश्न हैं ।

       (a)   प्रश्न संख्या 1 से 4 **एक** अंक के प्रश्न हैं । इनमें से किन्हीं **तीन** के उत्तर दें ।

       (b)   प्रश्न संख्या 5 और 6 **दो** अंक के प्रश्न हैं । इनमें से किसी **एक** का उत्तर दें ।

(iv)   खण्ड-**ख**, 12 अंक का है और इसमें विषय विशेष के प्रश्न हैं ।

       (a)   प्रश्न 7 से 12 **एक** अंक वाले प्रश्न हैं, इनमें किन्हीं **चार** के उत्तर दें ।

       (b)   प्रश्न 13 से 18 **दो** अंक वाले प्रश्न हैं, इनमें से किन्हीं **चार** प्रश्नों के उत्तर दें ।

*   (v)   खण्ड-**ग**, 8 अंक का है और इसमें **तीन** क्षमता आधारित प्रश्न हैं ।

             प्रश्न सं. 19 से 21 **चार** अंकों वाले प्रश्न हैं, इनमें से किन्हीं **दो** प्रश्नों के उत्तर दें ।

(vi)   प्रत्येक खण्ड के साथ दिए गए निर्देशों के अनुसार कार्य करें ।

(vii) निर्धारित अंक प्रत्येक खण्ड/प्रश्न के सामने दिए गए हैं ।

General Instructions :

(i) *Please read the instructions carefully.*

(ii) *This question paper is divided into **03** Sections, viz., Section-**A**, Section-**B** and Section-**C**.*

(iii) *Section **A** is of **5** marks and has **6** questions on Employability Skills.*

> *(a) Question numbers **1** to **4** are **one** mark questions. Attempt any **three** questions.*

> *(b) Question numbers **5** and **6** are **two** marks questions. Attempt any **one** question.*

(iv) *Section **B** is of **12** marks and has **12** questions on Subject Specific Skills.*

> *(a) Question numbers **7** to **12** are **one** mark questions. Attempt any **four** questions.*

> *(b) Question numbers **13** to **18** are **two** marks questions. Attempt any **four** questions.*

(v) *Section **C** is of **8** marks and has **3** Competency-based questions.*

> *Question number **19** to **21** are **four** marks questions. Attempt any **two** questions.*

(vi) *Do as per the instructions given in the respective sections.*

(vii) *Marks allotted are mentioned against each section/question.*

खण्ड – क   (3 + 2 = 5 Marks)

दिए गए 4 प्रश्नों में से किन्हीं 3 प्रश्नों के उत्तर लिखिए । प्रत्येक प्रश्न 1 अंक का है ।   1 × 3 = 3

1. उस व्यक्ति का नाम लिखिए जो ग्राहकों के लिए मूल्य उत्पन्न करने और संपत्ति पैदा करने के तत्त्वों को सृजनात्मक तरीके से जोड़ता है ।   1

2. उस कौशल का नाम लिखिए जो किसी को नेतृत्व करने में, निर्देशन करने में और व्यवसाय में काम करने वाले लोगों का पर्यवेक्षण करने में सहायक होता है ।   1

3. प्रकृति के किन्हीं दो तत्त्वों (एलीमेंट्स) के नाम लिखिए ।   1

4. संधारणीय विकास (सस्टेनेबल डेवलपमेंट) को प्रोत्साहित करने में अपनाए जा सकने वाली किसी एक विधि को बताइए ।   1

दिए गए 2 प्रश्नों में से किसी 1 प्रश्न का उत्तर दीजिए । प्रत्येक प्रश्न 2 अंकों का है ।   2 × 1 = 2

5. कृषि उद्यमिता तथा लघु उद्योग उद्यमिता में अंतर एक बिंदु में बताइए ।   2

6. अपने दैनिक जीवन में 4Rs' और 1U का अनुगमन करते हुए हम संधारणीय (सस्टेनेबल) समाज के निर्माण में योगदान दे सकते हैं । 4Rs' और 1U में से किसी एक शब्द (टर्म) को समझाइए ।   2

Answer any **3** questions out of the given **4** questions. Each question is of **1** mark.   **1 × 3 = 3**

1. Name the person who combines factors in a creative manner to generate value for customers and create wealth.   **1**

2. Name the skill that helps anyone to lead, guide and supervise people who work for the business.   **1**

3. Name any two elements of nature.   **1**

4. Give any one method that we can adopt to promote Sustainable Development.   **1**

Answer any **1** question out of the given **2** questions. Each question is of **2** marks.   **2 × 1 = 2**

5. Differentiate between Agricultural Entrepreneurship and Small Scale Entrepreneurship with one point only.   **2**

6. In our daily life we can contribute to create a Sustainable Society by following 4Rs' and 1U of Sustainability. Explain any one term out of 4Rs' and 1U.   **2**

दिए गए **6** प्रश्नों में से किन्हीं **4** प्रश्नों के उत्तर दीजिए ।   **1 × 4 = 4**

7.   _____ एक संगठन है जो डायल–अप या डाइरेक्ट या वायरलेस कनेक्शन के द्वारा आपको इंटरनेट

तक पहुँचने देता है ।   1

8.   उस सॉफ्टवेयर या हार्डवेयर सिक्युरिटी डिवायस का नाम लिखिए जो नेटवर्क ट्रैफिक का विश्लेषण करता है

और निश्चित करता है कि ट्रैफिक को अनुमति दी जाए या नहीं ।   1

9.   _____ घायल को बचाने के लिए दी जाने वाली तत्काल सहायता है जिससे उसे मेडिकल सहायता

मिलने तक उसका जीवन बचाया जा सके और स्वास्थ्य को कम हानि पहुँचे ।   1

10.   जब एक या अधिक कॉलमों पर प्राइमरी की कॉन्सट्रेंट लागू किया जाता है तो उसे _____ कहा जाता है ।   1

11.   किसी तालिका में एक अकेले डेटा आइटम को दिखाने वाली पंक्ति ('रो') को _____ कहा जाता है ।   1

12.   सॉर्टिंग शब्द को स्पष्ट कीजिए ।   1

Answer any **4** questions out of the given **6** questions. **1 × 4 = 4**

7. _____ is an organization which provides you with access to the Internet via a dial-up or direct or wireless connection. **1**

8. Name the software or hardware security device that analyzes the network traffic and determine if the traffic should be allowed or not. **1**

9. _____ is the immediate assistance provided to the injured to save life and minimize health loss till the proper medical aid/facility is provided. **1**

10. When primary key constraint is applied on one or more columns then it is known as _____. **1**

11. A row that represents a single data item in a table is known as _____. **1**

12. Explain the term Sorting. **1**

दिए गए **6** प्रश्नों में से किन्हीं **4** प्रश्नों के उत्तर दीजिए ।　　　　　**2 × 4 = 8**

13. स्ट्रॉन्ग पासवर्ड बनाने के लिए अपनाए जाने वाले किन्हीं चार नियमों को लिखिए ।　　**2**

14. अपने निजी वेब पेजों के निर्माण के लिए गैर-तकनीकी (अथवा तकनीकी) उपभोक्ताओं के द्वारा प्रयुक्त संवाद शैली (डिस्कशन स्टाइल) साइट को क्या विशेष नाम दिया गया है ? ऐसी वेबसाइटों के कोई दो उदाहरण दीजिए जो हमें डिस्कशन स्टाइल साइट मुफ्त में बनाने में सहायता करती हैं ।　　**2**

15. LAN और WAN में केवल दो बिंदु में अंतर स्पष्ट कीजिए ।　　**2**

16. उन दो प्रकार के संबंधों (रिलेशनशिप) को समझाइए जो तालिकाओं (टेबल) में बनाए जा सकते हैं ।　　**2**

17. फॉर्म और रिपोर्ट्स में क्या अंतर है ?　　**2**

18. नीचे दी गई तालिका के अनुसार किन्हीं दो कॉलम नाम/एट्रीब्यूट और उनके डेटा टाइप की पहचान कीजिए ।　　**2**

<center>तालिका : PLAYER</center>

PID	PNAME	RUNS	GENDER	DOB
P101	SACHIN	13000	M	10/04/2001
P102	KAPIL	7000	M	12/02/1998
P103	SAURABH	12000	M	13/04/2001
P104	VIRAT	12500	M	17/03/2005

Answer any **4** questions out of the given **6** questions. 2 × 4 = 8

13. Write any four rules which is to be followed for creating strong passwords. **2**

14. What is the special name given to the discussion style site used by non-technical (or technical) users for creating personal web pages ? Give any two examples of websites that help us to create such discussion style sites for free. **2**

15. Differentiate between LAN and WAN with two points only. **2**

16. Explain any two types of relationship that can be created in tables. **2**

17. What is difference between Form and Reports ? **2**

18. Identify any two Column name/Attribute and their data types from a given table : PLAYER **2**

Table : PLAYER

PID	PNAME	RUNS	GENDER	DOB
P101	SACHIN	13000	M	10/04/2001
P102	KAPIL	7000	M	12/02/1998
P103	SAURABH	12000	M	13/04/2001
P104	VIRAT	12500	M	17/03/2005

खण्ड – ग   (4 × 2 =8 Marks)

(दक्षता आधारित प्रश्न)

दिए गए 3 प्रश्नों में से किन्हीं 2 प्रश्नों के उत्तर दीजिए :

19. आर्यन बहुत चिन्तित हुआ जब उसे यह मालूम हुआ कि उसके चाचाजी के बैंक खाते से किसी ने सारी धनराशि निकाल ली है । उसकी समझ में नहीं आया कि जब उन्होंने अपना ATM कार्ड किसी को नहीं दिया तो यह कैसे हो सकता है ।   4

    (a)   उसे एक तरीका बताइए जिससे वह सुरक्षित ऑन–लाइन ट्रैन्जेक्शन करने के लिए आश्वस्त हो सके ।

    (b)   अपने कंप्यूटर को मालवेयर से बचाने के लिए उसे किस प्रकार के सॉफ्टवेयर की जरूरत है ?

    (c)   उसे 'फिशिंग' को समझने में सहायता कीजिए ।

    (d)   वह यह भी समझता है कि कुकीज़ से कोई हानि नहीं है । उसे बताइए कि कुकीज़ भी उसके लिए कैसे हानिकारक हो सकती हैं ।

20. वैश्विक महामारी के कारण घर पर रहना सबके लिए बाध्यता थी, किंतु इंटरनेट के कारण सारे विश्व में संपर्क था ।   4

    (a)   वर्ल्ड वाइड वेब का क्या अर्थ है ? दो प्रकार के वेब ब्राउज़र के नाम लिखिए जिन्हें आप जानते हों ।

    (b)   समझाइए कि इंटरनेट पर डेटा–ट्रांसफर कैसे किया जाता है ।

(Competency Based Questions)

Write any **2** questions out of the given **3** questions :

19. Aryan is too much worried when he came to know that someone has withdrawn all money from his uncle's bank account. He was not able to understand how this could happen when he has not given his ATM card to anyone.   4

    (a) Suggest him a way by which he can be assured that he is doing secured online transaction.

    (b) Which type of software he needs to install in his computer to protect his computer from malware ?

    (c) Help him to understand about Phishing.

    (d) He also thinks cookies are harmless. Explain him how cookies can also cause harm to him.

20. Due to pandemic everyone was bound to stay at home. But, due to internet the whole world was connected.   4

    (a) What is meant by World Wide Web ? Also write any two web browsers names that you know.

    (b) Explain how data is transferred over internet.

STUDENT

ADMNO	NAME	GRADE	DOB	MARKS	HOUSE	GENDER
1001	RUPAL	9	10/04/2006	76	GREEN	M
1002	RASHMI	9	08/12/2005	87	RED	F
1003	ARNAV	10	25/05/2004	81	GREEN	M
1004	SUMONA	9	23/08/2005	68	RED	F
1005	ARUN	9	16/07/2005	72	GREEN	M
1006	TIA	9	22/09/2005	91	BLUE	F
1007	ROSHAN	10	26/08/2004	89	BLUE	M

SQL कमांड लिखिए :

(a)   Green House के सभी विद्यार्थियों के विस्तृत विवरण को प्रदर्शित करने के लिए ।

(b)   उनके 5 अंक बढ़ाने के लिए जिनका ADMNO 1005 है ।

(c)   80 से कम अंक पाने वाले सभी विद्यार्थियों के विस्तृत विवरण को प्रदर्शित करने के लिए ।

(d)   अंकों के अवरोही क्रम में सभी विद्यार्थियों की सूची प्रदर्शित करने के लिए ।

21. Consider the following table :   4

STUDENT

ADMNO	NAME	GRADE	DOB	MARKS	HOUSE	GENDER
1001	RUPAL	9	10/04/2006	76	GREEN	M
1002	RASHMI	9	08/12/2005	87	RED	F
1003	ARNAV	10	25/05/2004	81	GREEN	M
1004	SUMONA	9	23/08/2005	68	RED	F
1005	ARUN	9	16/07/2005	72	GREEN	M
1006	TIA	9	22/09/2005	91	BLUE	F
1007	ROSHAN	10	26/08/2004	89	BLUE	M

Write SQL Commands :

(a) To display the details of all students of Green House.

(b) To increase the marks by 5 whose ADMNO is 1005.

(c) To display the details of all students whose MARKS are less than 80.

(d) Display the list of all students in descending order of MARKS.

दृष्टिबाधित विद्यार्थियों के लिए :

21. निम्नलिखित को परिभाषित कीजिए : 4

(a) डाटाबेस मैनेजमेंट सिस्टम (DBMS)

(b) प्राइमरी कुँजी

(c) न्यूमेरिक डाटा टाईप

(d) सांदर्भिक समग्रता (रेफेरेंशियल इंटेग्रिटी)

_____

दृष्टिबाधित विद्यार्थियों के लिए :

For Visually Impaired Students :

21. Define the following : 4

    (a) Database Management System

    (b) Primary Key

    (c) Numeric Data Type

    (d) Referential Integrity

    _____

*

Strictly Confidential: (For Internal and Restricted use only)

Secondary School Term II Examination, 2022

Marking Scheme – INFORMATION TECHNOLOGY (SUBJECT CODE – 402)

(PAPER CODE – 89)

General Instructions: -

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. A small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully.

2. **"Evaluation policy is a confidential policy as it is related to the confidentiality of the examinations conducted, Evaluation done and several other aspects. Its' leakage to public in any manner could lead to derailment of the examination system and affect the life and future of millions of candidates. Sharing this policy/document to anyone, publishing in any magazine and printing in News Paper/Website etc. may invite action under IPC."**

3. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. **However, while evaluating, answers which are based on latest information or knowledge and/or are innovative, they may be assessed for their correctness otherwise and marks be awarded to them. In Class-X, while evaluating two competency based questions, please try to understand given answer and even if reply is not from marking scheme but correct competency is enumerated by the candidate, marks should be awarded.**

4. The Head-Examiner must go through the first five answer books evaluated by each evaluator on the first day, to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.

5. Evaluators will mark (√) wherever answer is correct. For wrong answer 'X' be marked. Evaluators will not put right kind of mark while evaluating which gives an impression that answer is correct and no marks are awarded. **This is most common mistake which evaluators are committing.**

6. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then be totalled up and written in the left-hand margin and encircled. This may be followed strictly.

7. If a question does not have any parts, marks must be awarded in the left-hand margin and encircled. This may also be followed strictly.

8. If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out.

9. No marks to be deducted for the cumulative effect of an error. It should be penalized only once.

10. A full scale of marks _____ (example 0-25 marks as given in Question Paper) has to be used. Please do not hesitate to award full marks if the answer deserves it.

11. Every examiner has to necessarily do evaluation work for full working hours i.e. 8 hours every day and evaluate 30 answer books per day in main subjects and 35 answer books per day in other subjects (Details are given in Spot Guidelines). This is in view of the reduced syllabus and number of questions in question paper.

12. Ensure that you do not make the following common types of errors committed by the Examiner in the past: -

- Leaving answer or part thereof unassessed in an answer book.

- Giving more marks for an answer than assigned to it.

- Wrong totalling of marks awarded on a reply.

- Wrong transfer of marks from the inside pages of the answer book to the title page.

- Wrong question wise totalling on the title page.

- Wrong totalling of marks of the two columns on the title page.

- Wrong grand total.

- Marks in words and figures not tallying.

- Wrong transfer of marks from the answer book to online award list.

- Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated. It should merely be a line. Same is with the X for incorrect answer.)

- Half or a part of answer marked correct and the rest as wrong, but no marks awarded.

13. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as cross (X) and awarded zero (0) Marks.

14. Any unassessed portion, non-carrying over of marks to the title page, or totalling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.

15. The Examiners should acquaint themselves with the guidelines given in the Guidelines for spot Evaluation before starting the actual evaluation.

16. Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totalled and written in figures and words.

17. The Board permits candidates to obtain photocopy of the Answer Book on request in an RTI application and also separately as a part of the re-evaluation process on payment of the processing charges.

INFORMATION TECHNOLOGY (Subject Code–402)

[Paper Code: 89]

Maximum Marks: 25

*General Instructions***:**

1. Please read the instructions carefully.
2. This Question Paper is divided into 03 sections, viz. Section A, Section B and Section C.
3. Section A is 05 marks and has 06 questions on Employability Skills.
   a) Question numbers 1 to 4 are one mark questions. Attempt any *three* questions.
   b) Question numbers 5 and 6 are two marks questions. Attempt any *one* question.
4. Section B is of 12 marks and has 12 questions on Subject Specific Skills.
   a) Question numbers 7 to 12 are one mark questions. Attempt any *four* questions.
   b) Question numbers 13 to 18 are two marks questions. Attempt any *four* questions.
5. Section C is of 8 marks and has 3 Competency-based questions:

   Question numbers 19 to 21 are four marks questions. Attempt any *two* questions.

6. Do as per the instructions given in the respective sections.

7. Marks allotted are mentioned against each section/question.

Q. No.	EXPECTED ANSWER / VALUE POINTS	Marks
	SECTION—A	**3+2=5**
Answer any 3 questions out of the given 4 questions. Each question is of *one* mark.		**1×3=3**
1.	Name the person who combines factors in a creative manner to generate value for customers and create wealth. **Ans:** Entrepreneur *(1 mark for correct answer)*	**1**
2.	Name the skill that helps any one to lead, guide and supervise people who work for the business. **Ans:** Entrepreneurial skill / Leadership skill *(1 mark for any correct answer)*	**1**
3.	Name any two elements of nature. **Ans:** Prithvi (Earth), Agni (Fire), Jal (Water), Vaayu (Air), Aakash (Space) *(1/2 mark for any one correct answer)* **OR** Soil, Coal, Petrol, Diesel, Minerals, Sunshine, animals, human beings, Plants, Fossil Fuel *(1/2 mark for any one relevant answer)*	**1/2×2=1**
4.	Give any one method that we can adopt to promote sustainable development. **Ans:** Methods that can be adopted to promote sustainable development are: • Protecting and living in harmony with the nature • Considering all human beings as equal • Promoting good governance	**1**

- Using science and technology responsibly
- Creating healthy, social and economically viable society
- Organic farming
- Vermi-composting
- Rainwater harvesting
- Proper use of means or resources
- Development of Positive Attitude and Holistic Approach Towards Conservation
- Integrated Socio-Economic Development
- Development based on People's Participation
- Limited Development
- Long-Lasting Development
- Any one R's (REFUSE, REDUCE, REUSE, RECYCLE, RECOVER AND REPAIR) OR 1U (UPCYCLE)
- Any one from 17 Sustainable Development Goals (Like Gender equality, Life on land etc.)

(1 mark for any one correct answer)

OR

(1 mark for any other relevant answer)

Answer any 1 questions out of the given 2 questions. Each question is of *2* marks.	**2×1=2**

5.	Differentiate between agricultural entrepreneurship and small-scale entrepreneurship with one point only. **Ans:**	**2**

Agricultural entrepreneurship	Small-scale entrepreneurship
Agricultural Entrepreneurship can be defined as being primarily related to the marketing and production of inputs and products used in agricultural activities. **OR** Agricultural entrepreneurship means doing business related to agricultural products.	Small scale entrepreneurship refers to starting industries in which manufacturing, trading, providing services, productions are done on a small scale or micro scale. **OR** Small scale entrepreneurship refers to starting/doing industries/business on a small or micro scale/level.

(1 mark each for correct explanation of Agricultural and Small-scale entrepreneurship)

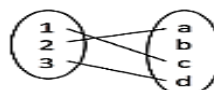|		
6.	In our daily life we can contribute to create a sustainable society by following 4Rs and 1U of sustainability. Explain any one term out of 4Rs and 1U. **Ans:** R's of sustainability stands for REFUSE, REDUCE, REUSE, RECYCLE, RECOVER and REPAIR. 1U of sustainability stands for UPCYCLE. **REFUSE** means to stop using products that may harm the environment. **REDUCE** means minimizing the use of products that may cause harm to the environment. **REUSE** means using the products as far as possible, to reduce waste generation.	**2**

	RECYCLE means creating new products from old products. The quality is usually affected and the new product is not of the same quality as the original product. **RECOVER** means a safe and eco-friendly alternative should be used in place of a thing. For example, using a cloth bag instead of a polythene bag. **REPAIR** means to fix things/products instead of buying new ones. **UPCYCLE** allows the scope of human skills to get their due. Any product that is not usable can be upcycled with creativity and innovation. **OR** UPCYCLE means reuse (discarded objects or material) in such a way as to create a product of higher quality or value than the original. *(2 mark for correct explanation of any one from REFUSE, REDUCE, REUSE, RECYCLE, RECOVER, REPAIR , UPCYCLE)*	1
	SECTION—B	**4+8=12**
	Answer any 04 questions out of the given 06 questions.	**1×4=4**
7.	_____ is an organization which provides you with access to the Internet via a dial-up or direct or wireless connection. **Ans:** Internet Service Provider (ISP) / Name of any ISP (Like BSNL, MTNL, Airtel, Jio etc.) *(1 mark for correct answer)*	1
8.	Name the software or hardware security device that analyzes the network traffic and determine if the traffic should be allowed or not. **Ans:** Firewall *(1 mark for correct answer)*	1
9.	_____ is the immediate assistance provided to the injured to save life and minimize health loss till the proper medical aid/facility is provided. **Ans:** First Aid / School Medical Room *(1 mark for correct answer)*	1
10.	When primary key constraint is applied on one or more column(s), then it is known as _____. **Ans:** Composite Primary Key / Composite key / Primary Key. *(1 mark for correct answer)*	1
11.	A row that represents a single, data item in a table is known as _____. **Ans:** Record / Tuple / Row *(1 mark for correct answer)*	1
12.	Explain the term 'sorting'. **Ans:** Sorting means to arrange the data in either ascending/increasing/A-Z order or descending/decreasing/Z-A order. *(1 mark for correct explanation)*	1

Answer any 4 questions out of the given 6 questions.	2×4=8

13.	Write any four rules which are to be followed for creating strong passwords.	2

Ans: Following are general rules to be followed for creating strong passwords:
- Keep the length of the password 12–14 characters if permitted.
- Avoid keeping passwords based on repetition, dictionary words, letter or number sequences, usernames, relative or pet names etc.
- Include numbers and symbols in passwords if allowed.
- Use capital/upper-case and small/lower-case letters.
- Avoid using the same password for multiple sites or purposes.
- Avoid using something that the public or workmates know you strongly like or dislike.
- Use random password generators if possible.
- Use a combination of alphanumeric and special characters

Example of a strong password: genXHd#@123$

(1/2 mark each for any four rules)

(1/2 mark should be given for correct example)

14.	What is the special name given to the discussion style site used by non-technical (or technical users) users for creating personal web pages? Give any two examples of websites that help us to create such discussion style sites for free.	2

Ans: Blog

Some of the websites that offer blog service for free are:
- www.WordPress.com
- www. blogger.com
- www.blog.com
- www.weebly.com
- www.blogsome.com etc.

(1 mark for blog and 1/2 mark each for any two websites)

15.	Differentiate between LAN and WAN with two points only.	2

Ans:

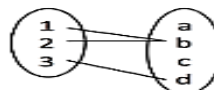| Points	LAN	WAN
i	**Full Form:** Local Area Network	**Full Form:** Wide Area Network
ii	**Explanation:** A network which connects computers and devices in a limited geographical area.	**Explanation:** A network which connects computers and devices over a broad /large geographical area.
iii	**Example:** Intranet, any network at Room, Home, School, Computer Lab, Office Building or closely positioned group of buildings.	**Example:** Internet, any network that links across metropolitan, regional or national boundaries.

(1 mark each for writing any of the two point from the above)

(Any relevant explanation/example apart from the above should also be considered)

16.	Explain any two types of relationship that can be created in tables.	2

Ans: There are three types of relationships which can be created in tables:

1. ONE to ONE

2. ONE to MANY or MANY to ONE

3. MANY to MANY

One to One Relationship: In this relationship, both the tables must have primary key columns.

OR

In this relationship, primary key column of one table is associated with primary key column of another/associated table.

OR

In this relationship, a record in table A is associated with only one record in table B.

One to Many Relationship: In this relationship, one of the tables must have primary key column. It signifies that one column of primary key table is associated with all the columns of associated table.

OR

In this relationship, one record of parent table is associated with more than one record of another/associated/child table.

OR

In this relationship, one record in table A is associated with several records in table B.

Many to One Relationship: In this relationship, one of the tables must have primary key column. It signifies that all the columns of primary key table are associated with one column of associated table.

OR

In this relationship, more than one record of parent table is associated with one record of another/associated/child table.

OR

In this relationship, several records in table A is associated with one record in table B.

Many to Many Relationship: In this relationship, no table has the primary key column. It signifies that all the columns of primary key table are associated with all the columns of associated table.

OR

In this relationship, a record in table A is associated with several records in table B and vice-versa.

(1 mark each for correct explanation of any two types of relationship)

Note: 1/2 Marks should be awarded for example without explanation.
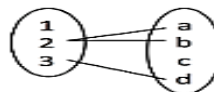
Suggestive diagram only: (Full marks should be awarded)

One-to-one:

Many-to-one:
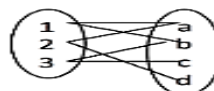
One-to-many:

Many-to-many:

| 17. | What is the difference between form and reports? | 2 |

Ans:

Form: A form provides the user a systematic way of collecting information for a database.

OR

It is an interface in a user specified layout that lets users view, enter and change data directly in database objects such as tables.

Reports: A report helps to display the data in a summarized manner.

OR

A report is used to generate the overall work outcome in a clear format.

OR

A report is an effective way to organise and summarize the data for viewing or printing.

(1 mark each for correct explanation of Form and Report)

| 18. | Identify any 2 column names/attributes and their data types from a given table : PLAYER | 2 |

Table: PLAYER

PID	PNAME	RUNS	GENDER	DOB
P101	Sachin	13000	M	10/04/2001
P102	Kapil	7000	M	12/02/1998
P103	Saurabh	12000	M	13/04/2001
P104	Virat	12500	M	17/03/2005

Ans:

Columns	Data Type
PID	CHAR / VARCHAR / TEXT
PName	CHAR / VARCHAR / TEXT
Gender	CHAR / VARCHAR / TEXT

Runs	INTEGER / INT / TINYINT / SMALLINT / MEDIUMINT / BIGINT / NUMBER
DOB	DATE / DATETIME

(1/2 mark each for any two column names

and 1/2 mark each for their data type)

SECTION—C

(COMPETENCY-BASED QUESTIONS)

Answer any 2 questions out of the given 3 questions.	4×2=8

19. Aryan is too much worried when he came to know that someone has withdrawn all money from his uncle's bank account. He was not able to understand how this could happen when he has not given his ATM card to anyone.

(a) Suggest him a way by which he can be assured that he is doing secured online transaction.

(b) Which type of software he needs to install in his computer to protect his computer from malware?

(c) Help him to understand about phishing.

(d) He also thinks cookies are harmless. Explain how cookies can also cause harm to him.

Ans:

(a) He can be assured that he is doing secured online transaction by checking the digital certificate represented as a golden lock/Padlock in the web browser's address bar/URL.

OR

He can check if the website uses https protocol.

(b) Antivirus/Antispyware software can be installed.

(c) Phishing is the act of acquiring personal/private and sensitive data from personal computers for use in fraudulent activities.

OR

Any valid example (like mails / message from unknown persons that may ask for your credit / debit card details / Aadhaar Card / Personal Details etc.)

(d) Cookies can cause harm to him as they can be tracked by unauthorized users and possibly gain access to his personal information.

(1 mark for correct answer in each part)

4

20.	Due to pandemic everyone was bound to stay at home. But, due to internet the whole world was connected. (a) What is meant by World Wide Web? Also write any two Web browsers name. (b) Explain how data is transferred over internet. **Ans:** (a) World Wide Web is a system of interlinked hypertext documents/webpages accessed via the Internet. Examples of web browsers are Google Chrome, Mozilla Firefox, Internet Explorer, Microsoft Edge, Netscape Navigator, Operamini, Safari etc. *(1 mark each for correct explanation of World Wide Web)* *(1/2 mark each for any two examples of web browser)* (b) Data is transferred over internet by following steps: • Data sent is broken into packets. • Each packet is sent from computer to computer until it finds its destination. All packets may not take the same route. • At the destination, the packets are examined. • If any packets are missing or damaged, a message is sent asking for them to be re-sent. This continues until all packets have been received intact. • The packets are now reassembled into their original form. *(1/2 mark each for writing four steps of data transfer)*	**4**

21.	Consider the following table: **STUDENT**						**4**

ADMNO	NAME	GRADE	DOB	MARKS	HOUSE	GENDER
1001	RUPAL	9	10/04/2006	76	GREEN	M
1002	RASHMI	9	08/12/2005	87	RED	F
1003	ARNAV	10	25/05/2004	81	GREEN	M
1004	SUMONA	9	23/08/2005	68	RED	F
1005	ARUN	9	16/07/2005	72	GREEN	M
1006	TIA	9	22/09/2005	91	BLUE	F
1007	ROSHAN	10	26/08/2004	89	BLUE	M

Write SQL Commands:

a) To display the details of all students of GREEN HOUSE.

b) To increase the marks by 5 whose ADMNO is 1005.

c) To display the details of all students whose MARKS are less than 80.

d) Display the list of all students in descending order of MARKS.

Ans:

a) SELECT * FROM STUDENT WHERE HOUSE = "GREEN";

OR

SELECT ADMNO, NAME, GRADE, DOB, MARKS, HOUSE, GENDER
FROM STUDENT WHERE HOUSE = "GREEN";

OR

SELECT * FROM STUDENT WHERE HOUSE LIKE "GREEN";

OR

SELECT * FROM STUDENT WHERE HOUSE IN ("GREEN");

(1/2 mark for SELECT Clause) (1/2 mark for WHERE Clause)

b) UPDATE STUDENT SET MARKS=MARKS+5 WHERE ADMNO=1005;

OR

UPDATE STUDENT SET MARKS=MARKS+5 WHERE ADMNO IN (1005);

(1/2 mark for UPDATE Clause) (1/2 mark for WHERE Clause)

c) SELECT * FROM STUDENT WHERE MARKS <80;

OR

SELECT ADMNO, NAME, GRADE, DOB, MARKS, HOUSE, GENDER
FROM STUDENT WHERE MARKS <80;

(1/2 mark for SELECT Clause) (1/2 mark for WHERE Clause)

d) SELECT * FROM STUDENT ORDER BY MARKS DESC;

OR

SELECT ADMNO, NAME, GRADE, DOB, MARKS, HOUSE, GENDER
FROM STUDENT ORDER BY MARKS DESC;

(1/2 mark for SELECT Clause) (1/2 mark for ORDER BY Clause)

(1 mark each for every correct answer)

Note: Punctuation mark like (" "),(' '),(;) should be ignored.

21.	**For Visually Impaired Students**	

	Define the following:
	
	   a. Database Management System (DBMS)
	   b. Primary key
	   c. Numeric data type
	   d. Referential integrity
	
	Ans:
	
	   a. A database management system is a software package with computer programs that controls the creation, maintenance and use of a database.
	
	   b. A primary key is a unique value that identifies a row in a table.
	
	OR
	
	A primary key is a field/column/attribute or set of fields/columns/attributes of which uniquely identifies records/rows/tuples in a table/relation.
	
	OR
	
	Primary Key = Unique + Not Null
	
	   c. Numeric data types are numbers stored in database column. The exact numeric data types are INTEGER, INT, TINYINT, SMALLINT, MEDIUMINT, BIGINT, NUMBER, DECIMAL, NUMERIC, FLOAT, REAL, DOUBLE.
	
	   d. Referential integrity is used to maintain accuracy and consistency of data in a relationship.
	
	OR
	
	Referential integrity is a system of rules that a DBMS uses to ensure that relationships between records in related tables are valid.
	
	(1 mark for correct answer in each part)
		4

* * *