

<p>Marking Scheme</p> <p>Strictly Confidential</p> <p>(For Internal and Restricted use only)</p> <p>Secondary School Examination, 2023</p> <p>SUBJECT NAME: INFORMATION TECHNOLOGY</p> <p>(SUBJECT CODE – 402) (PAPER CODE – 89)</p>	
<p><u>General Instructions: -</u></p>	
1	<p>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.</p>
2	<p>“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 various rules of the Board and IPC.”</p>
3	<p>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 due 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, due marks should be awarded.</p>
4	<p>The Marking scheme carries only suggested value points for the answers</p> <p>These are in the nature of Guidelines only and do not constitute the complete answer. The students can have their own expression and if the expression is correct, the due marks should be awarded accordingly.</p>
5	<p>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. If there is any variation, the same should be zero after deliberation and discussion. 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.</p>
6	<p>Evaluators will mark (√) wherever answer is correct. For wrong answer CROSS ‘X’ be marked. Evaluators will not put right (✓) while evaluating which gives an impression that answer is correct and no marks are awarded. This is most common mistake which evaluators are committing.</p>
7	<p>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.</p>

8	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.
9	If a student has attempted an extra question, answer of the question deserving more marks should be retained and the other answer scored out with a note “ Extra Question ”.
10	No marks to be deducted for the cumulative effect of an error. It should be penalized only once.
11	A full scale of marks _____ (example 0 to 80/70/60/50/40/30 marks as given in Question Paper) has to be used. Please do not hesitate to award full marks if the answer deserves it.
12	Every examiner has to necessarily do evaluation work for full working hours i.e., 8 hours every day and evaluate 20 answer books per day in main subjects and 25 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.
13	<p>Ensure that you do not make the following common types of errors committed by the Examiner in the past: -</p> <ul style="list-style-type: none"> ● 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 an answer. ● 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/not same. ● 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.
14	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.
15	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.
16	The Examiners should acquaint themselves with the guidelines given in the “ Guidelines for spot Evaluation ” before starting the actual evaluation.
17	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.
18	The candidates are entitled to obtain photocopy of the Answer Book on request on payment of the prescribed processing fee. All Examiners/Additional Head Examiners/Head Examiners are once again reminded that they must ensure that evaluation is carried out strictly as per value points for each answer as given in the Marking Scheme.

MARKING SCHEME
Secondary School Examination, 2023
INFORMATION TECHNOLOGY (Subject Code–402)
[Paper Code:89]

Max. Time: 2 Hours

Max. Marks: 50

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **21** questions in two sections: **Section A & Section B**.
3. **Section-A** has **Objective** type questions whereas **Section B** contains **Subjective** type questions.
4. Out of the given (**5 + 16 =**) **21** questions, a candidate has to answer (**5 + 10 =**) **15** questions in the allotted (maximum) time of **2** hours.
5. All questions of a particular section must be attempted in the correct order.
6. **Section A - Objective Type Questions (24 Marks):**
 - i. This section has **05** questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
7. **Section B – Subjective Type Questions (26 Marks):**
 - i. This section has **16** questions.
 - ii. A candidate has to do **10** questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

Q. No.	EXPECTED ANSWER / VALUE POINTS	Marks
SECTION—A		
Q1.	Answer any 4 out of the given 6 questions on Employability Skills. Each question is of one mark.	4×1=4
i)	_____ refers to focussing human efforts for maintaining a healthy body and mind, capable of withstanding stressful situations. Ans: (b) Stress Management <i>(1 mark for correct answer)</i>	1
ii)	Which of the following is not the benefit of stress management? Ans: (b) Reduces efficiency <i>(1 mark for correct answer)</i>	1
iii)	_____ are computer programs that can damage the data and software programs or steal the information stored on a computer. Ans: (b) Viruses <i>(1 mark for correct answer)</i>	1
iv)	_____ is a horizontal bar present at bottom of the Windows 7 desktop. Ans: (c) Task Bar <i>(1 mark for correct answer)</i>	1
v)	State whether the following statement is a myth or reality: Entrepreneurs are born a certain way. Ans: Myth <i>(1 mark for correct answer)</i>	1

vi)	Which one of the following is not true for entrepreneurs? Ans: (c) They do not create jobs <i>(1 mark for correct answer)</i>	1
Q2.	Answer any 5 out of the given 6 questions. Each question is of one mark.	5×1=5
i)	_____ controls all aspects of a paragraph's appearance, such as text alignment, tab stops, line spacing, and borders, and can include character formatting. Ans: (d) Paragraph Style <i>(1 mark for correct answer)</i>	1
ii)	How many levels of headings does Open Office Writer evaluate to build the Table of contents? Ans: (c) 10 <i>(1 mark for correct answer)</i>	1
iii)	Reema has created a pamphlet on “Tour to West India”. She has inserted many images to make it more presentable but the size of images is occupying a lot of space. Her friend has suggested her to reduce the size of images. Which of the following options will help her in doing the task without losing any content of the image? Ans: (c) Resize <i>(1 mark for correct answer)</i>	1
iv)	Which of the following Graphic filter is used to increase the contrast of an image in a document? Ans: (b) Sharpen <i>(1 mark for correct answer)</i>	1
v)	Which of the following is not used when creating a mail-merge document? Ans: (c) Paint <i>(1 mark for correct answer)</i>	1
vi)	Which mode is used to apply a style to many different areas of a document quickly without going back to styles and formatting window in Writer? Ans: Fill Format / Fill Format mode <i>(1 mark for correct answer)</i>	1
Q3.	Answer any 5 out of the given 6 questions. Each question is of one mark.	5×1=5
i)	A colored border, with _____ appears around a cell where changes are made in a shared worksheet. Ans: (a) a dot in the upper left-hand corner <i>(1 mark for correct answer)</i>	1
ii)	_____ feature adds data arranged in a group of cells in Calc, with labels for columns and/or rows. Ans: (b) Subtotal <i>(1 mark for correct answer)</i>	1
iii)	A _____ refers to a cell or a range of cells on a worksheet whose data values can be used in a formula. Ans: (c) cell reference <i>(1 mark for correct answer)</i>	1

iv)	<p>_____ feature of Calc is used to test 'what-if' questions.</p> <p>Ans: (c) Scenario OR (a) Solver OR (b) Goal Seek</p> <p style="text-align: center;"><i>(1 mark for any correct answer)</i></p>	1
v)	<p>Macros are especially useful to _____ the same way over and over again.</p> <p>Ans: (a) repeat a task</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
vi)	<p>_____ feature in Calc helps to track what data was changed, when the change was made, who made the change and in which cell the change has occurred.</p> <p>Ans: (a) Record Changes</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
Q4.	Answer any 5 out of the given 6 questions. Each question is of one mark.	5×1=5
i)	<p>Which one of the following is not an example of DBMS?</p> <p>Ans: (d) Impress</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
ii)	<p>A _____ is an interface in a user specified layout that lets users to view, enter, and change data directly in database objects such as tables.</p> <p>Ans: (b) form</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
iii)	<p>Which of the following is expanded form of SQL?</p> <p>Ans: (b) Structured Query Language</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
iv)	<p>_____ is usually suitable for less amount of data. (Relational/Flat file)</p> <p>Ans: Flat file</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
v)	<p>Binary data types in a database can be using for storing _____.</p> <p>Ans: (a) photos, music files, etc.</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1
vi)	<p>_____ clause can be used with the SELECT statement in SQL to specify which rows to retrieve from the table.</p> <p>Ans: (a) WHERE</p> <p style="text-align: center;"><i>(1 mark for correct answer)</i></p>	1

Q5.	Answer any 5 out of the given 6 questions. Each question is of <i>one</i> mark.	5×1=5
i)	_____ is an accessibility function which is designed for people who have vision impairment or cognitive disabilities. Ans: (c) Toggle Keys <i>(1 mark for correct answer)</i>	1
ii)	Networks in which certain computers have special dedicated tasks, providing services to other computers (in the network) are called _____ networks. Ans: (d) client server <i>(1 mark for correct answer)</i>	1
iii)	_____ provides Internet access by transmitting digital data over wires of a local telephone network. Ans: (c) DSL <i>(1 mark for correct answer)</i>	1
iv)	A _____ is an unplanned event that may happen all of a sudden and may lead to unwanted or unprecedented results/outcomes. Ans: (c) accident <i>(1 mark for correct answer)</i>	1
v)	A _____ worker will always perform to the best to his ability. Ans: (c) happy and healthy <i>(1 mark for correct answer)</i>	1
vi)	_____ is the process of emptying a place in case of an emergency, disaster. Ans: (d) Evacuation <i>(1 mark for correct answer)</i>	1

SECTION - B:
(Subjective Type Questions)

	Answer any 3 out of the given 5 questions on Employability Skills Answer each question in 20 – 30 words.	3x2 = 6
Q6.	What is self-awareness? Also give any two benefits of self-awareness. Ans: Self-awareness means that we can identify our strengths and weaknesses. <p style="text-align: center;">OR</p> Self-awareness means being aware of your personality, likes and dislikes, thoughts, beliefs, emotions and motivations. <p style="text-align: center;">OR</p> Having conscious knowledge of yourself, capabilities, feelings and your own character is called self-awareness. Benefits of self-awareness: <ul style="list-style-type: none"> • It helps us in converting our weakness into strength. • It helps us in converting our strength into an exceptional talent. • It allows us to understand other people. 	2

	<ul style="list-style-type: none"> • It influences our personal development. • It makes us more confident, innovative, empathetic. • Ability to work independently. • Better communication skills. • Better decision making skills. • Improved relationships and team work. • Better leadership skills etc. <p style="text-align: center;"><i>(1 mark for any correct/relevant definition)</i> <i>(1/2 mark each for any two correct/relevant benefits)</i></p>																	
Q7.	<p>Give one example each of following stress causal agents for students:</p> <p>(a) Mental (b) Social</p> <p>Ans:</p> <p>a) Mental:</p> <ul style="list-style-type: none"> • Unable to handle their assignment, submission deadlines and examination grades • High expectations from self/family/society • Uncontrolled internet usage (viz. Social media, Gaming etc.) • Financial constraints/problems • Poor time management • Stress due to Pandemic/Unforeseen circumstances • Health issues • Not getting due attention/importance (identity crisis) etc. <p>b) Social:</p> <ul style="list-style-type: none"> • Discord among family members • Peer Pressure • Status show off • Maintaining balance in relationships among friends/family • Bullying/Stalking/Trolling • Physical appearance • Gender Bias etc. <p style="text-align: center;"><i>(1 mark each for any correct/relevant example)</i></p>	1+1																
Q8.	<p>Differentiate between files and folders.</p> <p>Ans:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%; text-align: center;">Files</th> <th style="width: 50%; text-align: center;">Folders</th> </tr> </thead> <tbody> <tr> <td>1. All information stored in a computer is kept in files.</td> <td>1. A folder is a location/container where file(s)/folder(s) can be stored.</td> </tr> <tr> <td>2. Files may or may not have extension.</td> <td>2. Folders do not have extension.</td> </tr> <tr> <td>3. Different types of files store different types of information.</td> <td>3. A folder can contain any type of files/folders.</td> </tr> <tr> <td>4. A file cannot contain another file.</td> <td>4. A folder can contain another folder.</td> </tr> <tr> <td>5. A file is a collection of text, images, videos etc.</td> <td>5. A folder is collection of text, images, video files.</td> </tr> <tr> <td>6. Files take space in computer memory</td> <td>6. Folders do not take space in computer memory</td> </tr> <tr> <td>7. Example: abc.txt, abc.jpg, abc.mp4 etc.</td> <td>7. Example: abc, Game, Photos etc.</td> </tr> </tbody> </table>	Files	Folders	1. All information stored in a computer is kept in files.	1. A folder is a location/container where file(s)/folder(s) can be stored.	2. Files may or may not have extension.	2. Folders do not have extension.	3. Different types of files store different types of information.	3. A folder can contain any type of files/folders.	4. A file cannot contain another file.	4. A folder can contain another folder.	5. A file is a collection of text, images, videos etc.	5. A folder is collection of text, images, video files.	6. Files take space in computer memory	6. Folders do not take space in computer memory	7. Example: abc.txt, abc.jpg, abc.mp4 etc.	7. Example: abc, Game, Photos etc.	2
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	<i>(1 mark for writing any one point for files, 1 mark for writing any one point for folders) (Any relevant difference/example apart from the above should also be considered)</i>							
Q9.	<p>Give any two qualities of a successful entrepreneur.</p> <p>Ans:</p> <p>Qualities of successful entrepreneur:</p> <ul style="list-style-type: none"> • They are confident/ patient/ optimistic/ energetic/ passionate/ risk takers/ innovative/ perseverant/ hard working/ persistent/ disciplined/ self-independent/ decision makers/ problem solver/ visionary. • They provide job opportunities. • They believe in themselves and their abilities. • They keep trying new ideas in their business. • They have leadership qualities. • They are creative and think differently about business ideas. • They take responsibility for their actions. • They do not give up when they face a difficulty. • They have competitive spirit. • They have good communication skills. • They have strong work ethics etc. <p><i>(1 mark each for any two correct/relevant qualities)</i></p>	2						
Q10.	<p>Give any two promotional functions of an entrepreneur.</p> <p>Ans:</p> <p>Promotional functions of an entrepreneur:</p> <ul style="list-style-type: none"> • Idea Discovery/Idea generation/ Ideation • Determining the business objective • Detailed Investigation • Assembling the Requirements/procurement of Machines and Materials/ Resource acquisition • Preparation of Business Plan • Financing <p><i>(1 mark each for any two correct/relevant functions)</i></p>	2						
	Answer any 4 out of the given 6 questions in 20 – 30 words.	4x2 = 8						
Q11.	<p>Differentiate between Keep Scale and Keep image size options while cropping an image in a document.</p> <p>Ans: Difference between Keep Scale and Keep image size:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Keep Scale</th> <th style="text-align: center;">Keep image</th> </tr> </thead> <tbody> <tr> <td>1. When Keep scale is selected, cropping the image does not change the scale of the picture.</td> <td>1. When Keep image size is selected, cropping produces enlargement, shrinking, or distortion of the image so that the image size remains constant.</td> </tr> <tr> <td>2. When Keep scale is selected, size of the image changes.</td> <td>2. When Keep image is selected, size of the image does not change.</td> </tr> </tbody> </table> <p><i>(1 mark for writing any one point for Keep Scale, 1 mark for writing any one point for Keep image) (Any relevant difference apart from the above should also be considered)</i></p>	Keep Scale	Keep image	1. When Keep scale is selected, cropping the image does not change the scale of the picture.	1. When Keep image size is selected, cropping produces enlargement, shrinking, or distortion of the image so that the image size remains constant.	2. When Keep scale is selected, size of the image changes.	2. When Keep image is selected, size of the image does not change.	2
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<p>Q12.</p>	<p>Give any two characteristics of a template in Open Office Writer.</p> <p>Ans:</p> <p>Characteristics of a template in Open Office Writer:</p> <ul style="list-style-type: none"> • A template is a pre-defined format/model that is used to create other documents. • They can contain anything that a regular document can contain- text, graphics, styles etc. • Templates simplify the creation of documents. • Templates can ease our workload • Templates can increase our efficiency. • They help in saving time and money. • Templates improve clarity and consistency. <p style="text-align: center;"><i>(1 mark each for any two correct/relevant characteristics)</i></p>	<p style="text-align: center;">2</p>
<p>Q13.</p>	<p>Why do we need to merge worksheets?</p> <p>Ans:</p> <p>Sometimes, multiple reviewers return edited versions of a worksheet at the same time. In this case, it may be quicker to review all of these changes at once, rather than one review at a time. For this purpose, Calc provides the feature of merging worksheets.</p> <p style="text-align: center;">OR</p> <p>When multiple copies of same worksheets are modified by multiple users then all of them need to be merged into a single sheet.</p> <p style="text-align: center;">OR</p> <p>To summarize/combine data from separate worksheets into a single sheet, we need to merge worksheet.</p> <p style="text-align: center;"><i>(2 marks for correct/relevant answer)</i></p>	<p style="text-align: center;">2</p>
<p>Q14.</p>	<p>What is a Primary Key? How is it different from foreign key?</p> <p>Ans:</p> <p>A primary key is a unique value that identifies a row/record in a table.</p> <p style="text-align: center;">OR</p> <p>A primary key is a field/column/attribute or set of fields/columns/attributes which uniquely identifies records/rows/tuples in a table/relation.</p> <p style="text-align: center;">OR</p> <p>Primary Key cannot contain duplicate values and it cannot be NULL.</p> <p style="text-align: center;">OR</p> <p>Primary Key = Unique + Not Null</p> <p>How is primary key different from foreign key:</p> <ul style="list-style-type: none"> • A foreign key can contain duplicate values while primary key cannot. • A foreign key can contain null value while primary key cannot. • A table can have multiple foreign keys but only one primary key. • Value of foreign key is derived from primary key. • A primary key of a table is referred as foreign key in another table. • Primary key focusses on uniqueness of values while foreign key is used for creating relationships between tables. • The foreign key identifies a column or set of columns in one (referencing) table that refers to a column or set of columns in another (referenced) table. <p style="text-align: center;"><i>(1 mark for definition of Primary key and 1 mark for any one correct/relevant difference)</i></p>	<p style="text-align: center;">2</p>

<p>Q15.</p>	<p>Expand and explain the term WAN.</p> <p>Ans:</p> <p>Full Form of WAN is Wide Area Network.</p> <p>Explanation: A network which connects computers and devices over a broad /large geographical area (i.e. any network that links across metropolitan, regional or national boundaries) eg. Internet.</p> <p style="text-align: center;">OR</p> <p>WAN is a network which spans across several cities, countries, continents or even the whole world.</p> <p style="text-align: center;"><i>(1 mark for expansion and 1 mark for any correct/relevant explanation/example)</i></p>	<p style="text-align: center;">2</p>
<p>Q16.</p>	<p>(a) Identify the following network/Internet connectivities as wired or wireless:</p> <p>(i) Dial-up (ii) WiMax</p> <p>Ans:</p> <p>(i) Dial-up: Wired (ii) WiMax: Wireless</p> <p style="text-align: center;"><i>(1/2 mark each for correct identification of Dial-up and WiMax)</i></p> <hr/> <p>(b) Give any one feature of Instant messaging.</p> <p>Ans:</p> <p>Features of Instant messaging:</p> <ul style="list-style-type: none"> • Text Messages can be sent to one or more person (Similar to SMS) • Audio calling and conferencing • Video calling and conferencing • File transfers (viz. documents, spread sheets, audio files, video files, image files etc.) • Message history (Save messages for future reference) • Payment option is available on various messaging platforms • Online games and entertainment • Add/Click Photos and videos • Voice messaging • Online polls • Sharing contacts/location • Group formation • Messages can be encrypted etc. <p style="text-align: center;"><i>(1 mark for any correct/relevant feature)</i></p>	<p style="text-align: center;">1+1=2</p>
	<p>Answer any 3 out of the given 5 questions in 50 – 80 words.</p>	<p style="text-align: center;">3x4=12</p>
<p>Q17.</p>	<p>Explain the following terms with respect to positioning the graphics in a document:</p> <p>(a) Arrangement (b) Text Wrapping</p> <p>Ans:</p> <p>(a) Arrangement Arrangement refers to the placement of a graphic on an imaginary vertical axis. Arrangement controls how graphics are stacked upon each other or relative to the text.</p> <p style="text-align: center;">OR</p> <p>Arranging an image means to determine its position relative to other images, objects or text. Send to back, send backward, bring to front, bring forward are the various options available under this.</p>	<p style="text-align: center;">2+2</p>

(b) Text Wrapping

Text wrapping refers to the relation of graphics to the surrounding text, which may wrap around the graphic on one or both sides, be overprinted behind or in front of the graphic, or treat the graphic as a separate paragraph or character.

OR

Text wrapping causes all the text to wrap around the image so that the image does not interfere with line spacing. Various text wrapping options are: before, after, parallel, through and optimal.

(2 mark each for correct/relevant explanation of Arrangement and Text Wrapping)

Q18. Distinguish between the following with respect to spreadsheets:

- (a) Relative and Absolute hyperlink
- (b) Internet hyperlink and Document hyperlink.

Ans:

(a)

Relative hyperlink	Absolute hyperlink
1. A relative link will stop working only if the start and target locations change relative to each other. 2. A relative hyperlink is hyperlink that contains an address that is relative to the address of the destination file. 3. In relative hyperlink, the files should be in the same folder.	1. An absolute link will stop working only if the target is moved. 2. An absolute hyperlink is a hyperlink that contains the full address of the destination file of the Web site. 3. In absolute hyperlink, the files can be stored anywhere in the system.

(b)

Internet hyperlink	Document hyperlink
1. The Internet hyperlink points to a web address, normally starting with http:// 2. An internet hyperlink is a clickable element on a webpage that connects to another webpage or website. 3. Internet is required.	1. The document hyperlink points to a place in either the current worksheet/document or another existing worksheet/document. 2. Document hyperlink is a clickable link within a worksheet/document that takes us to another location within the same document or different document. 3. Does not require internet

(1 mark each for writing any one point

for Relative hyperlink, Absolute hyperlink, Internet hyperlink, Document hyperlink)

(Any relevant difference apart from the above should also be considered)

Q19. Explain any four data types of DBMS.

Ans:

Data types of DBMS are:

• **Numeric Types:** It stores numeric type of data.

- Boolean: It can store Yes/No type values in the form of 0 or 1
- Integer/Int/ Tinyint/ Smallint/ Mediumint/ Bigint: It can store integer values.
- Number/ Numeric/Float/Double/Real: It stores integers or whole numbers, and number with decimals.
- Decimal: It can store number with decimals.

2+2

4

- **Alphanumeric Types:** It stores text or/and numeric type of data.
 - Char: It stores exactly the number of characters specified by the user.
 - Varchar: It stores up to the specified number of characters.
 - Longvarchar: It stores up to the maximum number of characters specified by the user.
 - Varchar_ignorecase: It stores up to the specified number of characters. Comparisons are not case-sensitive, but stores capitals as you type them.
- **Binary Types:** It stores array of bytes
 - Binary: It is fixed, stores any array of bytes.
 - Varbinary: It is not fixed. stores any array of bytes.
 - Longvarbinary: It stores any array of bytes (images, sounds, etc).
- **Date time:** It stores date and(or) time information.
 - Date: It stores month, day and year information.
 - Time: It stores hour, minute and second information.
 - Timestamp: It stores date and time information.

*(1/2 mark each for name of four datatypes/category and
1/2 mark for each correct/relevant explanation)*

Q20. (a) Structure of a table "Orders" is given below. Suggest suitable data type of each column.

2+2

Table : Orders

Order_ID	Order_date	Customer_ID	Amount
A_101	12/12/19	C3445	1200.00
A_202	11/09/19	C1245	3456.00
A_402	09/07/19	C2121	2312.00

Ans:

Columns	Data Types
Order_ID	CHAR / VARCHAR / TEXT
Order_Date	DATE / DATETIME
Customer_ID	CHAR / VARCHAR / TEXT
Amount	DECIMAL/FLOAT/ DOUBLE /NUMBER/NUMERIC

(1/2 mark each for writing correct data type of each column)

(b) Consider the following table "Books"

BkID	BkName	Author	Qty	Price
B_101	Learning with Fun	Jacobins	5	355.00
B_103	How I Live Now	Meg Rosoff	4	400.00
B_104	I Capture the Castle	Dodie Smith	5	520.00
B_106	Mortal Engines	Philip Reeve	4	260.00
B_110	The Kite Rider	Geraldine McCaughrean	3	270.00

Write SQL queries to:

(i) Display data of all books whose quantity is more than 3.

Ans:

SELECT * FROM Books WHERE Qty > 3 ;

OR

SELECT BkID, BkName, Author, Qty, Price FROM Books WHERE Qty > 3 ;

(ii) Display total amount of all books whose price is less than 500.

(Hint: amount= Qty x Price)

Ans:

SELECT Qty * Price FROM Books WHERE Price < 500 ;

OR

SELECT Qty * Price AS Amount FROM Books WHERE Price < 500 ;

OR

SELECT Qty * Price "Amount" FROM Books WHERE Price < 500 ;

OR

SELECT Qty * Price "Total amount" FROM Books WHERE Price < 500 ;

OR

SELECT Qty * Price AS TotalAmount FROM Books WHERE Price < 500 ;

OR

SELECT Qty * Price AS Total_Amount FROM Books WHERE Price < 500 ;

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

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

For Visually impaired candidates:

Explain various relationships that can be created between two tables in a database.

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.

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	<p style="text-align: center;">OR</p> <p>In this relationship, several records in table A is associated with one record in table B.</p> <p>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.</p> <p style="text-align: center;">OR</p> <p>In this relationship, a record in table A is associated with several records in table B and vice-versa.</p> <p style="text-align: center;"><i>(2 marks each for correct explanation of any two types of relationship)</i> <i>Note: 1 mark should be awarded for example without explanation.</i></p>	
<p>Q21.</p>	<p>(a) Give two best practices for internet safety.</p> <p>Ans:</p> <p>Best practices for internet safety:</p> <ul style="list-style-type: none"> • Use updated antivirus or antispymware software • Install and use a firewall • Use strong passwords • Change password regularly • Use encryption software • Keep username, password private • Clear browser history frequently • Check Privacy Policies • Don't share personal information • Secure Transactions • Don't respond to unknown mails/ links • Update software regularly • Don't install software from unknown sources • Remove unwanted software etc. <p style="text-align: center;"><i>(1 mark each for any two correct/relevant best practices)</i></p>	<p>2+2</p>
	<p>(b) Give any two Falls and Slips Safety rules.</p> <p>Ans:</p> <p>To prevent Falls and Slips the following safety rules can be followed:</p> <ul style="list-style-type: none"> • The area where people movement is very high should be cleaned and clutter-free. • The workplace should be properly ventilated and have good light area. • The employees who are working in such slippery areas must wear non-slippery footwear. • The floors must be clean and dry before the movement of people. • If any oil, water or dust is there, it should be cleaned immediately. • Using clear and well-placed signage/ caution boards. • Use handrails when you walk up and down steps. • Before using any ladder or stepladder, make sure it opens fully. • Any wires/chords should be properly fixed. • Carry out a regular risk assessment etc. <p style="text-align: center;"><i>(1 mark each for any two correct/relevant safety rules)</i></p>	
