Class X

ANSWER KEY

Information Technology

Part-B: Subject Specific Skills

1. Advanced Features of Word Processor

Unit 1: Digital Documentation [Advanced]

Unsolved Exercise

Section A

A. 1. iii 2. ii 3. iii 4. i 5. ii 6. iii
7. i 8. ii 9. ii 10. ii

B. 1. formatting 2. F11 3. Crop tool 4. Anchors 5. Bring to front
6. Template 7. document template

Section B

A. 1. Digital documentation is a method of converting the physical text into digital text. Example, formatting options to create arranged documents. Pictures can be inserted in digital documents, table options can be used to create and store data, etc.

2. Outline Numbering defines the hierarchy of headings in a document. Typically the first-level headings in a book-length document are the next level of headings after the chapter titles which may be numbered. Some chapter titles and heading styles provide number to each chapter and heading level, for example 1, 1.1, 1.2, 2, 2.1, and so on. When chapters or sections are added or deleted, the numbering is automatically changed. The default paragraph styles assigned to outline levels are the heading styles Heading 1, Heading 2 and so on.

3. In Word, the 'table of contents' feature enables us to build an automated table of contents from the headings present in our document. Whenever changes are made in the textual part of heading in any document or the page on which the heading appears, those changes automatically appear in the table of contents into which it is next updated.

4. (This question was printed incorrectly in the book, please correct this question in your textbook)

Q. What is cropping? Write the steps to crop an image.

Ans. Cropping is the process to trim or remove some portion of an image along its edges. To crop an image:

Step 1: Select the image to be cropped.

Step 2: Click on Format tab.

Step 3: Click on Crop command. The handles around the image will change to straight lines (along the edges) and L-shaped (around the corners).

IMPRINT 1

Step 4: Click and drag the handles to remove the required portion from the image.

Step 5: Release the mouse button when the not required portion of the image appears dimmed.

5. Some of the popular methods to insert object/image are:
   - Inserting an image from a file
   - Inserting graphics from the Clip Art with Drag and Drop.
   - Inserting a an Excel chart into a Word document
6. There are different types of styles in word processor.
   1. **To apply a style:**

      Step 1: Select the text. Here, title of the document is selected.

      Step 2: Click on Home tab.

      Step 3: Click on More drop-down arrow in the Styles group. A list of pre-defined Styles opens up.

      Step 4: Click and select a style. Here, we have selected Intense Quote style. The chosen style is applied to the selected text in the document.

   2. **Format Painter**

      It is used to quickly apply the style on some text in the document to other text also in the document. To apply 'Styles' using Format Painter:

      Step 1: Move the cursor to the text from which the style is to be copied.

      Step 2: Click on Home tab.

      Step 3: Click on Format Painter command from the Clipboard group. The mouse pointer changes to a paintbrush icon.

      Step 4: Use the brush to paint over a selection of text or graphics to apply the copied formatting. This will only work once. If the copied style is to be applied to more than one part of the text, double-click on the Format Painter command in Step 3 and then apply Step 4 on all parts of the text. To stop Paint Format, press Esc key.

   The chosen style is applied to the selected text in the document.
7. Positioning images means aligning images relative to the page margins. Images can be aligned horizontally and vertically. There are three ways to align images horizontally (left, center, right) and three for aligning images vertically (top, middle and bottom).
8. Some of the popular arrangement techniques used in word processor are:
   - **Bring to Front:** This option places the image on top of any other graphics or text.
   - **Bring Forward:** This option brings the image one level up on the screen relative to other objects (image or text). Depending on the number of overlapping objects, this option may be used several times to obtain the desired result.

- **Send Backward:** This option works opposite of 'Bring Forward' option. It sends the selected objects one level down in the screen.
- **Send to Back:** This option sends the selected image to the bottom of the screen relative to other object (image or text), so that other images and text can cover it.

9. i. A character style is a collection of character formatting attributes that can be applied to text in a single step.

   ii. Cropping means removing unwanted area from an image starting from its boundary. In cropping, only a part of the original image remains.

   iii. Resizing is the process of altering the image size without cutting any part of the image. When resizing an image, we change the dimension of the image so that it fits in the desired area.

   iv. A template is a document that contains pre-defined formatting styles, graphics, tables, objects, and other information that are commonly used in a particular pattern. Thus it saves our time too. We can create template to design a pattern for leave application, online form, brochure, front page of our project, etc. A template is used for creating other documents.

10. i. **Step 1:** After scanning image, place the image in a folder that you can access.

   Step 2: In Word, place cursor at location where you want your image to be inserted.

   Step 3: On the Insert tab of the ribbon, click Pictures. Select your scanned image and click Insert.

   ii. **Step 1:** Create a document. Use different paragraph styles for different heading levels such as 'Heading 1' style for 'Chapter Titles' and the 'Heading 2' & 'Heading 3' styles for chapter's headings and sub-headings respectively.

   Step 2: Place the cursor where you want the table of contents to be inserted.

   Step 3: Click on References tab.

   Step 4: Click on Table of Contents command in the Table of Contents group to open a drop-down list.

   Step 5: Click on one of the style of Table of Contents. The Table of Contents appears at the required place in the document.

   iii. **Step 1:** Right-click on the image. Hover the mouse over Bring to Front.

   Step 2: Choose desired arrangement option from the submenu.

   iv. **Step 1:** Right-click on the image. Hover the mouse over **Send Backward** option.

   Step 2: Choose desired arrangement option from the submenu.

B. 1. Header 2. Formatting

Previous Years' Questions

1. Word Processor
2. Steps to highlight text in an open office writer: Select the first word of text. Then select Shift+F8. Move the key arrow to move the next words of text is to be selected.
3. Insert Menu
4. Header & Footer
5. Slides
6. Chapter name, Page number, Book name, Author's name
7. Section breaks can be used to separate a document into sections. Section break help in following ways:
   - It adds flexibility to formatting a document.
   - We can separate the chapters as separate sections in our document.
   - We can create different headers & footers, different footnote numbering, change the layout of columns, change page borders for different pages, and even change page layouts in the same document.
8. section
9. Reader
10. capitalise each word
11. A template is a document that contains pre-defined formatting styles, graphics, tables, objects, and other information that are commonly used in a particular pattern. Thus, it saves our time too. We can create template to design a pattern for leave application, online form, brochure, front page of our project, etc. A template is used for creating other documents.

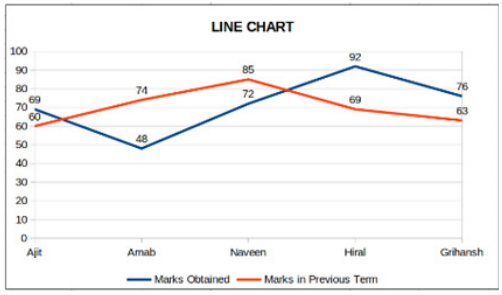
    For example, we can define paragraph and character styles in a document, save the document as a template and then use the template to create a new document with the same styles.
12. A Style is a set of predefined formatting options that can be applied in a word processor document of OpenOffice Writer or MS Word.
13. To insert a page break:
    i. Place the cursor where you want to add page break.
    ii. Click on the Insert tab.
    iii. Click on Page Break command from Pages group.
14. Capitalisation of the text that that the user is typing is called its Case. The user can change the capitalisation of text using the Change Case option from the Font group under Home tab. The different change case options of word are:

Change Case Option	Explanation
Sentence case	The first letter of the sentence is uppercase, and the rest are lowercase
Lowercase	All the alphabets of the selected text are made lower case

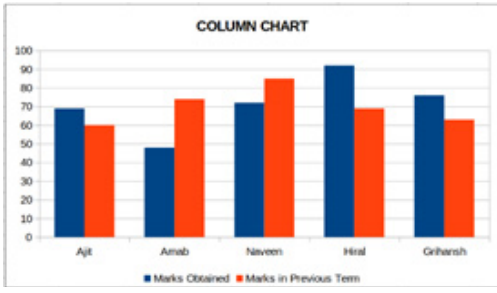
Uppercase	All alphabets of the selected text are made upper case
Capitalize each word	First alphabet of each selected word is made uppercase
Toggle case	The case of all the selected text is inverted reversed, that is uppercase alphabets are changed to lowercase while lowercase alphabets are changed to uppercase.

15. **Types of Charts:**

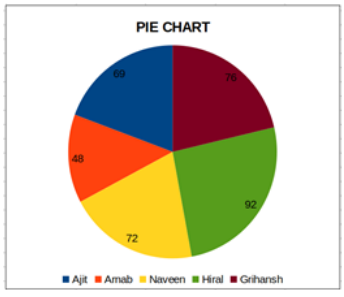
1. **Line Chart:** It is used to show trends over a period of time. It is similar to plotting a graph on a graph paper with its values on X and Y axis. It uses connecting dots to display trends over a period of time.



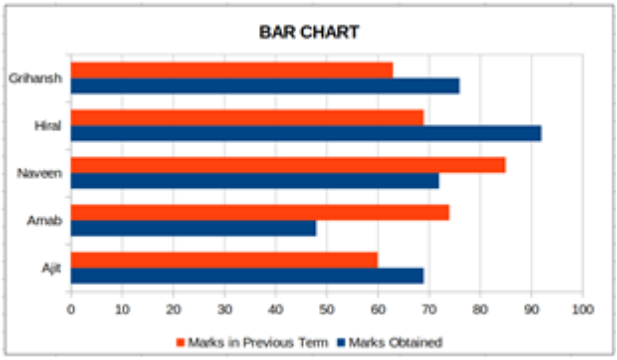
2. **Column Chart:** It is usually used to display the data in the form of vertical bars. It is used to show the changes in data over a period of time or comparison among the different data items. The categories are represented on the horizontal axis and the values are represented on the vertical axis.



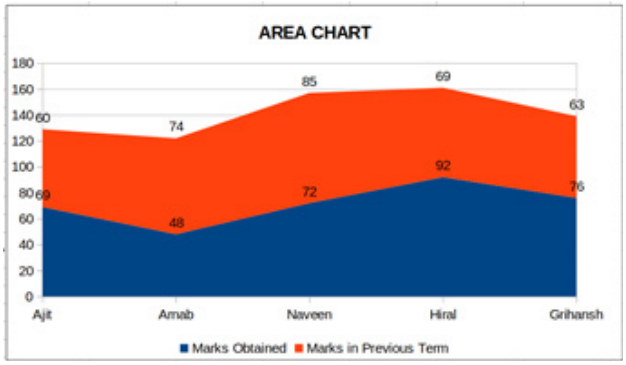
3. **Pie Chart:** It is a circular chart divided into sectors where each sector shows the relative size of each value. It always shows only one data series. It is useful when you want to emphasis on a significant element.



4. **Bar Chart:** The bar chart displays the data in the form of long rectangular rods also called bars. These bars can be placed horizontally on the chart area. It illustrates the comparisons amongst the individual items. In this chart, categories are represented on the vertical axis and values are represented on the horizontal axis.



5. **Area Chart:** It is used to display the quantitative magnitude of the data graphically. These charts are based on the features of the line chart. They basically emphasise the area between the line and the axis with the help of the colours, textures, pictures, etc.



16. To insert a table in a document:
    i. Position the insertion point where the table has to be inserted.
    ii. Click on Table drop-down button from the standard toolbar.
    iii. Click and hover the mouse pointer across the grid to select the desired number of columns and rows.
    iv. Release the mouse button. The table will be created.
17. horizontal
18. Name, Qualification, Work Experience, Contact no.
19. OR Four types of tab alignment options available in Word Processor are:
    - **Left:** The contents will be aligned towards the left side of the cell.
    - **Right:** The contents will be aligned towards the right side of the cell.
    - **Center:** The contents will be aligned towards the center of the cell.

- **Filled:** The contents will be displayed within the column width only. The data which does not get accommodated in the cell width will be hidden in the cell.
- **Justified:** The contents will be displayed completely within the column width by increasing the column width.

20. A template is a document that contains pre-defined formatting styles, graphics, tables, objects, and other information that are commonly used in a particular pattern. Thus, it saves our time too. We can create template to design a pattern for leave application, online form, brochure, front page of our project, etc. A template is used for creating other documents.

    For example, we can define paragraph and character styles in a document, save the document as a template and then use the template to create a new document with the same styles.

    To use pre-existing or created template, follow the steps given below:

    Step 1: Click on 'File' menu, then select 'New' option. A sub-menu appears. Click on 'Templates and Documents' from the sub-menu.

    Step 2: Select the required template (Here, NOTES) for the new document.

    Step 3: Click on 'Open' button.

2. Advanced Features of Spreadsheet

Unsolved Exercise

Section A

A. 1. iv 2. i 3. iii 4. iv 5. i 6. iii
7. ii 8. iv 9. ii 10. iii

B. 1. single worksheet 2. Goal Seek 3. Solver 4. Sheet1 5. Hyperlinks

Section B

A. 1. **Data consolidation** refers to collecting and integrating data from multiple worksheets or workbooks into a single/master worksheet.

During this process, the 'Data Consolidation' function takes data from a series of worksheets or workbooks and summarizes it into a single worksheet.

To Combine Cell Contents

Step 1: Open the worksheets that contain the cell ranges to be consolidated.

Step 2: Insert a new worksheet and rename as Consolidated Sheet to store the Total sales of each item.

Step 3: Click on Data tab.

Step 4: Click on Consolidate command. The Consolidate dialog box will open.

Step 5: Click on the Reference text box. A blinking cursor will appear in the box.

Step 6: Click and drag to select a source cell range from the worksheet to consolidate with other areas.

Step 7: Click on Add button.

Step 8: Repeat Steps 6 and 7 to add more source cell ranges to be consolidated.

Step 9: Click and select Sum function (if not selected by default) to add the quantities of different items.

Step 10: Check the Top row, Left column and Create links to source data check boxes.

Step 11: Click on OK button to consolidate the reference ranges.

2. In Microsoft Word, PowerPoint and Paint, only one user can open a document for editing. But in Excel, many users can open the same worksheet/workbook for entering and editing the data at the same time. This feature enables to share the spreadsheet file with several users and edit the same workbook without keeping track of multiple versions.
3. Sum
4. Scenario is a tool to test 'what-if' questions. Scenario is a set of values that spreadsheet saves and can substitute automatically in cells on a worksheet. Each Scenario is named and can be edited and formatted separately, and chosen from a list in the Scenario Manager dialog box. When the spreadsheet is printed, only the contents of the currently active Scenario are printed. By adding a Scenario, arguments of a formula the new results can also be viewed easily.
5. Like scenarios, Data Table is also a planning tool for 'what-if' questions. The Data Table tool creates a formula array which is a separate set of cells that give all the alternative results for the formulas used. Although the tool is not listed among the functions, it is really a function that acts on other functions, allowing you to calculate different results without having to enter and run them separately.

   Let's say 'ABC' Publisher publishes a book whose selling price is Rs. 100 (cell B1), manufacturing cost of each book is Rs. 35 (cell B2), in addition to fixed cost of Rs. 50,000 per year (cell B3). We can calculate profit made by the Publisher in a year if they sell 2000 books and profit for different sale of quantities that are 2500, 3000, 3500, 4000 using data table.
6. Goal Seek feature is an important part of What-if Analysis feature of spreadsheet. Goal Seek is basically used when our output or target value is fixed and we have to make a change in any one of the input cell values. Goal Seek option reverses the usual order of a formula. While creating a formula or function in spreadsheet, we use various parts together to calculate a result. Goal Seek works in the reverse way. It starts with the desired result and it calculates the input value accordingly.
7. Solver is a more descriptive form of Goal Seek. Solver can deal with equations having multiple unknown variables. Goal Seek is used to manipulate one input cell after the outcome or target is fixed. In Solver, we can manipulate a set of cells after knowing the output and can estimate the minimum or maximum value that can be entered into those cells. It is specifically designed to minimize or maximize the result according to a set of limiting rules defined by

the user. Each of these rules sets up whether an argument in the formula should be greater than, lesser than, or equal to the entered value. If the arguments need not to be changed, set the rule so that the argument in the cell is equal to its current entry.

8. **Step 1:** Click on Home tab.

   Step 2: Click on More Options arrow of Insert command.

   Step 3: Click on Insert Sheet option.

9. To rename a worksheet:

   Step 1: Double-click on one of the existing worksheet names.

   Step 2: The name of the worksheet gets highlighted. Type the desired name of the worksheet and press Enter key.

10. Do it yourself.

B. 1. Sorting 2. Macros

Previous Years' Questions

1. SUM
2. rowwise, columnwise
3. (a) =SUM(B3 : E3)

   (b) Multiple operations

   (c) =MAX(B5 : E5)

   (d) AVERAGE(B3 : B6)

   (e) = C5 – C4
4. Charts
5. File
6. Freeze Panes is spreadsheet means to keep specific rows or columns visible when the user scrolls in the worksheet. It is generally used when the initial rows or columns of the worksheets contain labels.
7. (a) Autosum

   (b) Right click on sheet tab → Rename

   (c) Freeze Panes
8. (a) F2 = C2 + D2

   F3 = C3 + D3

   F4 = C4 + D4

   F5 = C5 + D5

   F6 = C6 + D6

   (b) Sort Descending

   (c) =MAX(F2 : F6)

(d) =AVERAGE(C2 : C6)

(e) View → orientation → Portrait

9. rowwise, columnwise
10. Window, View
11. (b)
12. **Types of Charts:**
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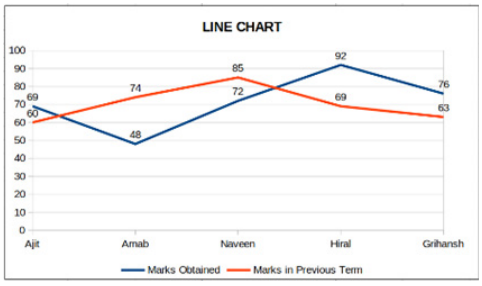

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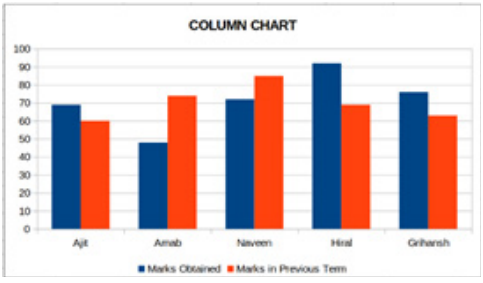

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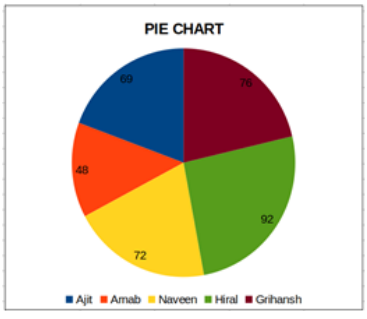

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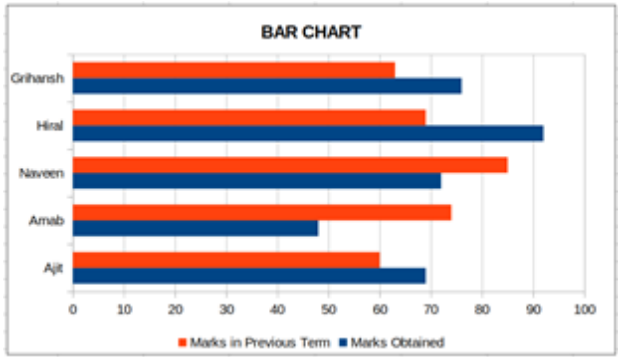

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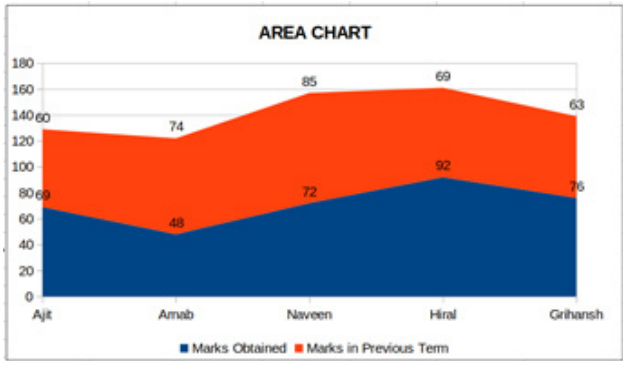

13. (a) =B2 * D2

(b) =(10 * E2)/100

(c) =E2 + F2

(d) =MAX(B2 : B7)

(e) =COUNT(D2 : D7)

3. More About Spreadsheet

Unsolved Exercise

Section A

A. 1. ii 2. ii 3. iii 4. i 5. ii 6. ii

7. ii 8. i

B. 1. Track changes 2. Show all comments 3. colour.
4. comment 5. Tools

Section B

A. 1. Few changes are not recorded. For example, changing of text alignment in cell from left to right is not recorded. However, all usual changes made by a proof reader are recorded, such as additions, deletions, text alterations, and usual formatting.

To start recording changes:

Step 1: Open the document to be edited.

Step 2: Click on Review tab.

Step 3: Click on drop-down arrow of Track Changes command of **Changes** group.

Step 4: Click on **Highlight Changes** option from the list.

2. Comments are used to add a note or explain a formula in a cell. One can edit, delete and show or hide a comment in Excel worksheet.

Steps to add a comment:

i. Place the cursor on the cell you want to add a comment.

ii. Right click on the cell and scroll down the list to Insert Comment command.

3. **Step 1:** Open the edited worksheet.

Step 2: Click on **Review** tab.

Step 3: Click on drop-down arrow of Track **Changes** command in **Changes** group.

Step 4: Click on **Accept/Reject Changes** option. **Select Changes to Accept or Reject** window opens.

Step 5: When: Not yet reviewed' option is selected by default. Click on OK button.

Step 6: Accept or **Reject Changes** window opens.

Based on the suggested review, click on:

Accept button to accept the change.

Reject button to ignore the change and revert to the original value of the cell.

To accept all the reviews, click on **Accept All** button.

To reject all the reviews, click on **Reject All** button.

Click on Close button to close the window after accepting or rejecting the reviews.

4. Macros are the set of stored functions that can be used to automate processes that are repeated often. They are tools which can be used to perform most of the redundant tasks with relative ease. A Macro is a saved sequence of commands or keystrokes that are stored for later use. An example of a simple macro is one that 'types' our address. The Microsoft macro language is very flexible, allowing automation of both simple and complex tasks. Macros are especially useful in execution of such type of tasks which are repeated again and again frequently or within a specified time interval in the same manner.

5. **Step 1:** Click on **Page Layout** tab.

   Step 2: Click on **Print Titles** command from Page Setup group. The Page Setup dialog box appears on the screen.

   Step 3: Click on the **Comments** drop-down arrow to open the drop-down list.

   Step 4: In the drop-down list, click on:

   At end of sheet option to print all the comments at the end of the worksheet on the paper.

   As displayed on sheet option to print all the comments at the same place as they appear on the screen. This option is rarely used as it hides the text in the cells hidden behind the comment box.

   Step 5: Click on **OK** button to set print the comments on for the worksheet.

6. Comparing different versions of spreadsheet file helps find duplicate records, broken links, inconsistent formulas or wrong formatting.
7. Do it yourself
8. Sorting means arranging data in either ascending or descending order. Rearranging data helps to find values quickly. Data to be sorted can be either a range or table of data on one or more columns of data. For example, employees data can be sorted first by department and then by last name.

Previous Years' Questions

1. Fill Color, Fill Pattern.
2. (c)
3. Calc gives the user an advance formatting feature known as Conditional Formatting. This feature enables the user to apply formatting to only those cells in the worksheet which satisfy a particular condition. The formatting is not applied to the cells which do not satisfy the condition.
4. Sorting means grouping some data by class or type or size. Calc has a built-in feature to sort lists. Calc can sort a list both in ascending or increasing order and descending or decreasing order. In case of both ascending or descending order, Calc first sorts numbers, then alphabets followed by blanks cells.

   Filter is an object that removes something from whatever passes through it. The Filter feature of Calc gives the user the required information without making any change in the order of the list.

Unsolved Exercise

Section A

A. 1. i 2. iii 3. iii 4. i 5. i 6. i
7. i 8. iii

B. 1. E.F. Codd, IBM, 1970. 2. Information 3. Sorting 4. Foreign key
5. field size 6. field size 7. data property 8. Primary key

Section B

A. 1. **Reduction in Data Redundancy**

Data redundancy refers to the duplication or the repetition of data. A DBMS provides a centralised control over data i.e., all the data or the information is kept at one place and any application that requires relevant data can access it from the central location.

Reduction in Data Inconsistency

In DBMS, the stored database is consistent and remains updated. In case data of any item is changed i.e., when the modification is made in one portion of data, the changes are done automatically to all other portions wherever that data has been used. This process is also known as **Propagating Update**.

Sharing of Data

Sharing of data means that the same data stored at one place can be shared by multiple users or different applications. Due to sharing, it is possible to fulfill the data requirement of new applications without having to create the same data again from the beginning.

Enforcement of Data Standards

In DBMS, access to the database is done in a standardised and systematic manner. Standards may relate to the naming of the data, the format of the data, report generation, structure of the data, and so on. Standardisation of data helps in migrating or exchanging data between different systems.

Ensures Data Security

A database management system ensures the security that only the authorised users are allowed to access the data of a database. To operate, different users can be given separate and restricted access levels to the data of a database.

Data Integrity

Data integrity implies validation of data. The database management system ensures that only valid data can be entered into the database. There may be certain standards laid down by an organisation, which needs to be implemented while storing the data in the database.

Interactive Interface

DBMS provides more convenient interface for entering or viewing data. In DBMS, there is an easy availability of information as the data can be presented in an exact and proper format. DBMS also makes it easy to respond to unexpected requests for a new type of information.

2.
   - **Data:** In DBMS package, data is generally kept in a tabular format and is organised by fields, records and files.
   - **Field:** A field represents a single type of related information; a record is a complete set of values stored under different fields whereas a file is a collection of records and the records are kept in table.
   - **Table:** A table is a collection of logically related records. The multiple records of a database are arranged together in a tabular structure to make a table. It is made of rows and columns.

     Generally, a column represents a field which contains information of a particular type, whereas a row represents records which contain information of the related fields.
   - **Field:** A field represents one related part of a table. It contains the logically related data contained in a database. For example, age, name , address, designation and phone are fields in the table given below.
   - **Record:** A record is a collection of multiple data which is stored in related fields that can be treated as a single unit. It represents the data which is entered in a set of different fields which are related to a particular item. for eg. 22, Andy, New Market Lane, Accountant, 9908457245 is one of the records of the table given below.
3. **One to One:** In this relationship, both the tables must have Primary Key Columns.217 Database Management

   One to Many: In this relationship one of the tables must have a Primary Key column that will be associated with all the columns of related tables.

   Many to Many: In this relationships none of the associated tables have Primary Key column. It means that all the columns of Primary Key fields are associated with all the columns of related tables.
4. Data redundancy refers to the duplication or the repetition of data. In non-database systems, each application has its own separate collection of files. It leads to the repetition of the stored data, thus resulting in wastage of space and time.
5. Sharing of data means that the same data stored at one place can be shared by multiple users or different applications. Due to sharing, it is possible to fulfill the data requirement of new applications without having to create the same data again from the beginning. The same data can be shared outside also, so that new reports or analysis could be made. Sharing of data saves cost and time.
6. OLE object can be used to link files and applications together. OLE object is an external type file for example document, graphics, and video file. It allows us to select objects from a specific document in a particular application and keep it to another place.

7. Default value property specifies the value that will automatically be inserted in a field whenever a new record is entered into the table. If the user leaves the field blank, the default value is saved in the record but if the user modifies the value, the modified value is saved. For example, if the City name of most of the employees of an organisation is' N.DELHI', then instead of writing 'N.DELHI' again and again, it can be specified as default value for the field 'City'.
8. No, there cannot be multiple primary keys in a table since only one field can be used as a unique identification feature of every record.

B. 1. Database Management System like Microsoft Access, OpenOffice Base, MySQL, etc.
2. Sanjeev is unable to fetch the records because the tables are not connected in the database.
3. Data security

Previous Years' Questions

1. INSERT
2. SELECT
3. A Data Definition Language or Data Description Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify and remove database objects such as tables, indexes and users. Common DDL statements are CREATE, ALTER, TRUNCATE, RENAME and DROP. Data Manipulation Language (DML)

   A Data Manipulation language (DML) is a language that enables users to retrieve, update, insert and delete data in a database. Common DML statements are SELECT, UPDATE, INSERT INTO and DELETE.
4. i. Numeric Data Type
   ii. Alphanumeric Data Type
   iii. Date/Time Data Type
5. a. Forms: Forms enable to provide a user interface for entering of data or to display intermediary information. In the Form, the user can add or modify data.
   b. Reports: A report summarizes or displays the information in a format that is suitable for viewing or publishing. Reports are used to present the results in a meaningful and useful manner. Reports can obtain information from tables or queries. Reports are printed to share information.
   c. Table: A table is a collection of logically related records. The multiple records of a database are arranged together in a tabular structure to make a table. It is made of rows and columns.
   d. Primary Key: Primary key is a field which is used to uniquely identify records in a database. It is a unique field and it cannot be left blank. There can be only one primary key in a table. If there are more than one primary keys, then there will be two identities against a row. There can be only one identity against a row. So, we cannot have more than one primary key. To make retrieval of records faster, Primary keys are indexed in database.

6. DDL – ALTER, DROP

   DML – SELECT, INSERT

7. RDBMS is a relational DBMS in which tables are linked to each other by fields. In addition to all the advantages of DBMS, RDBMS helps in the management of a database in a broader way.

8. Database servers are dedicated computers that can hold the actual databases. It can run only the DBMS and its related software. Databases available on the database servers are accessed through Command Line or Graphic User Interface tools also called as Frontends. Other servers are referred to as Backends that process the request and provides the data.
   - Primary Key: Primary key is a field which is used to uniquely identify records in a database. It is a unique field and it cannot be left blank. There can be only one primary key in a table. If there are more than one primary keys, then there will be two identities against a row. There can be only one identity against a row. So, we cannot have more than one primary key. To make retrieval of records faster, Primary keys are indexed in database.
   - Foreign Key: The main table of a database is referred to as the 'Master Table' and the tables in which the related data is stored are referred to as 'Transaction Table'. The tables are related and are linked through a field which is common. This common key field in the transaction table is called the 'Foreign key' and its value depends on the primary key values of the master table.

9. A Data Manipulation language (DML) is a language that enables users to retrieve, update, insert and delete data in a database. Common DML statements are SELECT, UPDATE, INSERT INTO and DELETE.

10. ClipArt is a collection of pictures or images that can be imported in an office application.

    Difference between Linking and Embedding an object: When an object is linked, information can be updated if the source file is modified. When an object is embedded, it becomes a part of the file and does not get updated if the source file is modified.

11. DBMS stands for Database management System. It is a software that controls the creation, maintenance and use of a database.

    RBDMS stands for Relational Database Management System. In this database system, tables are linked to each other by fields and helps in management of database in a broader way.

12. - Primary Key: Primary key is a field which is used to uniquely identify records in a database. It is a unique field and it cannot be left blank. There can be only one primary key in a table. If there are more than one primary keys, then there will be two identities against a row. There can be only one identity against a row. So, we cannot have more than one primary key. To make retrieval of records faster, Primary keys are indexed in database.
    - Foreign Key: The main table of a database is referred to as the 'Master Table' and the tables in which the related data is stored are referred to as 'Transaction Table'. The tables are related and are linked through a field which is common. This common key field in

the transaction table is called the 'Foreign key' and its value depends on the primary key values of the master table.

12. A Data Definition Language or Data Description Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify and remove database objects such as tables, indexes and users. Common DDL statements are CREATE, ALTER, TRUNCATE, RENAME and DROP. Data Manipulation Language (DML)

    A Data Manipulation language (DML) is a language that enables users to retrieve, update, insert and delete data in a database. Common DML statements are SELECT, UPDATE, INSERT INTO and DELETE.

5. More on Database

Unsolved Exercise

Section A

A. 1. i 2. i 3. iv 4. iv 5. i 6. ii
7. i 8. iv 9. i 10. ii

B. 1. Select 2. Datatypes 3. Create 4. Data Manipulation Language (DML)
5. Data Definition Language (DDL) 6. Select 7. Delete

Section B

1. Structured Query Language (SQL) is a popular data manipulation language.
2. SQL statements consist of reserved words or characters used to perform arithmetical operations, comparisons, etc. These reserved words or characters are called as SQL Operators.

   There are three types of operators in SQL. These are arithmetic, comparison and logical.
3. Names of 4 logical operators are:

   AND, ANY, BETWEEN, NOT
4. Syntax:

```
CREATE TABLE table_name
(
column_name1 data_type (size),
column_name2 data_type (size),
column_name3 data_type (size),
.....
.....
column_nameN data_type (size)
);
```

5. Queries are commands that are used to define the data structure and also to manipulate the data in the database. Query is used to collect specific information from the table. A query helps us to join information from different tables and filter specific information as per the required criteria.

6. i. Data Definition Language (DDL)

   A Data Definition Language or Data Description Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify and remove database objects such as tables, indexes and users. Common DDL statements are CREATE, ALTER, TRUNCATE, RENAME and DROP.

   ii. Data Control Language (DCL)

   A Data Control Language is a language that has various commands which are used to grant and take back authority from any database user. Some DCL statements are Grant and Revoke.

   iii. Data Manipulation Language (DML)

   A Data Manipulation language (DML) is a language that enables users to retrieve, update, insert and delete data in a database. Common DML statements are SELECT, UPDATE, INSERT INTO and DELETE.

   iv. Transaction Control Language (TCL)

   A Transaction Control Language is a language that has various commands which are used to manage transactions in the database. These are used to manage the changes made by DML-statements. Some TCL statements are Commit, Savepoint and Rollback.

7. DDL: CREATE, ALTER, RENAME, DROP, TRUNCATE, COMMENT

   DML: SELECT, DELETE, UPDATE, INSERT INTO

   DCL: REVOKE, GRANT

   TCL: COMMIT, ROLLBACK, SAVEPOINT, SET TRANSACTION

8. CREATE TABLE Employee

   (

   EmpId Char(4),

   EmpName Varchar(15),

   Desig Varchar(20),

   Salary Float

   );

9. CREATE TABLE Student

   (

   AdmissionNumber Int,

   Name Char(30),

Age Int,
Marks Int
);

10. i. A01 Mother Board 12000 S01
A02 Hard Disk 5000 S01
A03 Keyboard 500 S02
A04 Mouse 300 S01
A05 Mother Board 1300 S02

ii. A01 Mother Board 12000 S01
A02 Hard Disk 5000 S01

iii. A04 Mouse 300 S01
A03 Keyboard 500 S02
A05 Mother Board 1300 S02
A02 Hard Disk 5000 S01
A01 Mother Board 12000 S01

iv. Mother Board
Mother Board

Previous Years' Questions

1. CREATE TABLE EMPLOYEE
(
EMPID Char (4),
EMPNAME Varchar (15),
DESIGN Varchar (20),
SALARY Decimal
);
2. (b)
3. CREATE TABLE FLIGHT
(
Flight_ID Char (4),
Flight_ID Varchar (25),
Source Varchar (30),
Destination Varchar (30)
);
4. (a) ID

(b)INSERT INTO DOCTOR (ID, Department, OPD_DAYS, Doctor_Name)

VALUES ("H608', 'Cardiology', 'TTS', 'Vinita Wapi');

(c)SELECT * FROM DOCTOR WHERE OPD_DAYS ='MWF',

5. A Data Definition Language or Data Description Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify and remove database objects such as tables, indexes and users. Two DDL statements are CREATE and ALTER.

6.
- Data Definition Language (DDL): A Data Definition Language or Data Description Language (DDL) is a standard for commands that define the different structures in a database. DDL statements create, modify and remove database objects such as tables, indexes and users. Common DDL statements are CREATE, ALTER, TRUNCATE, RENAME and DROP.
- Data Manipulation Language (DML): A Data Manipulation language (DML) is a language that enables users to retrieve, update, insert and delete data in a database. Common DML statements are SELECT, UPDATE, INSERT INTO and DELETE.

6. Web Application

Unsolved Exercise

Section A

A. 1. iii 2. iii 3. iv 4. ii 5. iv 6. iii
7. iv 8. iii 9. iii 10. iii

B. 1. True 2. True 3. True 4. True 5. True

Section B

A. 1.
i. Digital Subscriber Line
ii. Internet Service Provider
iii. Modulator – Demodulator
iv. World Wide Web
v. Local Area Network
vi. Metropolitan Area Network
vii. Wide Area Network
viii. Peer to Peer
ix. Unified Payments Interface

2. Google Chat, Skype, Hike, WhatsApp, WeChat

3. Three rules and etiquettes to be followed while chattng on the Internet are:
- Messages should be short.
- The identity of users should be known to others.
- It's better to check the user availability (through status) before chatting.

4. Blog refers to uploaded comments on www. It is a platform where writers or opinion makers share their views on any subject of their choice.

5. The webpage is a single document on the web having a unique address. On the other hand, a website is a collection of multiple webpages in which information on a related topic is located under the same domain address.
6. It is a tool that enables to create blog posts without any connectivity to the Internet connection and publishes the blog whenever Internet connectivity is available. Some offline blog editors are:
   - BlogDesk
   - Window Live Writer
   - Qumana
7. flipkart.com, amazon.com, futurebazaar.com, homeshop18.com, myntra.com
8. Some common online threats are:
   - Phishing: Phishing is an activity that demands the user's sensitive data like bank details, username or passwords, credit card details, and other details through email attachments or links. The links redirect the user to such a fake website that looks too similar to the bank's website and asks to enter data.
   - Viruses: Viruses are malicious program or harmful program which can damage the computer system, memory and replicate themselves.
   - Email Spoofing: Email spoofing is an activity of an email from a source that is fake and used for phishing emails and spam emails to run a campaign. The main goal of email spoofing is that recipient opens a message and clicks on the links provided in that email.
   - Chat Spoofing: It similar to email spoofing on the chat platform.
   - Denial of Services: The DoS attack refers to an attack from a large number of computers to a single target and tries to prevent the device from properly functioning.
   - Password Attack: Password attack is a common security threat that is aimed to guess the user's password or steal the user's password using different tricks
9. Two benefits of online transactions are:
   - Transaction can be done from almost anywhere.
   - Payments can be made anytime.
10. e-Governance (Electronic Governance) refers to the application of Information and Communication Technology (ICT) tools for delivering the services of government. The basic purpose of e-Governance is to simplify processes for acquiring services and passing required information properly to the stakeholder at National, State and Local levels and to promote simple, fast, responsive, accountable and transparent governance. Through e-Governance, the citizens get convenient, efficient and transparent service.

    e-Banking refers to the online banking transactions that can be done through a computer on the Internet from anywhere irrespective of the location of the user. It enables an account holder of a particular bank to do transactions like transfer of fund to or from other accounts, payment of bills, etc. by oneself on a computer. For e-banking, the bank provides PIN, that is, Personal Identification Number to the account holders. To do the transactions, the account holder has to open the website of the bank and has to login to his account through his secret identification password.

B. Mr. Singh must opt for WAN so that records in all his offices are connected to each other. Within the office in each city, the computers can be connected using LAN.

Previous Years' Questions

1. (c)
2. Accessibility Options
3. Blog refers to uploaded comments on www. It is a platform where writers or opinion makers share their views on any subject of their choice. Two websites that offer free blog services are: www.WordPress.com and www.wix.com
4. Embedding an object makes it part of the document while linking an object does not include the object file into the document files.

   Users trying to access the linked object must also have direct access to the separate file that forms that object.

   Linking means change in source file reflected in the target file but Embedding means change in source file does not reflect in the target file.

   Yes, embedding a document increases the size of the document.

   Some of the websites that have free clip arts are:

   www.openclipart.org

   www.pdclipart.org
5. • Cognitive impairments and learning disabilities, such as Dyslexia, Attention Deficit-Hyperactivity Disorder (ADHD) or Autism.
   • Visual impairment such as low vision, complete or partial blindness and colour blindness.
   • Hearing impairment including deafness.
6. • **Peer-To-Peer (P2P) Architecture:** Networks, in which all the computers are connected to each other under different topologies and where each workstation has an equal right to access data on a network, is said to be peer to peer network.
   • Client-Server Architecture: In many networks, data or information resources are mainly stored in a centralized computer of higher configuration. The computers which receive & share the information as and when required are terminals. Computers which store the data and provide resources are called servers and the terminals that avail the centralized resources are said to be clients. Such architecture of network is said as Client-Server.
7. hearing
8. Internet Service Provider
9. Peer-To-Peer (P2P) Architecture: Networks, in which all the computers are connected to each other under different topologies and where each workstation has an equal right to access data on a network, is said to be peer to peer network.

10. When data gets sent over the Internet, it is first broken up into smaller packets which are then translated into bits. The packets get routed to their destination by various networking devices such as routers and switches. When the packets arrive at their destination, the receiving device reassembles the packets in order to use or display.

11. (a) Web server is the principal computer or server that links or stores contents of different websites. It provides data and information to computers on request via Internet.

    In other words, it can be said that web server is a computer that stores data and runs software that are designed to send web pages in file format when requested by the web browsers.

    (b) It is a type of connectivity that uses modem and the telephone lines to connect to the Internet. A modem must be connected to a telephone (not in use for voice calling). It is a commonly used connection for home PCs to connect to the Internet.

    (c) Wi-Fi (Wireless Fidelity) is a network of wireless connection. It is a mode of communication network that is established by radio frequency like that of Bluetooth, but it has more power, resulting into a stronger connection. Wi-Fi is sometimes called 'Wireless Ethernet'. Wi-Fi connections are commonly established in electronic gadgets including video game console, home networks, PDAs, tablets, mobile phones, i-Pad, i-Pod, etc. A Wi-Fi enabled device such as a PC or PDA can connect to Internet within a range of (Wi-Fi) wireless network that is connected to the Internet.

12. (b)

13. (a)

14. see attached sheet (not available)

15. (a) Text Editor

    (b) Web Browser

7. Web Security and Workplace Safety

Unsolved Exercise

Section A

A. 1. iv 2. iii 3. iv 4. i 5. i 6. i
7. iii 8. ii

B. 1. False 2. True 3. True 4. True 5. True 6. False

Section B

A. 1. Internet security is a branch of computer science that is related to a network and web browser security which in turn helps to keep the data intact & safe leading to prevention of cyber attacks.

2. Some common online threats are:
    - Phishing: Phishing is an activity that demands the user's sensitive data like bank details, username or passwords, credit card details, and other details through email attachments or links. The links redirect the user to such a fake website that looks too similar to the bank's website and asks to enter data.
    - Viruses: Viruses are malicious program or harmful program which can damage the computer system, memory and replicate themselves.
    - Email Spoofing: Email spoofing is an activity of an email from a source that is fake and used for phishing emails and spam emails to run a campaign. The main goal of email spoofing is that recipient opens a message and clicks on the links provided in that email.
    - Chat Spoofing: It similar to email spoofing on the chat platform.
    - Denial of Services: The DoS attack refers to an attack from a large number of computers to a single target and tries to prevent the device from properly functioning.
    - Password Attack: Password attack is a common security threat that is aimed to guess the user's password or steal the user's password using different tricks
3. Web browsers have built-in password management system that helps to store passwords while browsing or opening an e-mail. It often prompt to save user names and passwords when users attempt to login.

    This facility is offered to the users, so that they can login to their frequently used websites or e-mail accounts without having to type the usernames or passwords time and again. However, it is not advisable to store such data on public or on shared computers, else any other user can open the website or e-mail.
4. Following are the characteristics of strong password:
    - A combination of uppercase-lowercase words of ample length along with numbers and special characters make a password complex.
    - Password strength can be achieved by incorporating the mentioned characteristics; the more characteristics you incorporate into your password, the stronger it will be. A strong password is hard to guess, but it should be easy for you to remember.
    - Keep the password of at least 8 characters-the more characters, the better.
    - Password should be a mixture of both uppercase and lowercase letters.
    - Include alphabets, numbers & at least one special character, e.g. ! @ # ? , in the password. (< or > should not be used in password, as it can cause problems in Web browsers)
5. Four practices to secure data are:
    - One needs to ensure that his/her user name, password, credit card or online banking information are secure as they are prone to be tracked by unauthorized users.
    - Be cautious while filling up the forms, responding to calls (pretending to be legitimate) that ask your name, DOB, bank details, etc.

- During certain transactions, some information such as credit card details or personal information is sent over the network. Therefore, it is always recommended to use only secure websites for doing such transactions. Always verify whether the website you are using, keeps transactions secure or not.
- Never connect your device to any unsecured or unknown Wi-Fi network. Connecting to an unsecure network might lead to leakage of your valuable data.

6. Every organization must follow a standard set of safety rules, like:
   - All types of instructions and procedures related to safety measures must be clearly stated and displayed at key places which are visible to most of the employees.
   - All workers should be well aware of the causes that can lead to accidents and accordingly demonstration must be given to handle any emergency situation.
   - Ensure the presence of necessary safety equipments or gadgets in the organization that will help to cope up with any kind of emergency.
7. One must follow the following safety measures to avoid Falls and Slips:
   - Floors must be clean and dry.
   - Oil spills and dust must be immediately cleaned.
8. Following are the measures that must be adapted to prevent electrical accidents:
   - The users should inspect cord and plug connected equipment, extension cords, electrical fittings, etc. for damages before each use.
   - Worn or damaged plugs should be discarded or repaired. Damaged and frayed switches and wires should be replaced.
9. It should be a common practice in a workplace that whenever anyone is injured, use First Aid and:
   - Assure the injured to keep calm and not to panic
   - Keep the injured warm if he/she is under shock
10. An occupational hazard refers to a hazard which is experienced at one's workplace. It can be in the form of chemical hazard, biological hazard, physical hazard and psychosocial hazard. In other words, it refers to a risk accepted as a consequence of a particular occupation.

B. 1. Tips for keeping non-guessable passwords:
   - Keep the length of the password of at least 8 characters, including a combination of numbers and symbols.
   - Avoid keeping passwords based on repetition, letters or number sequences.
   - Use a combination of uppercase and lowercase.
   - Avoid using the same password for multiple purposes.
   - Avoid using something about yourself that is publicly known to others.
   - Avoid keeping names of loved ones, relatives, friends etc. as passwords.

2. Some safety and first-aid measures that can be taken by Geeta are:
   i. Ensure to divert the traffic from spot of accident.
   ii. Turn off the vehicles involved in accident to avoid spilled fuel catching fire.
   iii. Move the victim to safer side
   iv. Call ambulance.
   v. Take first-aid kit from the vehicle and pour antiseptic solution on and around the wound.
   vi. Press antiseptic dampened cotton over the wound to slow down and ultimately control bleeding till medical aid arrives.