

1. Networking Concepts

Let Us Answer

A. Multiple Choice Questions :

1. (b), 2. (c), 3. (c), 4. (c), 5. (a).

B. Fill in the blanks by choosing the correct word from the bracket :

1. Data communication, 2. Network interface card, 3. Router, 4. Client server architecture, 5. network topology.

C. Write 'T' for true or 'F' for false statements :

1. T, 2. F, 3. T, 4. T, 5. F.

D. Give one example of each :

1. Computers attached in a computer lab
2. Tree Topology
3. File sharing
4. Cryptography

E. Short Answer Type Questions :

1. A network is defined as a group of two or more computers connected to each other for sharing resources.

2. Three advantages of computer network are given below :

- (i) **Communication and Creativity** : Computers are connected through networks. So, users are also plugged in networks of various kinds. Thus, information transmission among users is quick, efficient and cheap.
- (ii) **Data Security and Management** : Data can be centralized on shared servers. This makes it easy for implementation of security measures and to give permission for those who can read or change information.
- (iii) **Performance Enhancement and Balancing** : Network can be used to improve the performance of some applications by distributing computation tasks to various available computers on the network.

3. LAN, WAN, MAN and PAN are the different types of network.

4. Disadvantages of bus topology

- (i) It is not easy to isolate faults in the network nodes.
- (ii) It is best for networks with low traffic. High traffic increases load which leads to decrease in the network efficiency.
- (iii) The cable length is restricted.
- (iv) Limited number of network nodes can be connected.
- (v) A fault in the central bus leads to complete network failure.

5. Network security is securing a network from unauthorized access and risks. It is the responsibility of network administrators to follow preventive measures to protect networks from security threats.

F. Long Answer Type Questions :

1. Computer network share common devices, functions and features including servers, clients, transmission media, shared data, shared printers and other hardware and software resources, network interface card (NIC), local operating system (LOS) and the network operating system (NOS).
2. Using a point-to-point connection, all the hosts in a Star topology are connected to a central device, known as hub device. The hub device may be any of the following :

Layer-1 : Hub or repeater

Layer-2 : Switch or bridge

Layer-3 : Router or gateway

In Star topology, only one cable is needed to add another host and Its configuration is simple. So, it is a popular topology.

3. Difference between LAN and WAN :

	LAN	WAN
Stands for	Local Area Network	Wide Area Network
Area covers	Local areas only (homes, offices, schools)	Large geographic areas (cities, states, nations)
Definition	LAN (Local Area Network) is a computer network covering a small geographic area, like a home, office, school, or group of buildings.	WAN (Wide Area Network) is a computer network that covers a broad area (e.g., any network whose communications links cross metropolitan, regional, or national boundaries over a long distance).
Connection	Telephone lines and radio waves can be used to link up a LAN with other LANS.	Computers connected to a wide-area network are connected using public networks, e.g. telephone system. They can also be connected through leased lines or satellites.
Geographical Distributed	Small geographical range and do not need any leased telecommunication lines.	Computers connected to a wide-area network are connected using public networks, e.g. telephone system. They can also be connected through leased lines or satellites.

Maintenance costs	It covers a comparatively small geographical area, LAN is easier to maintain at a very low cost.	Maintaining WAN is difficult as it covers a wider geographical area and higher maintenance costs.
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4. Depending on their architecture, computer networks can be classified in various types hybrid, peer -to-peer or client server.

There can be one or more systems acting as Server. Other being Client, requests the Server to Server requests. Server takes and processes request on behalf of Clients.

Two systems can be connected Point-to-Point, or in back-to-back fashion. They both reside at the same level and are called peers.

There can be hybrid network which involves network architecture of both the above types.

5. COMPUTER THREATS : Computer Virus : A computer virus is a software that can multiply from one infected computer to another. It can damage, corrupt, steal, or delete data from your computer.

Trojan Horse : Users can infect computers with Trojan horse software simply by downloading an application. It can do anything from recording your passwords, to hijacking webcam, to watch and record all the moves in your computer.

Computer Worm : It is a software code that can replicate itself from one machine to another. Worms are able to replicate at high speeds and in large volumes. For example, a worm can send copies of itself to every contact in your email address book and then send itself to all the contacts in your contacts' address books. Network security is any activity designed to protect the usability and integrity of your network and data. It targets a variety of threats and stops them from entering or spreading on your network.

Spam : Spam in the security context is unwanted messages in your email inbox. Also called electronic junk mail, it is an annoyance as it can mess your mailbox as well as potentially take up space on your mail server. Spam messages can contain links that when clicked on, could go to a website that installs malicious software onto your computer.

SECURITY SOLUTIONS

Access Control

All users should not be allowed to look on to networks. Every user and his machine must be identified in advance to keep attackers at bay. Then you can impose your security policies.

You can block devices or give them only limited access. This process is called network access control (NAC).

Antivirus and Malware Software

Malware includes viruses, worms, Trojans etc. The best antimalware programs not only scan for malware upon entry, but also continuously track files afterward to find anomalies, remove malware, and fix damage.

Firewalls

Firewalls put up a barrier between your trusted internal network and untrusted outside networks, such as the Internet. They use a set of defined rules to allow or block traffic. A firewall may be hardware, software or both.

Let us Do

Do it yourself.

General Activity

Find out details about available network other than LAN and WAN using online method.

MAN and PAN. □

2. Windows Movie Maker

Let Us Answer

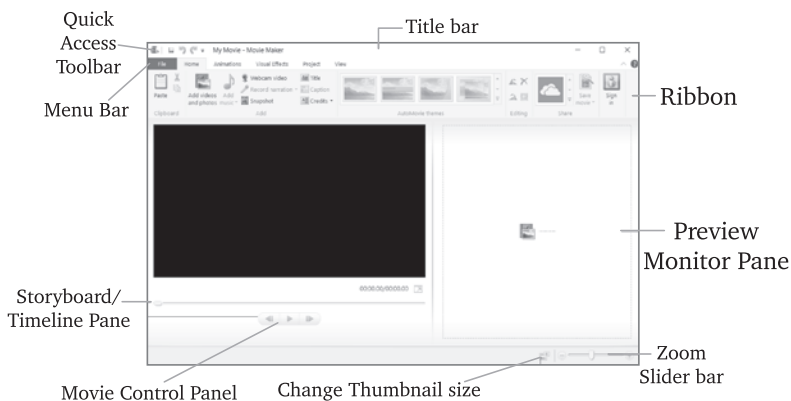
A. Multiple Choice Questions :

1. (b), 2. (a), 3. (a), 4. (c), 5. (c).

B. Fill in the blanks by choosing the correct word from the brackets :

1. Save Project, 2. Timeline, 3. Home, 4. Split, 5. Youtube.

C. Label the following figure and give the function of each label in one line :



1. **Quick Access Toolbar** : Quick Access Toolbar is used to quickly access some commands like Undo, Redo, New Project, Open existing project, add music etc. You don't need to explore the menu to use these commands.
2. **Title bar** : Title bar contains the title of the project. You can also see three buttons at the right end of the bar that are **Minimize**, **Maximize** and **Close** button.
3. **Menu bar** : It lies below the Title bar. It has a host of menus.
4. **Ribbon** : Just below the menu bar is the ribbon which consists of tabs and groups. You can open the tab by clicking on it and its associated groups with various commands appear. Click on any command you want to use.
5. **Preview Monitor Pane** : The preview of the project can be seen in this pane. You can preview all the changes made in the video before publishing the final project.
6. **Movie Control Panel** : This panel contains buttons to rewind, forward, play or stop the movie.
7. **Preview Full Screen** : This button is used to play the full screen preview of the movie.
8. **Storyboard/Timeline Pane** : Use this pane to control the placement of the media. Navigate through clips. You can split them and organise them in sequences.
9. **Change Thumbnail Size** : The thumbnails of the photos and video clips in storyboard can be resized to large, small or medium icons.
10. **Zoom Slider bar** : It is used to zoom in or out the storyboard.

D. Write 'T' for true or 'F' for false statements :

1. T, 2. F, 3. T, 4. F, 5. F.

E. Short Answer Type Questions :

1. MS Windows Movie Maker which is a part of Windows Essential Software Suite. It is used to integrate audio clips, video clips and photos. It can also be used to make movies. It is a Video editor program which allows you to add special effects, transitions, songs, recorder sound clip and caption to the movie.
2. Three features of Windows Movie Maker are given below :
 - (i) **Free for All** : Windows Movie Maker is a free software. It is available with all PCs that have MS Windows ME, Vista and XP.
 - (ii) **Simplicity** : This software is easy to use even by the people having little or no experience in video editing. The stress on your computer is small and it is constantly updated.

(iii) **AutoSave** : You don't need to save the work manually because it is saved automatically after a fixed time span. So, the chances of data loss is reduced even when the power fails.

3. Click on **Start**. Click on **All Apps** in the options that come up. Now, click on **Movie Maker**.
The **Movie Maker** window opens.
4. Use this pane to control the placement of the media. Navigate through clips. You can split them and organise them in sequences.
5. You can trim the video and hide the unwanted parts from it. On playing, it will play only the selected and unhidden parts of the video.
6. To apply Auto Movie Themes, follow the given steps :
 1. Click on Home tab.
 2. There are many built-in-themes in the **Auto Movie Themes** group.
 3. When you scroll the mouse over a particular theme, you can see the effects in the Preview pane.
 4. Select any theme you would like to apply by clicking on it.
7. A caption is a text information which can be added to the individual clip. Credit is again a text information which can be added at the end of the movie.
8.
 1. Select the clip which you want to move at some other location.
 2. Press the left button of mouse. Move the mouse to drag the image to a location of your choice.
 3. Drop the image at desired location.
 4. Using same drag and drop method, you can arrange the clips in movie.

F. Long Answer Type Questions :

1. **Adding Photos** To add photos in the movie follow the given steps :
 1. Click on **Home** tab.
 2. Select the **Add videos and Photos** option from Add group.
 3. An **Add Videos and Photos** dialog box opens.
 4. Select the photo or type the name in **Filename** textbox and click **Open** button.
 5. The desired photo is opened in Storyboard. You can see its preview in the Preview Monitor Pane.

Adding Videos

To add video clips in the movie, follow the given steps :

1. Click on **Home** tab.
 2. Select **Videos and Photos** from the group **Add**.
 3. An **Add Videos and Photos** dialog box opens.
 4. Find the video you want to add in the document, select the video or type the name in Filename text box and click **Open** button.
 5. You will see that the video has been added to the Storyboard. You can see its preview in the Preview Monitor Pane.
- 2.** The steps needed to trim a video are given below :
1. Select the video from the Storyboard.
 2. Click on the **Edit** tab.
 3. Go to the group named **Editing**. From this menu, select the option **Trim Tool**.
 4. You will see two bars at the start point and end point, which are called **Left End bar** and **Right End bar** respectively.
 5. Click and drag the **Left End bar** to reset the start point and similarly, click and drag the **Right End bar** to set the end point.
 6. Suppose you know the exact starting and ending times of the video. So, add the values in **Start Point** and **End Point**, respectively, in the toolbar named Trim.
 7. After completing the trimming process, click on **Save Trim** button in the **Trim toolbar**.
 8. If you don't want to trim the video, click on **Cancel** button.
- 3.** For this, follow the given steps :
1. Set your android phone in unlock state.
 2. Plug one end of the USB cable into your Android phone. Connect its other end to your computer.
 3. Open **Windows Movie Maker**.
 4. Click on **File** menu, a drop-down list opens.
 5. Select **Import from Device** option.
 6. You will see a message box notifying "Photos & videos will be imported into Photo Gallery".
 7. Click **OK** button.
 8. An **Import Photos and Videos** window opens. Select the device from which you want to Import the videos and click **Import** button.
 9. A process of locating photos and videos from your device will start.
 10. After successful import of all videos and photos, the Photo Gallery window will pop up on the screen.

11. To add and use the photos or videos in the movie, click on the checkbox on the upper-left corner of the photo or video.
 12. Click on the **Movie** option in **Share** group in **Create** tab.
 13. The selected videos and photos will get added to the story board.
 14. Save your file.
4. Steps to add music are given below :
1. Go to **Home** tab.
 2. From the **Add** group, select **Add Music** button.
 3. The **Add Music** dialog box opens.
 4. Browse the content from the folders. Select the file of your choice.
 5. Click **Open** button.
 6. A green bar will be displayed at the bottom of videos and images which means that the music file has been imported successfully.
5. We have learnt a lot about animations and transitions in MS Power Point 2016. Windows Movie Maker also provides this feature of adding animation and transition effects to the movies. These effects are applied when you proceed from one image or video to another.

There are many interesting and eye-catching effects which can be added to the transitions between images and videos. You need to follow the given steps to add animation to the project :

1. Select the video clip or image of your choice.
 2. Click on **Animation** tab.
 3. You can see various **Transition effects** and **Pan and Zoom effects** in the ribbon.
 4. When you move the mouse over the effect, you can have a preview of the animation.
 5. So, select any effect you like and click on **Apply to All** button.
 6. A small triangle shape will appear in a storyboard w.r.t. the video or image for which you had used the animation effect.
 7. Now, play the movie and see how you have performed.
6. Visual effects consist of various effects that can be added to photos and videos. You can change the colour, add ripple effects or other stimulating effects to enhance the appeal of movie. To add visual effects to the video, follow the given steps :
1. Select the image or video on which you want to apply the visual effect.
 2. Click on the **Visual Effects** tab.
 3. A list of various effects is displayed as shown in the figure.

4. When you scroll the mouse over the effect, you can have a preview of it. Select the effect you want to apply.
5. Use the **Brightness** option to set brightness and darkness in the video or image. This setting is independent of visual effects.
6. For setting brightness, click on **Brightness** option. You will see a slider by moving which you can change the brightness.
7. After completing selections, click **Apply to All**.
8. Notice the icon at the top left corner of the image which indicates that the visual effects have been applied successfully.
9. Play the movie and see the effects that you have applied on the media clips.
7. A video clip can be split into parts and you can apply animation effects on them.
8. After creating your project, you need to save it for future reference.
9. To export the movie, follow the given steps :
 1. Select the clip which you want to export.
 2. Now click on **Home**.
 3. Click on the **Save Movie** button in **Share** group.
 4. A **Save Movie** dialog box opens.
 5. Give a name of your choice to the movie in the **File Name** box.
 6. Click on **Save** button.
 7. You will see a **Movie Maker Processing** bar. It will show the export process.
 8. After the completion of process, Movie Maker processing bar disappears and another box opens which asks you to open or play the movie.
 9. Click on **Play**. The default media player of MS Windows will play the movie.
10. Follow the given steps :
 1. Go to **File** menu.
 2. Move your mouse pointer on **Publish Movie** option, a cascading menu opens.
 3. Choose any of the service from the list where you want to publish your movie. (say **OneDrive**)
 4. When you click on **OneDrive**, a dialog box opens. It asks you to choose the resolution of the movie.
 5. Choose any resolution according to your choice.

6. A windows will pop up. It will ask you to sign in into a Microsoft account.
7. In next, select the album in which the movie will get uploaded.
8. Click on **Publish** button. The process of publishing will start.
9. After the successful completion of the publishing, a message box appears notifying the successful completion.
10. Login to the Microsoft account any time later and watch the movie.

3. Log on to MS Access 2016

Let Us Answer

A. Multiple Choice Questions :

1. (b), 2. (a), 3. (b), 4. (c), 5. (a).

B. Fill in the blanks by choosing the correct word from the brackets :

1. Database, 2. Query, 3. Design, 4. Attachment, 5. File.

C. Write 'T' for true 'F' for false statements :

1. T, 2. T, 3. F, 4. T, 5. T.

D. Give one example of each :

Access, Security, Ascending or descending, Table.

E. Short Answer Type Questions :

1. Data is a collection of facts related to any object, for example, Name, Age etc. It has to be relevant, specific and timely. When it is processed, organized, structured or presented to make it useful, it is called information, for example, a telephone directory.
2. Database is a collection of data in an organized way. It supports its storage and manipulation of data.
3. Database management system refers to the resources of handling all the records in a database. It gives us an organised methodology for creating, retrieving, updating and managing data for users and programmers.
4. The database management system has following advantages :
 1. **Redundancy can be controlled** : There is some common data of the students which has to be mentioned in each application, like Roll no, Name, Class, Phone no, Address etc., and it will create the problem of redundancy. Using DBMS, data is organized at one place and other relations can use the data by sharing it. Thus, centralized system of DBMS reduces the redundancy of data.

- 2. Integrity can be enforced :** By integrity, we mean that the data of the database is always correct and accurate. To maintain the integrity of data, some integrity constraints are enforced on the database. A DBMS provide capabilities for defining and enforcing the constraints.
- 3. Inconsistency should be avoided :** When the same data is duplicated and changes are made at one place, which is not circulated to other places, it gives rise to inconsistency and data is said to be inconsistent. Redundancy of data greatly affects its consistency. If redundancy is less, it is easy to implement the consistency of data.
- 4. Data can be shared :** Data can be shared by multiple applications in centralized DBMS as compared to file system. The applications may be developed without having to create any new stored files.
- 5. (a) Data Definition :** An RDBMS allows you to define the kind of data you have and how it should be stored. You can define rules that the RDBMS can use to ensure the integrity of the data.
- (b) Data Manipulation :** An RDBMS provides you many ways to work with your data. For example, you can search a single table for information or request a complex search across several related tables. You can update a single field or many records with a single command. You can write programs that use RDBMS commands to get data that you want to display and allow the user to update the data. Access uses the powerful SQL database language to process data in your tables.
- (c) Data Control :** In the case of RDBMS, many users can read and update data. An RDBMS that is designed to allow data sharing also provides features to ensure that no two people can change the same data simultaneously. The systems allow you to group changes (known as transactions) so that either all the changes or none of the changes seem in your data. You might also want to be sure that no one else can view your data. Since you can share your Access data with other users, you need to set restrictions on users who are allowed to see or update.
- 6. (a) Table :** Table is the collection of data in the form of rows and columns. Rows contain the records of a particular entity. Each table contains finite number of rows and columns.
- (b) Queries :** Queries are specified conditions that select particular data from a database and display it. Once the

condition is met, a table is displayed with required entries in it.

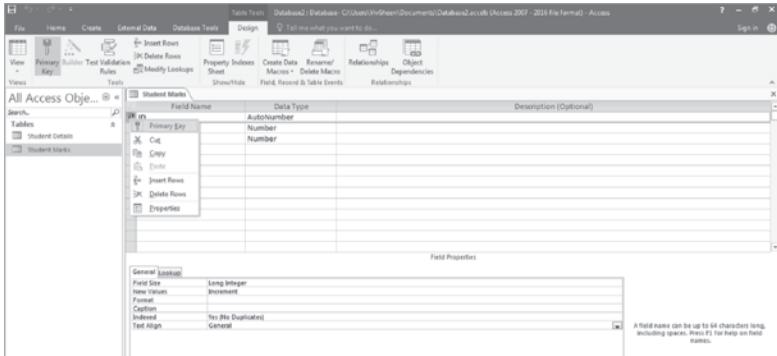
(c) Forms : Form is just like the form you fill up for admission or any other form. It provides the user interface for database access. The user can enter the data in the form that will be stored in the corresponding database.

(d) Reports : They are used to display data of a database in an organised format. It collects the data from the database and presents it in an organized manner.

7. A primary key is the unique identifier for the table. In the field of primary key, every value is unique for every record.

To create a primary key, follow the given steps :

1. Right-click on the ID field, a drop-down list opens.
2. Select **Primary Key** from the 3 list.
3. This makes the field a primary key field. You'll see a little key icon to the left of ID which indicates primary key field.



4. The option **AutoNumber** generates numbers automatically in every record that is created.

8. Sorting means arranging data in a ascending or descending order.

9. **Field :** The column heading contains the field, which is a unique category. Its examples are : ID, Student Name, contact No., DOB and House are fields (column headings).

We can set field properties by following steps :

- (i) Click on the drop-down arrow to set the data type of a particular field.
- (ii) A drop-down list opens.
- (iii) Click on the required data type from the list.
- (iv) A **Field Properties** box opens with **General** tab and is selected by default.

- (v) Set the required properties for the field whose data type you have set.

F. Long Answer Type Questions :

1. Database Management System or DBMS is the technology of storing and retrieving user data with productivity and security.

TYPES OF DATABASE

Four basic types of databases are as follows :

- (a) Hierarchical databases
- (b) Network databases
- (c) Relational databases
- (d) Object-oriented databases

Hierarchical Databases

Hierarchical Database Model is very fast and simple. In this database, records are organised in groups that are stacked in trees. The parent-child relationship exists among various levels. It can be accessed and updated rapidly because in this model, the structure is like a tree and the relationships between records are defined in advance. This is a two-edged feature. Here, adding a new field or record requires entire database to be redefined.

Network Databases

Network databases are mainly used on large digital computers. It is interconnected network of records. It authorized the modelling of many-to-many relationships in data.

Relational Databases

Data in a relational database is stored in different tables. Each table contains a key field that mainly identifies each row, called **Primary Key**. In this database, tables are called **relations**. Tuple means a row or record, and columns are called attributes or fields. Database entries can be modified easily by modifying table structure.

Object-Oriented Model

The functionality of the object-oriented programming prevails in this model. It provides full-featured database programming capability. Applications require less code, use more natural data modelling, and code bases are easier to maintain. Object developers can write complete database applications with little effort.

Object-oriented databases use small, recyclable software called objects. The objects themselves are stored in object-oriented database. Each object contains two elements :

- Piece of data (e.g., sound, video, text, or graphics).
- Instructions or software programs called methods for what to do with the data.

ADVANTAGES OF DBMS

The database management system has following advantages :

- 1. Redundancy can be controlled :** There is some common data of the students which has to be mentioned in each application, like Roll no, Name, Class, Phone no, Address etc., and it will create the problem of redundancy. Using DBMS, data is organized at one place and other relations can use the data by sharing it. Thus, centralized system of DBMS reduces the redundancy of data.
- 2. Integrity can be enforced :** By integrity, we mean that the data of the database is always correct and accurate. To maintain the integrity of data, some integrity constraints are enforced on the database. A DBMS provide capabilities for defining and enforcing the constraints.
- 3. Inconsistency should be avoided :** When the same data is duplicated and changes are made at one place, which is not circulated to other places, it gives rise to inconsistency and data is said to be inconsistent. Redundancy of data greatly affects its consistency. If redundancy is less, it is easy to implement the consistency of data.
- 4. Data can be shared :** Data can be shared by multiple applications in centralized DBMS as compared to file system. The applications may be developed without having to create any new stored files.
- 5. Standards can be enforced :** DBMS is a central system and so standards can be enforced with ease at various levels. Interchange of data is feasible due to the standardization of data.
- 6. Restricting unauthorized access :** When multiple users share a database, all users will not be authorized to access all information in the database. Data is considered confidential, and only authorized persons are allowed to access data. Some users may be permitted only to retrieve data, whereas others are allowed to both retrieve and update. A DBMS should provide a security and authorization system to enforce restrictions.
- 7. Providing Backup and Recovery :** A DBMS must provide facilities for recovery from hardware or software failures. The backup and recovery subsystem of the DBMS is responsible for recovery.

8. Cost of Developing and Maintaining System is Lower :

When data is standardized in a database, it becomes easy to respond to any request. The cost of developing and maintaining an application is low. The productivity of programmers can be higher in using non-procedural languages that have been developed with DBMS than using procedural languages.

9. Concurrency Control : DBMS has mechanisms to provide concurrent access of data to multiple users.

2. Microsoft Access is a Database Management System (DBMS) from Microsoft that combines the Relational Microsoft Jet Database Engine with a graphical user interface and software development tools.

- (i) It stores data in its own format based on the Access Jet Database Engine.
- (ii) It also allows you to link related information easily.
- (iii) It can also import or link directly to data stored in other applications and databases.

Access can work directly with data from different sources. It can also understand and use a wide variety of other data formats, including many other database file structures. You can export to and import data from word processing files, spreadsheets, or database files directly. It can work with most popular databases. Programmers can use it to develop application software. The database will store the information collected through the execution of application software.

It provides a graphical user interface that allows you to manage and organize the data in the form of tables. You can create queries, forms and reports in MS Access.

CREATING A DATABASE

MS Access 2016 provides two different ways to create a database.

- (a) Create a blank database
- (b) Create a database using template

Creating a Blank Database

1. Open **MS Access 2016**.
2. Select the **Blank Database**.
3. Or go to **File > New > Blank database** to create a new database.
4. The blank database opens that asks you to enter the name for the database in **File Name** text box.
5. You can change the default location of the database. Select the folder icon next to the text box called **File Name**.

6. Click on **Create** button.
7. Your new database has now been created.
8. A table will appear on the screen. By default, its name is Table 1. You can see menus which can be used to customize Table 1.

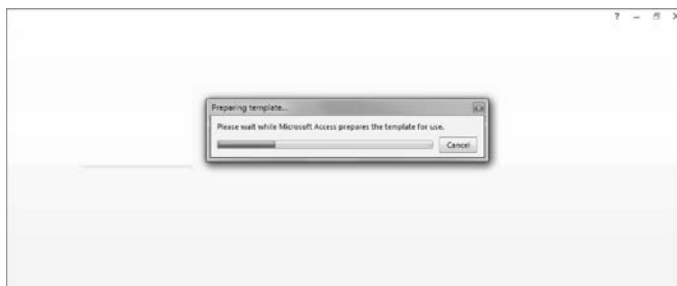
Create Database using Template

If you want to use predefined layout, templates are available in MS Access. You can choose any template as per your requirement.

1. From the welcome screen or from **File** menu, you can click on a selection of templates as shown below :



2. A processing bar opens in a window as shown in the figure below :



3. You will see a task pane on the screen.
 4. Give a name to the template in **File Name** text box. You can change the location where you want to save the file by clicking on folder icon.
 5. Click **Create** Button. The following window appears which shows the table in Form view.
- 3.** In the case of RDBMS, many users can read and update data. An RDBMS that is designed to allow data sharing also provides

features to ensure that no two people can change the same data simultaneously. The systems allow you to group changes (known as transactions) so that either all the changes or none of the changes seem in your data. You might also want to be sure that no one else can view your data. Since you can share your Access data with other users, you need to set restrictions on users who are allowed to see or update.

4. Datasheet View

- (i) In this view, records are shown as rows and fields are shown as columns. This view shows a grid.
- (ii) Datasheet View displays the data in the cells.
- (iii) Each row represents a record. If the table has say, five records, there would be five rows of data.
- (iv) In Datasheet View, if you want to find out a field's data type, you need to select that field, then select the Fields tab from menu. You can see the data types of fields as well as their properties.

Design View

Design View doesn't display any data. Therefore, more space is available to display other settings.

- (i) In this view, field listings are vertical. They are not displayed side by side.
- (ii) In Design View, you can see the data type listed next to each field.
- (iii) The way Design View works is, when you click on a field (in the top frame), the bottom frame displays the properties for that field. You can then change these properties as required.

5. Method 1 :

1. Select one cell in any column which is to be sorted.
2. Select the Home tab, then in Sort & Filter group, click the A-Z Ascending command to sort in ascending order, or the Z-A Descending command to sort in descending order. The worksheet will be sorted by the selected column.

Method 2 :

Right-click on a field name. A pop-up menu will appear on the screen. Select the required option to sort the data.

After you save the sort, the records will stay sorted this way until you perform another sort or remove the current one. To remove a sort, click the Remove Sort command in Home tab under Sort & Filter group.

6. A filter allows us to see only that data which meets some criteria. When you create a filter, you set criteria for the data to be displayed and temporarily hides the ones that you do not want. Filters are useful because they allow you to focus on

specific records. If you have a database that includes customer and order information, you can create a filter to display only customers living within a certain city or only orders containing a certain product. Viewing this data with a filter would be far more convenient than searching for it in a large table.

To filter numbers by a search term :

1. Click the drop-down arrow next to the field you want to filter by. Suppose you want to filter the records in your menu items table by House, click the arrow in the House field.
2. A drop down list pops up before you. Select the method of filtering from that list.
3. Click OK button.

7. DATA TYPES

Every table in Access is made up of fields. The properties of the field can be changed according to the needs of the databases. A field's data type controls the kind of data it can store. In this topic, you will know about the description of the data types and other field properties available in Access.

A field's data type determines :

- (i) which formats can be used with the field.
- (ii) the maximum size of a field value.
- (iii) how can the field be used in expressions?

The following table shows options for data types and explains the result of the formatting option :

Data Type	Description
Short Text	It is used to store text or a combination of text and numbers that does not require calculations, such as addresses, phone numbers, etc. The field with this data type can have a maximum of 255 characters.
Long Text	It is used to store lengthy text, i.e. up to 65,536 characters. It can be used for storing detailed information such as the synopsis of a book or a patient's medical history.
Number	It is used for numeric data that can be used in calculations.
Date/Time	It stores date and time values. You can display the dates and times in various formats.
Currency	It stores currency values and then displays them in different formats.
Auto Number	It stores an integer that increments automatically as you add records.

Yes/No	It can have only one of two possible values such as Yes/No, True/False or On/Off.
OLE	It stores graphics or objects such as Microsoft Excel worksheet or Microsoft Word document.
Hyperlink	The fields with this data type can store links to websites or email addresses.
Attachment	This data type is used to attach images, spreadsheet files, documents, charts and other types of supported files to the record in your database, much similar to the manner you attach files to the emails.

8. (a) Adding a New Field

1. Open the table in **Datasheet View**.
2. Click the header with the text **Click to Add**. If you already have several fields, you may have to scroll all the way to the right to see this.
3. Write down the name of the field and a new field will be added in a table.

(b) Hide/Unhide a Field

1. Right click on the field name which you want to hide.
2. From the drop-down list, select **Hide Fields** option.
3. If you want to unhide the field, right-click on a field name. Now, select unhide fields.
4. An **Unhide Fields** dialog box opens.
5. Click on the check box of the field which you want to unhide.

(c) Saving a Table : Saving the table is important. If you don't save it, its data may be lost due to abruptly switching off of the computer.

1. Right-click on **Table1** and select **Save** option from the drop-down list OR press **CTRL+S** from the keyboard.
2. A **Save As** dialog box opens.
3. Enter table name at the prompt.
4. Click Save button.

(d) Moving a Field

1. Locate the field you want to move, then hover your mouse over the bottom border of the field header.
2. The cursor will become a four-sided-arrow.
3. Click and drag the field to its new location.
4. Release your cursor.
5. You will see that the field has appeared in a new location.

Let us Do

Do it yourself. □

4.

Working With Queries, Forms and Reports

Let Us Answer

A. Multiple Choice Questions :

1. (c), 2. (c), 3. (b), 4. (a), 5. (b).

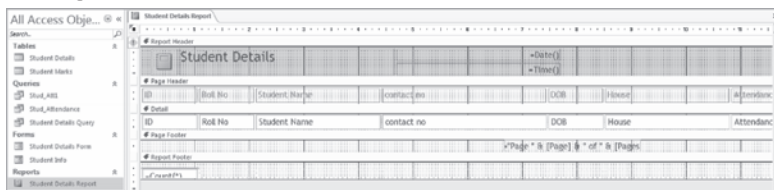
B. Fill in the blanks by choosing the correct word from the brackets :

1. Information, 2. Primary Key, 3. Report, 4. Relationship, 5. Layout.

C. Write 'T' for true or 'F' for false statements :

1. T, 2. T, 3. T, 4. F, 5. T.

D. Look at the following figure and tell which type of view it shows (Print Preview/Report View/Layout View/Design View) :



Layout View

E. Short Answer Type Questions :

1. Database can be defined as a large collection of data in an organized manner.
2. Query is the database object which can be used to extract specific information from one or more related tables.
3. A primary key is a key that uniquely identifies each record of the master table and there is only one primary key in a table.
4. A relationship is an important component of a database. These are the links between the tables that are interconnected to each other. It is a linkage between data in tables and the tables themselves. For retrieving information from multiple tables, a relationship between the required tables should be established, which in turn, can retrieve the required results. These results can be fetched with the help of a query or in the form of a report or a form.
5. A form is a collection of fields in which specific information is to be filled.
6. Reports are an effective way of organizing and presenting the data in front of other users.

7. Steps to Print a Report

1. Click the table for which report is to be created.
2. Go to **File** tab, click on **Print** option and then click on **Print Preview** option.
3. The report will appear in a print-worthy format. You can decide set-up and page size as per your needs.
4. After making the changes, click on **Print** option, give the printing details and click on **OK** button to get a hard copy of the generated report.

F. Long Answer Type Questions :

1. There are following steps to create a relationship between tables :

1. Click on **Database Tools** and then go to **Relationships** option in **Relationships** group.
2. The **Show Table** dialog box appears with the names of tables in the database. Now select tables and click on **Add**. The tables will show up in **Window Relationships**.
3. Close the **Show Table** dialog box by clicking the **Close** button.
4. Drag the primary key of the parent table and drop it on the same field of the child table to create a relationship between the tables. (In our example, Roll No is the key on which relationship is established).
5. The **Edit Relationships** dialog box appears. Click on **Create** button to create the relationship between them.
6. A linked line is created between the tables showing the relationship.
7. Right click on the **Relationships** tab and click on **Save** button to save the relationship.
8. Click on **Close** button under **Relationships** group after saving the relationship.

2. Steps to Create a Query in Design View :

1. Click the tab **Create**. Now, in the **Queries** group, click on the option **Query Design**.
2. You will see that a **Show Table** dialog box has appeared with names of tables in the database. Select the tables and click on **Add button**. The table will be shown in the **Query** window.
3. Double click on the field on which query is to be applied. It will be shown in **Design Grid**. You can also drag the field to the design grid, which will be added to that place.

3. (a) **Specifying a Single Criteria** : It is applied on the **Criteria** property in the **Design Grid**. The result is obtained

on the basis of the criteria set on the fields of a table. Following are the steps to apply simple criteria in a query :

- (i) The question is “Get the names of the students who are present in the class”.
- (ii) Move the Student Name and Attendance fields in the Design Grid.
- (iii) Go to **Sort** new. Click on the option **Ascending**.
- (iv) Go to **Criteria Property** under **Attendance Field** and type **Present** in the space provided.
- (v) Click on **Run** button in the **Results** tab to view the result of the query.
- (vi) Now, you can click on Query 1 tab with right button of mouse. You will see a **Save As** dialog box on the screen.
- (vii) Click on **Yes** button and give the name for the query. It will be shown in the navigation pane.
- (viii) One can double click on the name of the query and can view the result in Datasheet View.

(b) Specifying Multiple Criteria : It is applied on the Or property in the Design Grid. The result is obtained on the basis of multiple criteria set on the fields of a tables. Following are the steps to apply multiple criteria in a query :

- (i) The question is “Get the names of the students of Rose House who are either present or absent”.
- (ii) Take the Student Name, House and Attendance fields in the **Design Grid**.
- (iii) Go to **Sort property** and click on **Ascending** option to get the names in ascending order.
- (iv) Go to **Criteria Property** under **Attendance Field** and type “Present” or “Absent” in the space provided.
- (v) Click on **Run** button in the **Results** tab to view the result of the query.
- (vi) Save the query with a name so that you could view the result of the query in a **Datasheet** view.

4. There are following steps to create a query in the Query Wizard :

1. Go to **Create** tab and click on **Query Wizard** under **Queries** group.
2. A dialog box named as “**New Query**” appears. The **Simple Query Wizard** option is selected by default. Click on **OK** button.
3. The **Simple Query Wizard** dialog box appears. Select the table from dropdown box named as “Tables/Queries”.
4. Next add the different fields that you want as an output of the query.

5. Select the field from available fields and click on **Single Arrow** button. It will be added in the selected fields.
6. If you wish to add all the fields, click on the **Double Arrow** button.
7. After adding the required fields, click on **Next** button.
8. Give a suitable name to the query in the **Simple Query Wizard**. Now, click on **Finish**.
9. You can see the output in the Datasheet View.

5. Steps to Create a Form

1. Click on the table from the navigation pane for which form is to be created.
2. Go to the tab **Create**, In the **Forms** group, click on the option **Form**.
3. A new form is created and shown in the layout view. Three new tabs named as **Design**, **Arrange** and **Format** appear under the **Form Layout Tools**.
4. To edit or enter the data in the form, go to **Home** tab. Click on **Form View** under **View** option.
5. Various records of the table can be seen through the use of Record Navigation Bars. It is possible to move between records.
6. After completing all tasks, save the form with a new name in the **Save As** dialog box for future references.
7. Click on **OK** button and the name will be shown in the navigation pane.

6. Here are the steps to create a report from a table :

1. Click on the table from the navigation pane for which report is to be created.
2. Click on the tab **Create**. Under the **Reports** group, click on the option **Report**.
3. You will see that a new report has been generated. It will show up in the layout view. Four new tabs will appear under Report Layout Tools. They are **Design**, **Arrange**, **Format** and **Page Setup**.
4. Save this report with a new name for future references.

7. Steps to Export a Report

1. Now go to the **Home** tab. In the **Views** group, click on the option titled **Print Preview**.
2. The report appears in the **Print Preview Layout**.
3. Go to **Data** group, click on **More** option and then click on **Word**.
4. The **Export-RTF** dialog box comes on the screen. Select the location where you want to save the file. Click on **OK** button.

5. A final screen is shown after the completion of the exporting into another format. Click on **Close** button and check the location and file where you have saved the report.

Let us Do

Do it yourself.



5. Adobe Photoshop CS6

Let Us Answer

A. Multiple Choice Questions :

1. (c), 2. (c), 3. (b), 4. (b), 5. (b).

B. Fill in the blanks by choosing the correct word from the brackets :

1. Gradient, 2. Diamond, 3. History, 4. Workspace, 5. Open.

C. Write 'T' for true or 'F' for false statements :

1. F, 2. F, 3. T, 4. T, 5. T.

D. Write the key combinations to perform following tasks :

1. Ctrl+N, 2. Ctrl+O, 3. Ctrl+S, 4. Ctrl+W, 5. Ctrl+Shift+D.

E. Match the tool to the correct option :

1. Marquee Tool
2. Lasso Tool
3. Crop Tool
4. Move Tool
5. Quick Selection Tool

F. Short Answer Type Questions :

1. Adobe Photoshop is a graphic editing software. It is used to create and manipulate images.

2. Features which are new in Adobe Photoshop CS6 Version :

(i) User Interface : Adobe Photoshop CS6 has a new dark and revised user interface.

(ii) Properties Panel : This new version of Photoshop has reduced all the clutter by consolidating Masks Panel, Adjustment controls and 3D options into Properties Panel. All the missing filters are tucked away under Filter Gallery.

(iii) Blur Effects : There are various blur effects available in Blur gallery which support smart objects, which can be applied non-destructively as smart filters.

3. History Panel is used to store and display the actions you have performed. When you apply changes to an image, the new state of that image is added to the panel. When you close the document, all the contents in History panel are removed.

4. Graphic editing can be done in Photoshop CS6.

5. Difference between the Color Panel and Swatches Panel :

Color Panel

Color Panel is used to specify the values for foreground and background colour. You can change the colour by moving the sliders or R, G, B to set the RGB colours. You may choose the colour from the spectrum of colours displayed at the bottom of the panel.

Swatches Panel

Click on the Swatches tab to open the Swatches Panel. It consists of various colours which can be set as Foreground and Background colour. You can also add or delete the customized colour from this panel.

6. The three selection tools are —

Marquee tool, Lasso tool and Polygonal Lasso Tool.

7. Difference between the Save and Save as options —

Save	Save As
The process of writing data to a storage medium, such as a floppy disk, CD-R, USB flash drive, or hard drive.	A command in the File menu of most applications that causes a copy of the current document or image to be created.
The Save option is found in almost all programs commonly under the “File” drop-down menu or through an icon that resembles of a floppy diskette.	If differs from the regular Save command, which stores the data back to the file and folder it originally came from.

8. Close option close the file where as Exit option close the Photoshop software.

G. Long Answer Type Questions :

1. To create a new document, follow the given steps.

1. Click on **File** Menu. A drop-down list opens.
2. Select **New** option.
3. It will open a **New Document** setup dialog box as shown alongside figure.
4. In this dialog box, set the name of the document, page size and orientation.
5. To give the name to the document, type name in the Name textbox. This is the name which will get displayed in the image name of the document.
6. To set the page size and orientation, type the value in Width and Height options.

7. The quality of the printed area of an image is described by resolution. In this, you need to specify the number of pixels in the value box.
 8. Next, to select the color mode which fits best for your project like RGB, CMYK, Greyscale etc.
 9. Background Contents can be selected from White, Background color or Transparent.
 10. Click OK button after doing all your settings.
- 2.** We can insert images by taking the following steps :
1. Click on **File** menu. A drop-down list opens.
 2. Click on **Place** option from the list.
 3. A **Place** dialog box opens.
 4. Select the picture which is to be inserted and click **Place** button.
 5. A picture will be displayed in the page.
 6. Click and drag the image to the desired position within the canvas.
 7. You can also change the size of the image by dragging it from the corner of the image.
 8. You can also rotate the image by moving the cursor to the corner of the image where it will change into rotate cursor. Click the left mouse button and rotate the image to either direction you want.
- 3. (a) Opening an existing file :** The steps to open an existing file are as follows :
1. Click on the **File** menu. A drop-down list opens.
 2. Select **Open** option.
 3. An **Open** dialog box appears.
 4. Type the name of the file that is to be opened in File name text box.
 5. Click **Open** button.
- (b) Saving changes in existing file :** Steps to save changes in a file are given as follows :
1. Go to **File** menu. A drop-down list comes on to the screen.
 2. Click on **Save** or **Save As** option.
 3. A **Save As** dialog box opens.
 4. Choose the location where you want to save the file.
 5. Type the name of the file in **File name** text box.
 6. Click on **Save** button.
- (c) Saving a new file :** Steps to save a file are given as follows :
1. Go to **File** menu. A drop-down list comes on to the screen.

2. Click on **Save** or **Save As** option.
 3. A **Save As** dialog box opens.
 4. Choose the location where you want to save the file.
 5. Type the name of the file in **File name** text box.
 6. Click on **Save** button.
4. We can select an image using marquee tools by following steps :
1. Click on the drop-down list to get a list of Marquee tool.
 2. Select the type of marquee tool, by clicking on it.
 3. Place the cursor on the image and click the left mouse button. Now hold it. Now drag the mouse to select the image or part of it.
 4. A dashed border will come around the image or part of image, indicating that it is selected.

Marquee Tool

This tool is used to select the image or picture in a rectangular, square, elliptical or single row or column which is one pixel wide. By default, rectangle marquee tool is displayed. But when you click on the drop-down arrow of this tool, you will see other tools like **Elliptical Marquee Tool**, **Single Row Marquee Tool** and **Single column Marquee tool also**.

5. Lasso tool is used to make free hand selections. When you click on the drop-down arrow of Lasso Tool, you will see other tools also like **Polygonal Lasso Tool** and **Magnetic Lasso Tool**. For face hand selection, we use the Lasso tool. Let us see how it helps :
- (i) Select the Lasso tool from the tool box.
 - (ii) Click left mouse button from where the selection of image will begin. Hold the button and drag the mouse to select the image in a free hand shape.
 - (iii) Release the mouse when you come to the end of the selection.

Polygonal Lasso Tool : Polygonal Lasso Tool helps us to make selections in straight lines. Let's see how it works :

- (i) Select the **Polygonal Lasso Tool** from the drop-down list of Lasso Tools.
- (ii) Click once at one selection point of the image.
- (iii) Click at other point of the image. You will notice a straight line of selection appearing between these two points.
- (iv) Use the same method and complete the selection of the image.

Magnetic Lasso Tool : It works like a magnet and snaps the selection to the edges of the defined areas in an image.

- (i) Select **Magnetic Lasso Tool** from the drop-down list of **Lasso Tools**.
 - (ii) Click on the image to begin the selection and drag the mouse around the image to make the selection.
 - (iii) You will observe the anchor points appearing with the selection.
 - (iv) Double click the left mouse button after reaching to the end.
- 6.** Crop tool is used to remove unwanted parts from our image.
- 7. Procedure to create a new gradient using Gradient tool :**
1. Open an image in Photoshop CS6.
 2. Click on the **Gradient Tool** from the **Toolbar**.
 3. In the **Option** bar, you can see various options related to the Gradient Tool.
 4. Click on the drop-down arrow of the **Gradient Picker** and select the desired gradient from the available options.
 5. You can create a new gradient by double clicking on the Gradient Picker from the Option bar.
 6. A **Gradient Editor** dialog box comes on the screen.
 7. Select the **Gradient Type : “Noise”**.
 8. Select Roughness to 50%.
 9. Move the sliders of RGB to set the colors.
 10. Click on **Restrict** color checkbox.
 11. Change the name to **Abstract**.
 12. Click **New** button to create a new gradient.
 13. You will notice that the newly created gradient is displayed with other gradients in Preset.
 14. Click **OK** button.
 15. Create a new layer by clicking on the **Create New Layer** option from the lower bottom corner of the dialog box.
 16. A new layer will get inserted with other layers. Refer to the figure given below :
 17. Now click on the image. Also drag the mouse pointer to insert the new gradient as shown in the figure.
 18. Now click on Normal drop-down list. Select any option you like and you can see the gradient effect on the image accordingly.
- 8.** This tool helps to fill the colour in an image or part of an image with a foreground colour.
1. Open an image in **Photoshop CS6**.
 2. Click on the drop-down arrow of **Gradient Tool** and select the **Paint Bucket Tool** from the list of options.

3. Click on the **Foreground Color** from the **Toolbar**.
4. A **Color Picker Box** appears.
5. Select any colour of your choice.
6. Click **OK** button.
7. Now click on the image to fill the foreground colour in the image.

Let us Do

Do it yourself. □

6. More on Photoshop CS6

Let Us Answer

- A. Multiple Choice Questions :**
 1. (b), 2. (c), 3. (c), 4. (a), 5. (a).
- B. Fill in the blanks by choosing the correct word from the brackets :**
 1. Reservoir, 2. Sharpen, 3. Hue, 4. Hand, 5. Ellipse.
- C. Write ‘T’ for true or ‘F’ for false statements :**
 1. F, 2. F, 3. F, 4. T, 5. F.
- D. Write the shortcut keys for the following options :**

Option	Shortcut
Image Size	Ctrl+Shift+I
To open Brush Panel	Ctrl+Shift+B
To open Layer Panel	Ctrl+Shift+C
To create new file	Ctrl+N
To create new layer	Ctrl+Shift+N
To Zoom in	Ctrl+Shift+I
To Zoom out	Ctrl+Shift+O

- E. Short Answer Type Questions :**
1. Photoshop and Coreldraw are two photo editing tools.
 2. Brush Tool is a painting tool which is used to create smooth brush strokes of the foreground colour in the picture. Pencil Tool helps to draw free hand drawings.
 3. Mixer brush tool helps to mix colours and paint in the image or part of image.
- 4. Spot Healing Brush Tool**
 When you click a photograph, there may be many things you want to change in order to make it a perfect picture, like removing dark circles, dark spots, blemishes, marks, or many

other elements from your photograph. In order to do this, Spot Healing Brush can be useful.

Healing Brush Tool

There is a difference between the Healing Brush Tool and the Spot Healing Tool. The Healing Brush Tool needs the input of source point to paint a spot. But **Spot Healing Brush Tool** does not need this input.

5. Clone Stamp tool works like copy and paste command.
6. Blur tool, as the name implies, is used to blur the image or portion of the image. Let us see how it can be done :
 1. Open an image in the Photoshop CS6.
 2. Select the **Blur Tool** in the toolbar.
 3. Set the Brush size to 160. Set the Hardness to 65. Set other options as well. Use the Options bar to define these values.
 4. Insert a new layer by clicking on **Create a New Layer** option.
 5. Now, click and drag the mouse over the area of the image which needs to be blurred.
 6. Now see the blurred effect in newly created layer and the original image in original layer.

7. SHARPEN TOOL

Sharpen tool is used to sharpen the outlines of an image to improve the quality of an image and makes the image looks clearer.

SMUDGE TOOL

We use this tool to smudge an image with a colour. We move brush stroke from a point on the image and go to another point. The entire patch gets smudged that way.

8. **(a) Hand Tool** : Hand tool is used to move the image. This tool is useful in case when the image is too large to be seen on the single screen. By using Hand tool, you can move the image to see the parts of image which is not visible otherwise. You just need to select the Hand tool. Click on the image by pressing the left mouse button, hold the button and move the Hand tool to move the image with it.
(b) Zoom Tool : Zoom tool is used to enlarge the image called Zoom in or compress it called Zoom out. You need to select the Zoom tool from the toolbar. Click on the image now. It will be zoomed in (magnified). To zoom out, press Alt key from the keyboard and click on the image.
9. Layers are also a part of Adobe Photoshop, just like they are in Flash. A layer is a transparent sheet, through which everything beneath it is visible. These layers are used to hold objects and

are stacked on top of one another. Thus, you can see different objects of different layers altogether as they are on a single layer. By putting the objects on separate layers, you can edit the objects without affecting the objects in other layers. It is possible to add layers, hide, lock or delete layers.

10. Deleting a Layer

To delete a layer, follow the given steps :

1. Select the layer by clicking it once.
2. Right click on it. A popup menu appears.
3. Select **Delete Layer** option.
4. A box will pop up before you and ask you to confirm the deletion of the layer.
5. Click **Yes** button.

11. Making the Image Black and White

We can create black and white image in photoshop by following steps :

1. Select the image.
2. Go to **Adjustments Panel**.
3. Go to panel and select the option **Black and White**.
4. A **Black and White** property box opens.
5. Do the necessary settings and see the effect on the image.

F. Long Answer Type Questions :

1. Brush Tool is a painting tool which is used to create smooth brush strokes of the foreground colour in the picture. Select a brush shape; it may be oval, circle, square, etc. When you move the brush on the image, it leaves a stroke of colours. When you select a brush tool from the toolbar, you can see the options available in the Options bar related to the Brush Tool.

It may include :

Brush Preset Picker : When this option is checked, a list of presets available for brush appears on the ocean.

Mode : This option is used to set the painting mode from the available options.

Opacity : This option is used to set the level of transparency of the brush strokes.

Flow : This option is used to set the flow of the brush.

Let us see how it works :

1. Open an image in Photoshop CS6.
2. Use a **Magic Wand Tool** and select the area where you want to apply the brush tool by clicking on the area once. (In this example, we have selected the sky)
3. Select the **Brush Tool** from the toolbar.

4. From the Options bar, select the Style (say Brush number 60) and Hardness (will be disabled if we select Brush 60) of the brush.
 5. Set the Foreground colour to any colour you want.
 6. Create a new layer by clicking on the **Create a New Layer** button at the bottom left corner of the window.
 7. Now, paint with the type of brush you have selected by clicking the left mouse button and dragging the mouse in the selected area.
- 2.** Pencil Tool is used to create free hand drawings. The difference between Brush Tool and Pencil tool is that Brush Tool draws with smooth and soft edges and Pencil Tool draws with hard edges. Let us explain the working of Pencil Tool with the help of an example :
1. Open an image in Photoshop CS6.
 2. Select the **Pencil** tool from the toolbar.
 3. Go to the Options bar. Set the size of the panel to 16. This is done in Brush Preset Picker; the size of slider is to be set at 16.
 4. Set the foreground colour by clicking on the Foreground color from the toolbar.
 5. A **Color Picker** dialog box opens. Set any colour (say green).
 6. Click **OK** button.
 7. Create a new layer by selecting the Create a new layer button.
 8. Click the left button of the mouse now. Drag the mouse and draw lines using the Pencil tool.
- 3.**
1. Open an image in Photoshop CS6.
 2. Select the **Color Replacement Tool** from the toolbar.
 3. Click on the **Foreground Color** to select a new colour.
 4. A **Color Picker** dialog box opens.
 5. Select the colour (say blue).
 6. Click **OK** button.
 7. Change the cursor size to 115 pixels.
 8. The cursor changes its shape.
 9. Now click and drag the pointer on the image and colour your image.
- 4.** In Patch tool, you can select a patch, drag it and drop it on the area which you want to cover. This way, you can remove unwanted elements from the image with the patch of matching contents. Let us see how it works :
1. Open an image in Photoshop CS6.

2. Select Patch tool from the toolbar.
 3. Go to **Options Bar** and in the Choose a **Patch Mode**, select **Content Aware Patch Mode**.
 4. Select an area in the image by clicking the left button of the mouse. Hold the button and drag the mouse to make the selection. Let us assume that you have selected the second flower.
 5. Now, drag the selection to the area left, right or anywhere from where you want to generate a fill.
5. We use this tool to move an image or a part thereof to another area. When we move that part to another place, the area left behind will be filled up with the existing background.
1. Open an image in Photoshop CS6.
 2. Go to toolbar. Select the **Content Aware Move Tool**.
 3. Select the area by clicking the left mouse button, hold it and drag the mouse to draw the line around the element you want to move, as shown in the figure.
 4. Now, click on the selection and drag it to another location.
 5. You will see that the area left behind has been filled up with matching surroundings.
6. **Hand tool** is used to move the image. This tool is useful in case when the image is too large to be seen on the single screen. By using Hand tool, you can move the image to see the parts of image which is not visible otherwise. You just need to select the Hand tool. Click on the image by pressing the left mouse button, hold the button and move the Hand tool to move the image with it. **Move tool** is used to move the selected part of an image.
7. This tool works like Copy and Paste command. We use it to make duplicate of an image. It uses the sampling points of an image. It uses those sampling points to make a clone of that image.
1. Open an image in Photoshop CS6.
 2. Select the **Clone Stamp Tool** from the tool bar.
 3. Select the type, size and hardness of brush. Select the **Blend Mode** from the **Options Bar**.
(In this example, we select the Brush size : 100 and Brush Preset : Round Point Stiff)
 4. Now, press Alt + Left mouse click to select the area for sampling.
 5. Now, click on the other area and drag the mouse to draw a clone.
 6. When you start dragging, a + symbol appears to the original image.

8. Blur tool, as the name implies, is used to blur the image or portion of the image. Let us see how it can be done :
 1. Open an image in the Photoshop CS6.
 2. Select the **Blur Tool** in the toolbar.
 3. Set the Brush size to 160. Set the Hardness to 65. Set other options as well. Use the Options bar to define these values.
 4. Insert a new layer by clicking on **Create a New Layer** option.
 5. Now, click and drag the mouse over the area of the image which needs to be blurred.
9. **Brush Tool** is a painting tool which is used to create smooth brush strokes of the foreground colour in the picture. **Pencil Tool** helps to draw free hand drawings. **The color replacement tool** helps to replace or change the colour of the image to new color. **Mixer brush tool** helps to mix colours and paint in the image or part of image. **Content Aware Tool** helps to move the image or part of it to some other area. **Clone stamp tool** helps to create the duplicate copy of an image. **Blur tool** helps to blur the image or portion of the image. **Zoom tool** helps to enlarge the image called Zoom in or compress it called Zoom out.

10. Rectangle Tool

This tool is used to draw rectangular shapes on the screen. Just click on the tool, select the Foreground color and draw the shape by click and drag method.

Rounded Rectangle Tool

Rectangle tool is used to create a rectangle shape with sharp corners. But rounded rectangle tool is used to draw a rectangle with rounded corners. To draw a shape, select the tool from the toolbar, select the Foreground color, set the height and width of the shape and also set the radius and draw the shape, using click and drag method.

Ellipse Tool

You can draw ellipses with the help of this tool. Select the Ellipse tool and the Foreground color. Draw the ellipse using the click-and-drag technique.

11. This option is used to adjust the hue or saturation of the image. Let us see how it is done :
 1. Open an image in Photoshop CS6.
 2. Select the image or a part of it using any selection tool.
 3. Click on the menu image. You will see a drop down menu popping up before you.
 4. Select the **Adjustments** option. A further menu opens.
 5. Select **Hue/Saturation** option.

6. The **Hue/Saturation** dialog box opens.
 7. Another way is to go to Adjustment panel on the right side of the window.
 8. Select **Hue/Saturation** option.
 9. A **Hue/Saturation** property box opens..
 10. Set the sliders in the Hue and Saturation utility and see the effects on the image at the same time.
- 12.** We can add a new layer by following the given steps :
1. Click on **Create a New Layer** option at the left bottom of the window.
 2. A new layer will be added in Layers panel.
 3. In order to change the name of the layer, double-click on it.
 4. The Layer name will get highlighted.
 5. Delete the name and type the new one.

Let us Do

Do it yourself. □

7. Cascading Style Sheets

Let Us Answer

- A. Multiple Choice Questions :**
1. (b), 2. (b), 3. (c), 4. (c), 5. (c).
- B. Fill in the blanks by choosing the correct word from the brackets :**
1. text-shadow, 2. letter spacing, 3. font-style, 4. black, 5. text-indent.
- C. Write the syntax for the following :**
1. letter-spacing : value
 2. background-image : path
 3. font-size : value
 4. border-color : value
 5. border-width : value
- D. Short Answer Type Questions :**
1. A cascading style sheet makes it easier to enhance the look of the different elements on a web page.
 2. **Benefits of using Cascading Style Sheets**
 1. **Saves Time :** Using CSS, you can define the style sheet rules once, which can then be used and applied to various elements. So, one doesn't need to write the rules separately for each element which saves time.

- 2. Maintenance is Easy :** It is easy to format web pages in a web site. As one applies the change in CSS, automatically updates the elements in a web page.
 - 3. Fast Transfer Speed :** There is no need to write formatting statements repeatedly, which reduces the complexity and file size. Thus, files can be transferred at faster speed.
 - 4. Superior Styles :** With the help of CSS, we can apply superior styles to the web page rather than using the HTML tags and attributes. This gives a better appearance to the HTML document.
 - 5. Compatibility :** With the help of CSS, one can apply different layouts to different media types. The same HTML document can be presented and viewed in different ways for different devices like computer screen, phone etc.
- 3.** The syntax for defining Style Sheet rule is given below :
Selector (Property : Value; Property : Value;)
 - 4. Declaration :** Declaration part is enclosed in curly braces { }. This part consists of property and its value. Property is the attribute of the HTML element in a Selector and value is its assigned value.
 - 5.** Class attribute is used to select the elements with a specific class that we have defined in the style.css file. To select the elements, write dot (.), followed by class name.
 - 6.** .html is the extension of HTML document.
 - 7.** .css is the extension of CSS file.

8. Three Ways to Define CSS

- 1. External Style Sheets :** In this style sheet, you can define a common style sheet with .css extension and then invoke it by using <link> tag in HTML document.
- 2. Internal Style Sheets :** In this style sheet, you can define the style sheet rules in the header section of the HTML document using <style> tag.
- 3. Inline Style Sheets :** In this style sheet, you can define the style sheet rules with HTML tags using STYLE attributes.

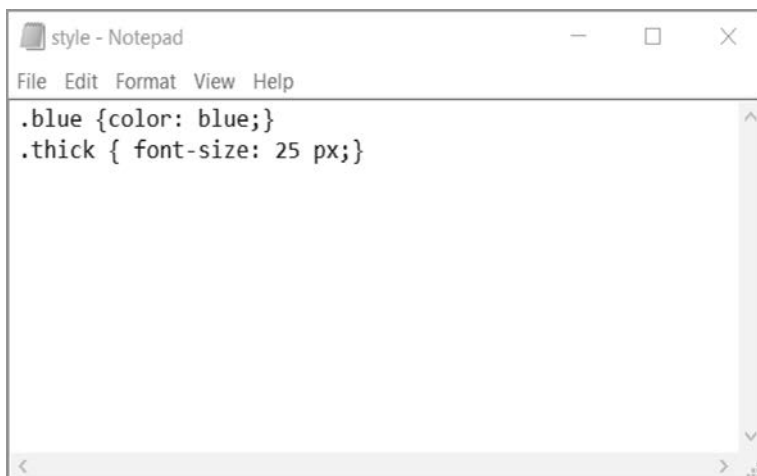
E. Long Answer Type Questions :

1. External Style Sheet :

In External Style Sheet method, you need to define the style sheet in a separate file with an extension .css. Let us understand it with an example.

Suppose we have created a file named **style.css**.

In this file, we have created two rules 'blue and thick' in an external CSS. Now, we will link it in HTML document using <link> tag as shown in the next figure.



```
style - Notepad
File Edit Format View Help
.blue {color: blue;}
.thick { font-size: 25 px;}
```

2. External Style Sheets : In this style sheet, you can define a common style sheet with .css extension and then invoke it by using <link> tag in HTML document.

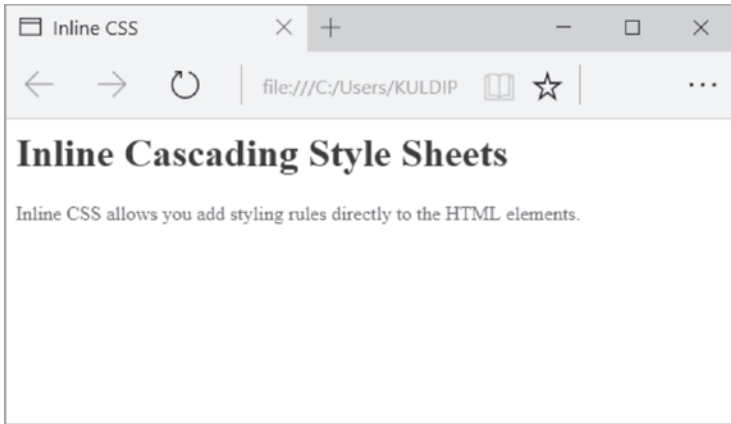
Internal Style Sheets : In this style sheet, you can define the style sheet rules in the header section of the HTML document using <style> tag.

3. Internal Style Sheet :

One way to apply CSS to HTML elements is by using the 'Style' attribute. The Style attribute can be used with any elements in the body section including the <body> tag itself. Let us understand it with the help of the same example as above.



```
Example - Notepad
File Edit Format View Help
<html>
  <head>
    <title> Example </title>
  </head>
  <body>
    <h1 style ="color:blue;">Inline Cascading Style Sheets</h1>
    <p style ="color:red;">Inline CSS allows you add styling rules
    directly to the HTML elements.</p>
  </body>
</html>
```



4. HTML allows you to set the background style of an element with the help of the following properties :
 - (i) background-colour
 - (ii) background-image
 - (iii) background-position
 - (iv) background-repeat
 - (v) background-attachment
5. The Border property of Cascading Style Sheets allows you to set the border style, width and colour of the HTML element. Various border properties may include :
 - (i) border-style
 - (ii) border-width
 - (iii) border-colour
 - (iv) border

(i) border-style : This property is used to specify the type of the border.

Syntax :
border-style:value
where, value can be any of the following :

Solid : To define the solid border

Dashed : To define the dashed lines in a border

Dotted : To define a dotted border

Double : To define double border

Grooved : To define 3D grooved border

Ridge : To define 3D ridge border

Inset : To define 3D inset border

Outset : To define 3D outset border

None : To define no border

Hidden : To define hidden border

- (ii) **border-width** : This property helps you to set the width or thickness of the lines of the border of an element.

Syntax :

border-width:value

where, value can contain any of the following values :

- Thick
- Thin
- Medium

- (iii) **border-colour** : This property helps you to set the colour of the border. One can change the colour of the individual border as well like top, bottom, left or right border.

Syntax :

border-colour:value

where, value can contain colour name, RGB colour code or Hexadecimal code.

- (iv) **border** : Using this property, we can set all the border properties in one declaration.

Syntax :

border : border-style border-width border-colour

6. The margin property of Cascading Style Sheets helps you to set the margin of each side of element. Each element has four sides : **right, left, top** and **bottom**. The margin properties are used to set the margin on HTML document i.e. these are used to specify the amount of free space surrounding an element.

- margin-left
- margin-right
- margin-top
- margin-bottom

Syntax :

margin-side:value

where,

margin-side may be any side from left, right, top or bottom

value can be any of the following:

auto : browser calculates the margin

length : specifies the length in px, pt, cm etc.

% : Margin is specified in % of the width of the containing element

Let us Do

Do it yourself.



Half Yearly Model Test Paper

Do it yourself.

Annual Model Test Paper

Do it yourself.

