

Computer Network



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

1. Hardware, Software 2. Hub 3. Ring 4. MAN 5. Wireless

D. Answer the following questions.

1. A computer network is a collection of computers and other peripherals which are connected with a communication channel, like cables or wireless media.

Computer networks are helpful for sharing various resources and information among different users working on different computers. They bring efficiency, economy and effectiveness in any organization.

Following are the advantages of a computer network:

- Helps in communication-via email, video conferencing, instant messaging, etc.
 - Reduces cost- It enables multiple users to share a single hardware device like a printer or scanner.
 - Enables all types of file (text, audio, video, etc.) sharing across the network-Many users can access the same file. It also allows sharing of software or operating programs on remote systems.
 - Efficient storage of data-Data can be stored in a central network drive which can be shared by everyone.
2. See topic 'Types of Networks' on book page no-9.

LAN	WAN
<ul style="list-style-type: none"> • LAN stands for Local Area Network. • It spans over a limited geographical area such as school, office or home. • The transmission speed of LAN is high. • It can be controlled by a single person or an organisation. 	<ul style="list-style-type: none"> • WAN stands for Wide Area network. • It spans over a large geographical area such as a country or even over in continental distances. • The transmission speed of WAN is low. • WAN might not be owned by one organization.

Ring Topology	Star Topology
<ul style="list-style-type: none"> • Each node is connected with the adjacent nodes in a circular chain using a single cable. • The data flows in the chain in only one direction and passes through all the nodes until it reaches its destination. 	<ul style="list-style-type: none"> • All the computers are connected to a central device called hub or switch. • All the information passes through the hub or switch before it can be transferred to the destination.

- 4 (a) **Network Interface Card (NIC)** : Also known as a LAN Card or Ethernet Card. It is the most important component of the networking hardware. It provides a hardware interface between the network and the computer. It connects a computer to a cable, which in turn links all the computers on the network together. Information from the computer is transmitted through NIC connected on the motherboard of CPU.
- (b) **Router** : A router is a network device which is responsible for routing traffic from one network to another network. These two networks could be a private company network or a public network. We can think of a router as a traffic police who directs different network traffic to different directions.
- (c) **Hub** : Hub is a central controller device which provides the connection for all the computers on a network.
5. See topic 'Network Security' on book page no-13.

Fun Activity



G	P	S	Y	Q	T	Z	P	N	R
Z	T	N	T	N	O	Y	R	T	E
Y	M	Q	S	E	P	R	O	Y	P
B	L	U	E	T	O	O	T	H	E
R	A	K	N	W	L	U	O	U	A
I	N	W	D	O	O	T	C	B	T
D	Z	A	E	R	G	E	O	Z	E
G	Y	N	R	K	Y	R	L	Q	R
E	M	A	I	L	M	N	P	A	N

HOTS



Bluetooth technology, Wi-Fi

2

Learn to Use MS-Access 2016



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

1. RDBMS 2. redundancy 3. Field
4. one 5. value

D. Answer the following questions.

1. A database or an electronic database refers to an organized collection of data stored on a computer in such a way that its contents can be quickly accessed, updated and queried with the help of a software program.

Two advantages of database are given on next page:

Sharing of Data : Different users can access the same database according to their needs.

No Data Inconsistency : It helps to avoid data inconsistency. It means if a single database is used by multiple users, then it also ensures that the same data is present for all the users.

2. See topic 'Relational Database Management System (RDBMS)' on book page no- 18.
3. Primary key is a unique feature of Database Management System. This is a field which can uniquely identify each record in a table. The value in primary key is different for every record. A table can have only one primary key. The primary key ensures that there is no data duplication inside the table. It is used to relate the table's record to those in another table.

4.	Design View	Datasheet View
	The Design view is useful to specify the design (field names, their data types and field properties) of a table or to modify the design of an existing table.	In Datasheet vies, tables are seen exactly the way they are. We generally use this view for creating tables, entering data into them and also for editing data.

5. See topic 'Creating Tables in a Database' on book page no. 22.

Fun Activity



1.	Object	Purpose
	Database	It is an organized way to storing data & record keeping in a computer.
	DBMS	Database Management System (DBMS) is a software that helps to manage large amount of data.
	Query	With this, you can display the records that match certain criteria.
	Reports	Reports are used to collect the summarised data from one or more tables/queries and organise it in a printable form.

2. Write down the missing steps in the blank boxes to define the primary key in a table.

1. Open the table in Design view.
2. Select the field by clicking on that field selector column. That field will be highlighted. Right click on the field header.
3. Click on the Primary Key option. The selected field will be set as the primary Key.

HOTS



Roll no field can be used for making the primary key.



He should use Report in Access.

4

Images, Links and Forms in HTML



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

1. ALT 2. URL 3. Hyperlinks
4. <OPTION>, <SELECT> 5. <TEXTAREA>

D. Answer the following questions.

- HTML Allows us to insert images inside the web pages through the tag.
- HREF (Hypertext Reference) attribute specifies the destination of a link and is given by the URL.
- Hyperlink is usually a word, a group of words or an image that when clicked links to a new document or a new section within the current document.

Anchor tag is used for creating hyperlinks in HTML web pages. It is a container tag and used as <A> Hyperlink Text . Where, Hyperlink Text is a text or an image.

- The <TEXTAREA> tag is used to create a multiline text box that can accept long text values. We can specify the number of rows and columns we want in text area by using the ROWS and COLS attributes of the <TEXTAREA> tag.

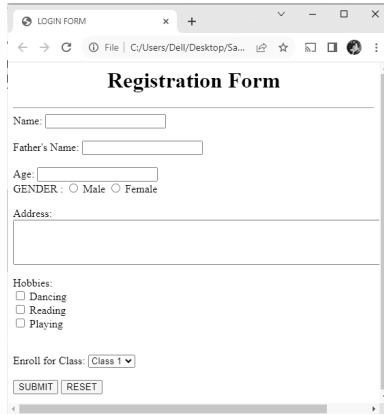
Example :

```

FORMAT - Notepad
File Edit Format View Help
<html>
<head>
<title> LOGIN FORM </title>
</head>
<body>
<form>
<center> <h1> Registration Form </h1> </center>
<br>
Name: <input type="text"> <br><br>
Father's Name: <input type="text"> <br><br>
Age: <input type="text"><br><br>
GENDER : <input type = "Radio" NAME = "gender"> Male <input type = "Radio" NAME =
"gender"> Female <br><br>
Address:<TEXTAREA ROWS="4" COLS="80"> </TEXTAREA> <br><br>
Hobbies: <br>
<input type = "checkbox"> Dancing <br>
<input type = "checkbox"> Reading <br>
<input type = "checkbox"> Playing <br>
<br>
Enroll for Class:
<select>
<option> Class 1
<option> Class 2
<option> Class 3
<option> Class 4
<option> Class 5
<option> Class 6
<option> Class 7
<option> Class 8
</select>
<br>
<br>
<input type="submit" value="SUBMIT">
<input type="reset" value="RESET">
</form>
</body>

```

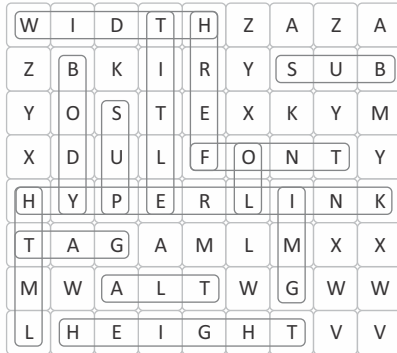
HTML code for <TEXTAREA>, <SELECT>, <SUBMIT>, <RESET> and <OPTION> tags



Web browser displaying the output

5. See topic 'Submit/Reset Box' on book page no- 52.

Fun Activity



HOTS



```

<html>
<head>
<title>hyperlink</title>
</head>
<body bgcolor="pink" text="red">
<ahref = https://www.google.com> My best friend</a>
</body>
</html>

```



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

1. Library 2. Instance 3. Layers 4. Masking 5. Motion


D. Answer the following questions.

1. A symbol is a reusable object that we can use for special effects, animation, or interactivity. Symbols are stored in the Library panel. When we drag a symbol, Animate creates an instance of a symbol.

An Instance is a copy of a symbol, which is located on the stage. A symbol can contain JPEG image, drawings, etc.

2. A symbol is a reusable object that we can use for special effects, animation; or interactivity.

To create a symbol, see topic 'Creating a symbol' on book page no 57.

3. To insert a new layer, click on New Layer  button from the Timeline panel. You can also insert new layer by clicking on Insert → Timeline → Layer. A new layer on top of the selected layer.

4. (a)

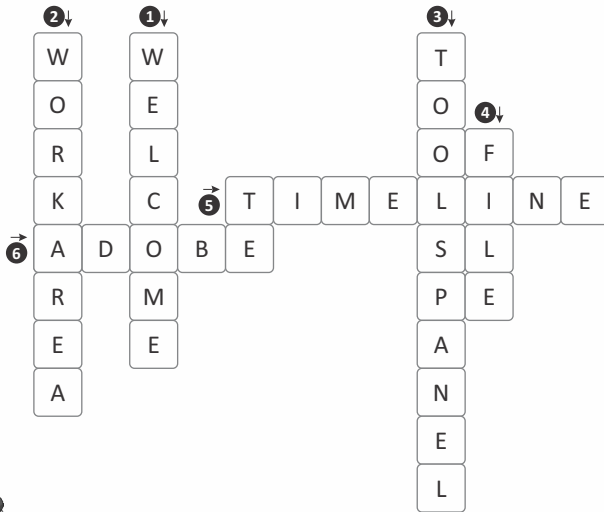
Frame by Frame Animation	Tweened Animation
<p>This animation technique allows you to specify a different art for each frame in the Timeline. Use this technique to create an effect that is like the frames of a film being played in rapid succession. When the frames are played one after the other, the effect of movement or animation becomes visible. This technique is useful for a complex animation where the graphic elements of each frame must be different.</p>	<p>The word Tween is derived from the word 'in-between'. The movement of an object in between the frames is called Tween. In Tween animation, only the starting and ending key frames are created and the rest is done by the computer, which creates the shortest path between the frames.</p>

4. (b)

Motion Tween	Shape Tween
<p>Motion Tween is one of the basic animation techniques. It refers to any object that travels from one point to another and involves no change in the shape or size of the object over a period of time. However, changes may occur in colour, texture or distance of the objects.</p>	<p>Shape tween is similar to making one shape appear to change into another shape over time. By tweening shapes, you can create an effect similar to morphing (making one shape appear to change into another shape over time.)</p>

5. Masking in Animate is used to hide a selected part and display content instead on a layer. Masking enables us to control the content that is visible to the audience. In order to create a Spotlight effect, we can create a circular mask and have the audience only view the content within the circular area. This enables the audience to focus on the important content in the project/graphics.

Fun Activity



HOTS



See topic 'Creating a Symbol' on book page no- 57.



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

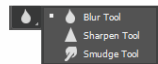
1. Retouching 2. Clone stamp 3. Vertical Type Text
4. Background 5. Warping

D. Answer the following questions.

- Dodge tool is used to make the darker portions of the image lighter while Burn tool is used to darken areas of an image and sponge tool affects their saturation.
- See topic 'Retouching Tools' on book page no- 80.
- Spot Healing Brush Tool is used to quickly repair imperfections such as blemishes, scars, unwanted marks and other imperfections in photographs.
- The Blur Tool is a great way to create effects in a photograph. This tool can blur or soften an image or part of an image. The steps are as follows.

Step 1 : Open any image. Select the **Blur Tool** from the Tools panel.

Step 2 : Select the desired Blur Tool size, mode, and strength from the Context menu.



Step 3 : Select the layer that you wish to work on from the **Layers** menu.

Step 4 : Drag the tool over the image you want to blur by holding the left mouse button. The more you move the brush over a portion of the image, the more blurred it will become.



Original Image



Using the Blur Tool

- See topic 'Layers in Photoshop' on book page no- 75.

Fun Activity



- a. Layers Panel
- b. Delete Layer
- c. Overscroll
- d. Blur Tool
- e. Eyedropper Tool

HOTS



Clone Stamp Tool



Functions and String in Python



Let's Do This

A. Multiple Choice Questions.

- 1. (c)
- 2. (c)
- 3. (c)
- 4. (a)
- 5. (c)

B. State true 'T' or false 'F'.

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

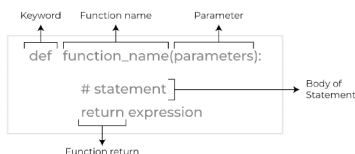
C. Fill in the blanks.

- 1. Function
- 2. Built in
- 3. Argument
- 4. Integer
- 5. *

D. Answer the following questions.

- 1. Python Functions is a block of statements that return the specific task. The idea is to put some commonly or repeatedly done tasks together and make a function so that instead of writing the same code again and again for different inputs, we can do the function calls to reuse code contained in it over and over again.

The syntax to declare a function is:



This is a function definition that consists of the following components.

- (a) Keyword `def` that marks the start of the function header.
- (b) A function name to uniquely identify the function.
- (c) Parameters (arguments) through which we pass values to a function. They are optional.

- (d) A colon (:) to mark the end of the function header.
 - (e) One or more valid python statements makes up the function body.
 - (f) Statements must have the same indentation level (usually 4 spaces).
 - (g) An optional return statement can be used to return a value from the function.
2. The Python return statement is used to return the output from a function.
 3. See topic 'Calling a Python Function' on book page no- 90.
 4. A sequence of characters which is enclosed or surrounded by single (") or double (") quotes is known as a string. The sequence may include a letter, number, special characters or a backslash.
Python treats single quotes as double quotes.
 5. **lower()**: Converts all uppercase characters in a string into lowercase
upper(): Converts all lowercase characters in a string into uppercase

Fun Activity



1.

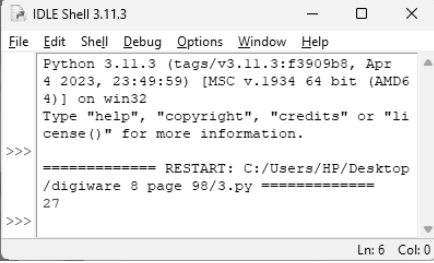
```

IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 8 page 98/1.py =====
Hello World!
Hello World!
>>>
Ln: 7 Col: 0
  
```

2.

```

IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 8 page 98/2.py =====
4 is maximum
>>> |
Ln: 6 Col: 0
  
```

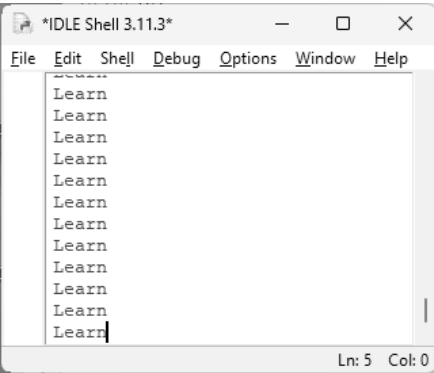
3. 

```

Python 3.11.3 (tags/v3.11.3:f3909b8, Apr
4 2023, 23:49:59) [MSC v.1934 64 bit (AMD6
4)] on win32
Type "help", "copyright", "credits" or "li
cense()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop
/digiware 8 page 98/3.py =====
27
>>>

```

Ln: 6 Col: 0

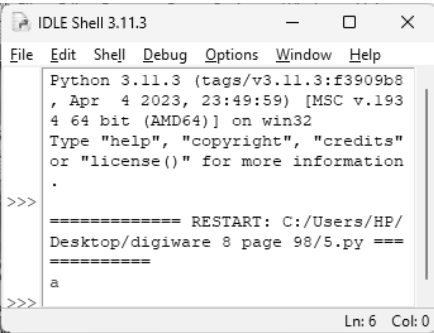
4. 

```

Learn
Learn
Learn
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Learn
Learn
Learn
Learn
Learn
Learn

```

Ln: 5 Col: 0

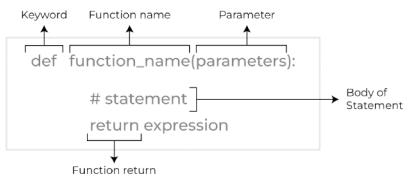
5. 

```

Python 3.11.3 (tags/v3.11.3:f3909b8
, Apr 4 2023, 23:49:59) [MSC v.193
4 64 bit (AMD64)] on win32
Type "help", "copyright", "credits"
or "license()" for more information
.
>>>
===== RESTART: C:/Users/HP/
Desktop/digiware 8 page 98/5.py ==
=====
a
>>>

```

Ln: 6 Col: 0





Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

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

C. Fill in the blanks.

1. Blogging 2. C2C 3. Flipkart
4. Microblogging 5. Digital Wallet

D. Answer the following questions.

1. Amazon.com, Flipkart.com, Sanpdeal.com, Alibaba.com
2. Three different types of people are involved with commerce. They are:

- Producers ▪ Sellers ▪ Buyers

Commerce revolves around these categories of people.

- Producers are the people who produce different kinds of products or items and provide services.
 - Sellers are the people who sell items or goods and give services to the people.
 - Buyers are the people who purchase items and services.
3. A **blog** (short for “weblog”) is an online journal or informational website run by an individual, group, or corporation that offers regularly updated content (blog post) about a topic. It presents information in reverse chronological order and it's written in an informal or conversational style. The entries that appear on a blog are called **posts**, and the act of publishing a blog is called **posting**. A single person who owns and maintains blogs is known as a **blogger**.

4.

Business-to-Business (B2B)	Business-to-Consumer (B2C)
This refers to a company selling or buying products or services to/from other companies. For example, a company that manufactures cars uses the Internet to	This refers to the transaction that takes place between a company and a consumer. The company establishes website for its products and services so that the customer can order any products or services and gather

purchase tyres from their supplier or manufacturer.

information about them. With B2C business model, sellers can sell products directly to consumers, without using traditional retail channels. This enables companies to sell products at a lower cost with quick service.

5. Digital wallets, such as PayPal, Apple Pay, and Google Pay, have become increasingly popular. They allow customers to store payment information securely and make payments with just a few clicks. According to Statista, digital wallets started pacing alongside credit cards for the first time in 2020 as the most popular online payment method in the US, and it's a trend that has only continued.

Fun Activity



1. (A) Business -to-Consumer (B) Business -to-Business
 (C) Business -to-Employee (D) Consumer-to-Consumer
 (E) Electronic Funds Transfer (F) Cash on Delivery
- 2.

B	R	N	V	V	Z	B	H	C	Q
L	W	M	B	C	X	U	G	R	W
O	A	J	L	A	C	Y	T	A	T
G	E	C	O	M	M	E	R	C	E
G	D	Q	G	A	E	R	A	L	E
E	C	R	G	S	W	S	N	K	W
R	F	Q	I	D	I	O	S	J	A
N	R	P	N	F	X	I	A	H	L
A	Q	L	G	G	A	T	C	G	L
F	L	I	P	K	A	R	T	F	E
I	P	E	S	L	U	D	I	D	T
L	E	T	Z	I	B	L	O	G	F
T	Y	P	E	P	A	D	N	P	X

HOTS



Cash on Delivery (COD)



Let's Do This

A. Multiple Choice Questions.

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

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. T 5. T

C. Fill in the blanks.

1. Mystery Animal 2. NLP 3. Google Translate
4. Deep learning 5. Text, Speech

D. Answer the following questions.

- Machine learning models, continuous learning, generalization and predictive and descriptive analytics are dependent on massive data sets. The more diverse and comprehensive the data, the better AI can perform. This is why data is often referred to as the 'training Fuel' for AI.
- "Natural Language Processing is the ability of computer program to understand the human languages as it is spoken."
NLP is all about algorithms to understand and interpret speech and text which is natural language data.
Its goal is to build systems that can make sense of text and perform tasks like translation, grammar checking, or topic classification.
- Google Assistant** : Google Assistant can connect to all smart devices that make use of the Android operating system. It helps its users in managing tasks, planning a day, searching images, and answering queries.
Google Maps : Google Maps is an application that is widely used for navigation. It helps the users in finding out the directions to reach a certain location. It also shows information related to traffic in real-time, suggests alternate routes if you are travelling by foot, car, train, bicycle, and air. You can take directions by Google Maps by just pressing the mic button and speaking.
- See topic 'Applications of computer Vision' on book page no- 115.
- Facebook, MRI, Self-driving vehicles, CCTV cameras, biometric machine, Google Translate.

Fun Activity



The machine plays an audio file in response to the human.

6

The human says something to the machine.

1

The processed data is converted back to audio.

5

The captured audio is converted to text.

3

The machine captures the audio.

2

The text's data is processed.

4

HOTS



(a) TEHOLOGYNC – TECHNOLOGY

(b) ITLNLIEGETN – INTELLIGENT