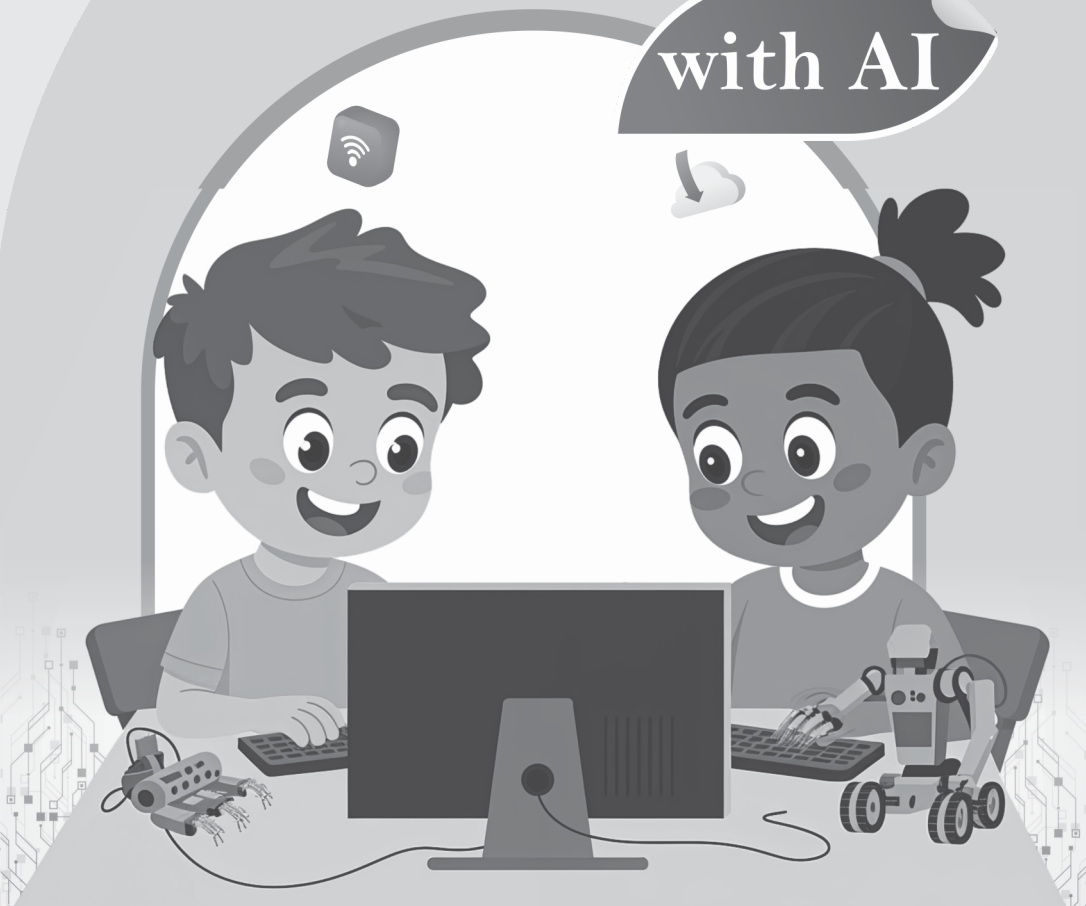
Edu Bridge

GRADE
8
MIDDLE STAGE

Teacher's Manual

Computer

with AI



Computer - 8

1. Computer Networking

A. **1.** (b); **2.** (b); **3.** (a); **4.** (c); **5.** (a)

B. **1.** Network cables; **2.** Router; **3.** Modem; **4.** Router

C. **1.** MAN; **2.** WLAN; **3.** LAN; **4.** LAN

D. In POP3, E-mails can be deleted from the server as E-mails is downloaded but in IMAP E-mails cannot be deleted from the server.

E. **1.** Local Area Network **2.** Metropolitan Area Network
3. Wireless Area Network **4.** Network Interface Card
5. Transmission Control Protocol
6. Internet Protocol
7. Hyper Text Transfer Protocol
8. Hyper Text Transfer Protocol Server
9. File Transfer Protocol
10. Simple Mail Transfer Protocol
11. Post Office Protocol
12. Internet Message Access Protocol

F. **1.** A Computer Network is a network that allows the interchange of data, files and electronic communications between different computer systems. This link may be between computer in the same building or between computer in different parts of country or world.

2. LAN are the Private Network that connects computer in a small area. It is secure the data and shared it safely.

3. Router can routes data packets based on their IP Address but in gateway it takes data from one system and then transfer to another gateway are generally more complete then switch or Router.

4. Network Security means some rules to prevent unauthorized access, misuse, modification of network, accessible data and resources.

It can be help in three ways.

1. To Prevent disruption of service.
2. To Prevent theft of or damage to the hardware.
3. To Prevent theft of or damage to the Information.

5. The Network Models is database model that is designed as a flexible approach to representing objects and their relationship. They are of two types client-server model and Pear to Pear model.

6. It is a group of computer in which each computer acts as a node for sharing files within the group. There is no central server each work station acts as a client.

7. **Advantage—**1. Files stored on the Central Server can be backup easily and shared easily.

2. Files can be stored on a central computer (the server) and easily shared.
3. Users can access their shared files from any workstation.
4. Devices such as laser printers and scanners can be shared. This saves money.

Disadvantage— 1. Viruses and malware can be spread easily and connected with expensive devices.

2. The cost of setting up a network can be high, especially when a large number of computers are to be connected. Expensive devices such as servers, routers, switches, hubs and so on have to be purchased.
3. If the server breaks down, the files on it become inaccessible.

TCP collects the data and resembles the data into its original form and IP component routes the packets to the specified IP address to its right destination.

2. Internet and Its Services

A. **1.** (a), **2.** (a), **3.** (c), **4.** (d)

B. **1.** transfer files; **2.** E-mail, **3.** virus

C. **1.** (d), **2.** (e), **3.** (c), **4.** (b), **5.** (a)

D. **1.** For connecting to the Internet we need.

- Connection-Phone Line, Cable, DSL or Wireless.
- Modem
- Network Software –TCP/IP
- Application Software-Web Browser, Email...
- Internet Service Provider (ISP).

2. FTP stands for File Transfer Protocol. File Transfer Protocol widely used to transfer files from one computer to the other over the Internet. It allows users to easily transfer files from one computer to another. FTP uses the Internet's TCP/IP protocols to enable data transfer.

FTP is most commonly used to download a file from a server using the internet or to upload a file a server (e.g., uploading a web page file to a server).

3. E-banking or Electronic banking, also known as Electronic Funds Transfer (EFT), is simply used to transfer funds directly from one account to another, rather than by cheque or cash. Instruct your bank or credit union to automatically pay certain monthly bills from your account, such as your auto loan or your mortgage payment. You can use your computer and personal finance software to coordinate your total personal financial management process, integrating data and activities related to your income, spending, saving, investing– record keeping, bill-paying and taxes, along with basic financial analysis and decision making.

4. Creating a new E-mail Account

1. Go to the G-mail home page.

2. Click Create An Account button.

3. Fill the information that you are asked for. You will need to choose your username, which will be your e-mail. You may have to, have a few, backup user name at hand because every username must be unique.

4. Scroll down, and fill in the remaining information and a unique Password to save and safe your account Click on Submit button.

5. Add a profile photo by clicking profit photo. If you would like to skip that step, click Next Step.

5. A computer virus is a program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes. Viruses can also replicate themselves. All computer viruses are man-made. A simple virus that can make a copy of itself over and over again is relatively easy to produce. Even such a simple virus is dangerous because it will quickly use all available memory and bring the system to a halt. An even more dangerous type of virus is one capable of transmitting itself across networks and bypassing security system.

3. Introduction to MS Access 2016

A. **1.** (b); **2.** (a); **3.** (b); **4.** (b); **5.** (b)

B. **1.** T; **2.** F; **3.** T; **4.** T; **5.** T

C. **1.** database; **2.** record; **3.** data; **4.** Primary; **5.** .accdb

D. **1.** MS Access 2016 is the Relational Database Management System (RDBMS) that comes as an integral part of the MS office 2016 suite of applications. It is a powerful GUI based RDBMS. It enables them to store, manage and utilise their data in an efficient manner. The database created in Access 2016 are save with the extension .accdb.

2. **Records :** A record is a row or collection of related fields that contain complete information about an entity in a table.
Fields : Fields are different columns within a table.

3. The following table explains various data types that are commonly assigned to the fields in a table.

Short Text	This is a general-purpose field containing any data. It has a limit of 255 characters and cannot be used for numeric calculations. Use this type for numeric entries that will not have calculations performed on them, such as telephone numbers and ZIP codes.

Long Text	This type has a limit of 63,999 characters; used for detailed, descriptive fields.
Number	This type stores numeric data that you can use in calculations. It can also hold symbols, such as decimal points and commas.
Date/time	This type only stores numbers representing valid dates and times.
Currency	Stores currency data that you can use in calculations.
Auto Number	Stores a sequential number for each record.
Yes/No	The value 1 represents Yes and the value 0 represents No, but the field can be formatted to display values as True/False or Yes/No.
OLE Subject	Stores objects created in another application, such as Word or Excel, that you can link to or fix in an Access tables.
Hyperlink	You can link to websites, e-mail addresses, files on your computer, files on the LAN or virtually any other location.
Attachment	This type works only in Access 2007, Access 2013 and Access 2016 databases. You can attach data files from word processing programs, spreadsheets, graphic editing programs and so on.
Calculated	You can use it to create calculated fields directly in a table. In the earlier versions, you could create calculated fields only in queries.
Lookup Wizard	Depending on the usage, this type creates either a lookup list form the data that you specify or a lookup list from the

	values in another table. It can also be used to set up multivalued lists.

4. A primary key is a field or combination of fields that uniquely identifies the record in a table. A primary key field cannot have repetitive values and cannot be left blank. For example, in a table of students' list, Roll number field can be made the primary key as every students has a unique roll number.

5. To enter records in the table, follow the given steps :

Step 1 : Open the table in the Datasheet view. (Double-click on the table in the Navigation Pane to open it in the Datasheet view)

Step 2 : Click on the New option in the Records group on the Home tab. A new record is inserted in the table.

Step 3 : Type the values for various field in a record. When we start entering data, a new record gets inserted automatically at the end of a table.

4. Introduction to Visual Studio

A. **1.** (b); **2.** (b); **3.** (a); **4.** (a); **5.** (c)

B. **1.** F; **2.** F; **3.** T; **4.** F; **5.** F

C. **1.** event; **2.** Message Box; **3.** two; **4.** IDE; **5.** Button

D. **1.** Visual Basic is an event driven programming language i.e., the programs that we create in it are based on the events performed by the users on different objects created in a form. An event is any action performed either by using the mouse click, double click, etc or by pressing keys on the keyboard.

2. **Integrated Development Environment (IDE)**

Integrated Developed Environment (IDE) is a term commonly used in programming world to describe the interface and the environment that we use to create our own applications. It is called integrated because it has

many features like designing, editing, compiling and debugging within the common environment.

3. **Label Control**
   The Label control is used to display text on the form. We can use labels for identifying a TextBox or for displaying instructions to the user on the form.
   TextBox Control
   The Textbox control is used to receive input from the user. We can enter text and numbers in this box.
4. This window displays a list of forms and other object that constitute the application. This list is orgnaised in the form of a branching structure, like Window Explorer. To open any object, we can double click its icon in the Solution Explorer Window.
5. To execute a Visual Basic Project, follow the given steps :
   Step 1 : Click Debug → Start Debugging or Press F5 or click the Start button on the toolbar.
   Step 2 : A Form titled Message with a button labelled Show Message will appear on the screen.
   Step 3 : Click the Show Message button. You will get the following popup message box.
   Step 4 : Click OK to return to the Form.

5. Programming in Visual Basic

A. **1.** (a); **2.** (a); **3.** (b); **4.** (b); **5.** (a)

B. **1.** F; **2.** T; **3.** F; **4.** F; **5.** F

C. **1.** If; **2.** Looping; **3.** Relational; **4.** For...Next; **5.** Char

D. **1.** Variables are the memory locations which store values temporarily. In VB you need to declare a variable first using Dim keyword.
Syntax
Dim VariableName As Datatype

Data Type

When a variable is declared, the type of data which can be stored in that variable is also specified. Commonly used data types are :

1. Byte : Represents an 8 bit unsigned integer.
2. Integer : Represents a 32 bit unsigned integer.
3. String : Used to store alphanumeric values.
4. Char : Store single character.
5. Boolean : Store value as True or False.

Example : Dim num As Integer = 5 'Variable Declaration with initialization'
Dim name As String = "India"
Dim Result As Boolean = False

2. Operators are special symbols used to perform calculations, make comparisons, and check logical conditions in a program.

Operators can be categorised into different categories.

Arithmetic Operators : These operators are used for arithmetic operations.

Operator	Explanation	Examples	Answer
+	Addition	1 + 2	3
–	Subtraction	5 – 2	3
/	Division	8 / 2	4
*	Multiply	2*3	6
^	Exponent (power of)	4^2	16

Logical Operators

These operators are used for making decision based on multiple conditions.

Operator	Explanation	Examples	Answer
OR	Result will be true if either of the condition is true.	4 > 2 OR 33 < 23 23 > 34 OR 34 < 12	True True

AND	Result will be true if all the conditions are true.	3 > 2 AND 33 < 34 63 > 34 OR 34 < 12	True False
NOT	Result will be opposite of the conditions	NOT 45 > 70	True False

3. The statements in a program are executed in a sequence. But sometimes, we wish to change the flow of control. Control statements are useful in these situations. They are used to control the execution of a program, either by repeating or by skipping the execution of a statement, or set of statements.

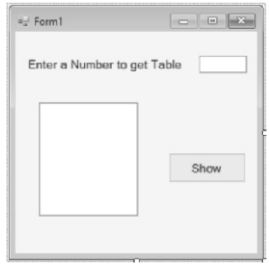
4. For ... Next

It is used to repeat a set of statements a fixed number of times. It uses a counter to count the number of executions.

Syntax : For Counter = Initial Value to Final Value

Statement(s)

Next



Example : To accept a number from the user and display its Table

- Create an interface as shown in the figure.
- Write code for the click event of Command Button 1.
- Execute the program and check the output for different numbers.

5. **Do While...Loop**

It is used to repeatedly execute a set of statement(s), till the specified condition remains true. It stops executing the statements as the condition become false.

Syntax : Do While Condition
Statement(s)
Loop

Example : To display even numbers between 1 to 21

- Create an interface as shown in the figure.
- Write code as shown for click event of the Command Button.
- Execute the program and click on the Print button.

Do Until ... Loop

This loop is similar to Do while loop but with a little difference. The keyword UNTIL means that as long as the comparison test is NOT TRUE, the loop repeats. As soon as it becomes TRUE, the loop terminates.

Syntax : Do Until Condition
Statement(s)
Loop

Example : To print first n squares lesser than 50. Create an interface. Write the code for the click event of Command Button1 and execute the program.

6. Introducing to Photoshop CS6

A. **1.** (b); **2.** (c); **3.** (b); **4.** (a); **5.** (c)

B. **1.** T; **2.** T; **3.** F; **4.** F; **5.** T

C. **1.** Menu bar ; **2.** Canvas area; **3.** Resolution; **4.** Lasso **5.** Crop

D. **1.** Adobe Photoshop is a powerful application for almost any kind of image editing and creating high-quality graphics. It is developed by Adobe systems. Photoshop has so many features that may be used professionally to edit photos or graphics.

Features of Photoshop CS6

- ❖ Revised user–friendly interface
- ❖ Photo editing or photo manipulation in lesser time and with little effort.
- ❖ Powerful tools to :

(a) Enhance or change the colour of an image by adjusting the brightness and contrast, colour balance, hue and saturation levels curves, etc.

(b) Crop or resize pictures without losing the quality of an image.

(c) Remove the unwanted object from the picture using vanishing point Tool.

(d) With the new Quick Selection Tool, users need only to click and drag across on image to make fast direction.

2. (a) Tools panel : The Tools panel is displayed on the left of the Photoshop window. It displays the tools available in Adobe Photoshop. These tools are grouped according to their functionality.

(b) Options bar : The options bar appears below the menu bar and displays the options that are available for the particular tool selected from the Tools panel. For example, if the Brush tool is selected, the options specific to the Brush tool will appear on the options bar.

3. The **Crop** Tool is used to remove unwanted areas of a an image. Whereas **Move** tool is used to move the current selection from one place to another.

4. It is used to automatically select the adjacent areas of the same colour in an image.

5. The Lasso tools are used to make free-hand selections in an image.

There are three types of Lasso tools

- ❖ **Lasso Tool :** To make free-form selections in the desired shape.

- ❖ **Polygonal Lasso Tool :** To select polygonal areas by clicking at different points. To close the selection border, position the mouse pointer over the starting point and click or double-click the mouse.
- ❖ **Magnetic Lasso Tool :** This tool sticks to the edges of the image, thus making the selection very easy. To close the selection border, double-click the mouse.

7. More on Photoshop CS6

A. **1.** (c); **2.** (b); **3.** (a); **4.** (a); **5.** (b)

B. **1.** T; **2.** T; **3.** T; **4.** F; **5.** T

C. **1.** Foreground; **2.** Clone Stamp; **3.** Rectangle; **4.** Shot Healing Brush **5.** Soften

D. **1.** The **Spot Healing Brush** Tool removes blemishes, scars, spots and other imperfections in the photographs whereas **Healing Brush** tool is used to paint with sampled pixels. This tool also matches the texture, lighting, transparency, and shading of the sampled pixels.

2. This tool allows you to duplicate the part(s) of an image by setting a sampling point in the image to be cloned.

3. Layers are the transparent sheet that can hold objects and are stacked on top of each other. When we have number of objects, it is always better to distribute the objects in different layers as it makes the work process much easier. We can draw and edit objects on one layer without affecting the objects on another layer. We can add number of layers, hide and lock layers, change the position of layers, delete layers and even customise the layers as well.

The layer palette displays a small thumbnail view of image in it.

4. The Type Tools are used for inserting text in Photoshop. You can format the text in many ways such as changing its font

family, size, style, colour, alignment, horizontal or vertical orientation, indentation, line spacing and much more. You can also warp the shape of the text in a number of interesting ways such as that of a wave, a flag or an arc.

The steps to use the Type Tool are :

Step 1 : Open the image.

Step 2 : Select the Horizontal Type Tool or the Vertical Type Tool.

Step 3 : Set the appropriate options such as font family, size, style, alignment and text colour for the Type Tool in the Options bar.

Step 4 : Click to set the insertion point anywhere on the image.

Step 5 : Enter the desired text.

Step 6 : Accept changes to the text by clicking the Commit button or cancel the operation by pressing the Cancel button in the Options bar.

5. There are three options under this Eraser tool.

Eraser Tool : The Eraser tool erases text and images based on the layer. If the user is on the text layer, then any text that the tool is dragged over will be erased. The size and style of the eraser can be selected in the Options bar.

Background Eraser Tool : The Background Eraser tool deletes any part of the image that is on the edge of an object. This tool is often used to extract objects from the background.

Magic Eraser Tool : The Magic Eraser tool deletes areas based on similar coloured pixels. It is very similar to the Magic Wand tool. This tool is ideal for deleting areas with the same colour that contrasts with the rest of the image.

8. HTML Lists, Images and Tables

A. **1.** (a); **2.** (b); **3.** (a); **4.** (c); **5.** (b)

B. **1.** F; **2.** T; **3.** F; **4.** F; **5.** F

C. **1.** ; **2.** Disc; **3.** Start; **4.** Bgcolor **5.** Cellspacing

D. **1.** The Unordered list <UL> is used when the items are not to be displayed any particular order.

The ordered list <OL> is used to display the list of items in a specific order. An ordered list indents and number each item in the list.

2. The 'Type' attribute specifies the type of bullet that can be used with <UL> element. The three values that can be defined with <UL> tag are disc, square and circle. The default value for <UL> tag is a disc. For example : UL Type = "circle">

3. The <TR> tag defines a horizontal row of cells whereas

<TD> tag specifies an individual block or cell in a table row.

4. Attributes of <TABLE> tag include border, bordercolor, bgcolor, background, width, height, cellspacing and cellpadding. Table provides a brief description of these attributes. Attributes of <TABLE> tag

Attributes	Description	Example
border	This attribute specifies the thickness of the border around the table. The value is specified in pixels.	<TABLE border = "3">
bordercolor	This attribute specifies the colour of the border of a table.	<TABLE bordercolor ="blue">

bgcolor	This attribute specifies the background colour of a table.	<TABLE bgcolor =“pink”>
background	This attribute specifies the URL of an image file to be displayed as the background of a table	<TABLE bordercolor = “c:\ roses.jpg”>
width, height	This attribute specifies the width or height of a table. The value is specified in pixels or in percentage.	<TABLE width = 100% height = 200>
cellspacing	This attribute specifies the space between two adjacent cells. The value is specified in pixels.	<TABLE cellspacing =3>
cellpadding	This attribute specifies the space between the edge of a cell (cell wall) and the contents of the cell. The value is specified in pixels.	<TABLE cell padding = 3>

5. **Rowspan:** This attribute specifies the number of rows a data cell should span. This attribute is used with the <TD> tag or the <TH> tag.

   Example <TD rowspan=“2”>

   Colspan : This attributes specifies the number of columns a data cell should span. This attribute is used with the <TD>

tag or the <TH> tag.

Example<TD colspan="2">

9. Artificial Intelligence

A. 1. (a); **2.** (a); **3.** (b); **4.** (b); **5.** (c)

B. **1.** T; **2.** F; **3.** F; **4.** T; **5.** T

C. **1.** routine; **2.** Machine Learning; **3.** Neural; **4.** image; **5.** cogritive

D. **1.** Artificial Intelligence (AI) is the science and engineering of making machines to demonstrate intelligence especially visual perception, speech recognition, decision-making and translation between languages like human beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of human beings such as the ability to reason, discover meaning, generalize, or learn from past experience. It is a science and a set of computational techniques that are inspired by the way in which human beings use their nervous system and their body to feel, learn, reason and act.

2. In the first half of the 20th century, science fiction familiarized the world with the concept of artificially, intelligent robots. It began with the "heartless" Tin man from the Wizard of Oz and continued with the humanoid robot that impersonated Maria in Metropolis. By the 1950s, we had a generation of scientists, mathematicians, and philosophers with the concept of artificial intelligence (or AI) culturally assimilated in their minds. One such person was Alan Turing, a young British polymath who explored the mathematical possibility of artificial intelligence. This was the logical framework of his 1950 paper, Computing Machinery and Intelligence in which he discussed how to build intelligent machines and how to test their intelligence.

3. To understand how Artificial Intelligence actually works, one needs to deep dive into the various sub domains of Artificial Intelligence and understand how those domains could be applied into the various fields of the industry.

Machine Learning

ML teaches a machine how to make inferences and decisions based on past experience. It identifies patterns, analyses past data to infer the meaning of these data points to reach a possible conclusion without having to involve human experience. This automation to reach conclusions by evaluating data, saves a human time for businesses and helps them make a better decision.

Deep hearing

Deep learning is can ML technique. It teaches a machine to process inputs through layers in order to classify, infer and predict the outcome.

Neural Networks

Neural Networks work on the similar principles as of Human Neural cells. They are a series of algorithms that captures the relationship between various underlying variables and processes the data as a human brain does.

Natural Language Processing

NLP is a science of reading, understanding, interpreting a language by a machine. Once a machine understands what the user intends to communicate, it responds accordingly.

Computer Vision

Computer vision algorithms tries to understand an image by breaking down an image and studying different parts of the objects. This helps the machine classify and learn from a set of images, to make a better output decision based on previous observations.

Cognitive Computing

Cognitive computing algorithms try to mimic a human brain by analysing text, speech, images, objects in a manner that a human does and tries to give the desired output.

4. There are three types of Artificial Intelligence :
(i) Artificial Narrow Intelligence (ANI)
(ii) Artificial General Intelligence (AGI)
(iii) Artificial Super Intelligence (ASI)

5. Advantages of Artificial Intelligence

- Reduction in human error
- Available 24 × 7
- Helps in repetitive work
- Digital assistance
- Faster decisions
- Rational decision maker
- Medical applications
- Improves security
- Efficient communication

Disadvantages of Artificial Intelligence

- Cost overruns
- Dearth of talent
- Lack of practical products
- Lack of standards in software development
- Potential for misuse
- Highly dependent on machines
- Requires Supervision

6. Ethics is the branch of philosophy concerned with grounding decisions, beliefs, policies, etc. in some sort of framework for deciding right and wrong. Ethics looks to resolve such questions as human morality.

10. Ensuring Cybersafety

A. **1.** (a); **2.** (a); **3.** (a); **4.** (a); **5.** (b)

B. **1.** T; **2.** T; **3.** T; **4.** T; **5.** T

C. **1.** Computer ethics; **2.** Unethical; **3.** Cyber crime; **4.** Spam
5. Hackers

D. **1.** Phishing is the act of sending and e-mail to a user while falsely claiming to be an established legitimate enterprise, all in an attempt to scam the user into surrendering private information that will be used for identity thief.

2. If any cybercrime happens, one must report firstly to parents, school authorities and then to police.

To report a cybercrime:

- ❖ The local police can be approached for filling complaints just as the cybercrime cells specially designated with the jurisdiction to register complaint.
- ❖ In addition, provisions have now been made for filling of 'E-FIR' in most of the states.
- ❖ In addition, the Ministry of Home Affairs is also launching a website for registering crimes against women and children online including cybercrimes.

3. White hat hackers, do not have intentions to damage any data but have computer access to your computer. Black hat hackers, have intentions to gain unauthorized access and destroy vital data or violate your system integrity using remote machines.

4. Any offence that is committed using a computer, the internet, or a hardware device is called cybercrime.

5. If we are a little cautious and take some precautions while doing Internet related activities, we will be safe and secure

from hackers. Steps given below will make sure that we are safe online.

1. Before entering our username and password in a website to logon, always check the URL of the website. If it is a fake web page it will be showing a different URL.
2. Never store your passwords in an email account as these are most often broken into.
3. If you think a website is unsafe, you can check it on the webpage by entering the URL safeweb.norton.com in your browser's webpage.
4. Keep your broadband connection off when not in use and close the cover of your laptop when not in use to avoid misuse of its webcam.
5. Always secure your Wi-Fi modem with passwords. Also, avoid getting connected to Free Internet Wi-Fi access zones that may leak your personal information to anyone.
6. Beware of Card readers at a store or petrol pumps. Use your debit/ credit card at trusted places only. Also beware while using them on the internet use them only at trusted websites.
7. Avoid using pen drives with data in computers that you do not trust. If you have to take data there, take formatted pen drives with only the required data in it.
8. Finally, always install a legally purchased good antivirus on your computer. It will save you from all spywares and other harmful programs.

Periodic Test Paper - I

A. **1.** (a); **2.** (b); **3.** (b); **4.** (b); **5.** (a); **6.** (b)

B. **1.** (T); **2.** (F); **3.** (T); **4.** (T); **5.** (T); **6.** (T)

C. **1.** LAN; **2.** Modem; **3.** .accdb; **4.** Integrated development environment; **5.** Xelfie; **6.** event; **7.** IDE; **8.** Button

D. **1.** I need Following things to connect Internet Connection.

1. Phone Line
2. Modem
3. Network Software
4. Web Browser
5. ISP

2. FTP (File Transfer Protocol) is needed to Upload or download a file one computer to another.
This protocol is also based on the client-server model. FTP Uses a secured method transfer files our a network.

3. The internet is a globally connected network system. Millions of websites are there on its network which allows you to access a huge amount of information such as text, graphics, audio, videos, and software. Internet can also be used to communicate with each other for communication on internet one require to follow rules and regulation. Some if example are surfing, e-commerce, e-banking etc.

4. The following table explains various data types that are commonly assigned to the fields in a table.

Short Text	This is a general-purpose field containing any data. It has a limit of 255 characters and cannot be used for numeric calculations. Use this type for numeric entries that will not have calculations performed on them, such as telephone numbers and ZIP codes.

Long Text	This type has a limit of 63,999 characters; used for detailed, descriptive fields.
Number	This type stores numeric data that you can use in calculations. It can also hold symbols, such as decimal points and commas.
Date/time	This type only stores numbers representing valid dates and times.
Currency	Stores currency data that you can use in calculations.
Auto Number	Stores a sequential number for each record.
Yes/No	The value 1 represents Yes and the value 0 represents No, but the field can be formatted to display values as True/False or Yes/No.
OLE Subject	Stores objects created in another application, such as Word or Excel, that you can link to or fix in an Access tables.
Hyperlink	You can link to websites, e-mail addresses, files on your computer, files on the LAN or virtually any other location.
Attachment	This type works only in Access 2007, Access 2013 and Access 2016 databases. You can attach data files from word processing programs, spreadsheets, graphic editing programs and so on.
Calculated	You can use it to create calculated fields directly in a table. In the earlier versions, you could create calculated fields only in queries.
Lookup Wizard	Depending on the usage, this type creates either a lookup list form the data that you specify or a lookup list from the values in another table. It can also be used to set up multivalued lists.

5. To enter records in the table, follow the given steps :

Step 1 : Open the table in the Datasheet view. (Double-click on the table in the Navigation Pane to open it in the Datasheet view)

Step 2 : Click on the New option in the Records group on the Home tab. A new record is inserted in the table.

Step 3 : Type the values for various field in a record. When we start entering data, a new record gets inserted automatically at the end of a table.

6. NetBeans is an integrated development environment (IDE) for Java. NetBeans allows applications to be developed from a set of modular software components called modules.

7. To execute a Visual Basic Project, follow the given steps :

Step 1 : Click Debug → Start Debugging or Press F5 or click the Start button on the toolbar.

Step 2 : A Form titled Message with a button labelled Show Message will appear on the screen.

Step 3 : Click the Show Message button. You will get the following popup message box.

Step 4 : Click OK to return to the Form.

Periodic Test Paper - II

A. **1.** (a); **2.** (b); **3.** (c); **4.** (a); **5.** (a); **6.** (a)

B. **1.** (F); **2.** (T); **3.** (T); **4.** (F); **5.** (T); **6.** (T); **7.** (T); **8.** (T)

C. **1.** If; **2.** Menu bar; **3.** Foreground; **4.** ; **5.** routine; **6.** Neural; **7.** Inethical; **8.** Hackers

D. **1.** Variables are the memory locations which store values temporarily. In VB you need to declare a variable first using Dim keyword.

Syntax

Dim VariableName As Datatype

Data Type

When a variable is declared, the type of data which can be stored in that variable is also specified. Commonly used data types are :

1. Byte : Represents an 8 bit unsigned integer.
2. Integer : Represents a 32 bit unsigned integer.
3. String : Used to store alphanumeric values.
4. Char : Store single character.
5. Boolean : Store value as True or False.

Example : Dim num As Integer = 5 'Variable Declaration with initialization'
Dim name As String = "India"
Dim Result As Boolean = False

2. Adobe Photoshop is a powerful application for almost any kind of image editing and creating high-quality graphics. It is developed by Adobe systems. Photoshop has so many features that may be used professionally to edit photos or graphics.

Features of Photoshop CS6

- ❖ Revised user–friendly interface
- ❖ Photo editing or photo manipulation in lesser time and with little effort.
- ❖ Powerful tools to :

(a) Enhance or change the colour of an image by adjusting the brightness and contrast, colour balance, hue and saturation levels curves, etc.

(b) Crop or resize pictures without losing the quality of an image.

(c) Remove the unwanted object from the picture using vanishing point Tool.

(d) With the new Quick Selection Tool, users need only to click and drag across on image to make fast direction.

3. The **Spot Healing Brush** Tool removes blemishes, scars, spots and other imperfections in the photographs whereas **Healing Brush** tool is used to paint with sampled pixels. This tool also matches the texture, lighting, transparency, and shading of the sampled pixels.

4. The Unordered list is used when the items are not to be displayed any particular order.

   The ordered list is used to display the list of items in a specific order. An ordered list indents and number each item in the list.

5. Artificial Intelligence (AI) is the science and engineering of making machines to demonstrate intelligence especially visual perception, speech recognition, decision-making and translation between languages like human beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of human beings such as the ability to reason, discover meaning, generalize, or learn from past experience. It is a science and a set of computational techniques that are inspired by the way in which human beings use their nervous system and their body to feel, learn, reason and act.

6. Advantages of Artificial Intelligence
   - ✧ Reduction in human error
   - ✧ Available 24 × 7
   - ✧ Helps in repetitive work
   - ✧ Digital assistance
   - ✧ Faster decisions
   - ✧ Rational decision maker
   - ✧ Medical applications
   - ✧ Improves security
   - ✧ Efficient communication

   Disadvantages of Artificial Intelligence
   - ✧ Cost overruns
   - ✧ Dearth of talent

- Lack of practical products
- Lack of standards in software development
- Potential for misuse
- Highly dependent on machines
- Requires Supervision

7. According to Webopedia, phishing is the act of sending and e-mail to a user while falsely claiming to be an established legitimate enterprise, all in an attempt to scam the user into surrendering private information that will be used for identity thief.

Olympiad Model Test Paper

❖ **1.** (d); **2.** (c); **3.** (a); **4.** (b); **5.** (a); **6.** (a); **7.** (a); **8.** (d);**9.** (d); **10.** (b); **11.** (d); **12.** (b); **13.** (c); **14.** (c); **15.** (a); **16.** (a); **17.** (a); **18.** (b); **19.** (b); **20.** (d);**21.** (c); **22.** (d); **23.** (c); **24.** (c); **25.** (c); **26.** (c); **27.** (b); **28.** (c); **29.** (d); **30.** (c)

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