إهداء
من سلسلة كتب المعاصر
لطلاب المدارس الرسمية والخاصة لغات
غير مخصصة للبيع

EL-MOASSER
Guide

Final Revision



Quick Look

الكمبيوتر وتكنولوچيا المعلومات والاتصالات

ICT

COMPUTER & INFORMATION AND COMMUNICATION TECHNOLOGY

1ST Prep.
2026
FIRST TERM

الصف الأول الإعدادى
الفصل الدراسى الأول
طبقاً لأحدث مواصفات الورقة الامتحانية ٢٠٢٥ – ٢٠٢٦

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Three days are enough

راجع وتمكن فى 3 أيام

Day 1 **Important Points**

1 Green technology

- Electric vehicles are used to enhance energy efficiency within the transportation sector.
- Green technology is based on technological tools that help protect the environment.
- Green technology is used in various aspects of life, renewable energy (solar energy / wind power / hydro power), retionalization of energy consumption , waste recycling and water treatment.
- Green technology aids in optimizing water and electricity usage through various means like body sensors.

2 Digital Transformation

- Digital transformation is a national project that links all government agencies to each other through an information environment.
- Citizens can obtain a wide range of services through the internet and mobile applications through digital transformation.
- Digital transformation is vital for organizations for in enhancing efficiency and productivity, improving the quality of services and products offered to customers. In addition, it helps in innovation, creativity and competitiveness. It also minimizes energy and resource consumption and creates new employment opportunities.
- To get digital services or products, you should have an email.
- Smart energy grids, precision farming, smart buildings and smart transportation are examples of the integration of green technology and digital transformation applications.
- The integration of green technology with digital transformation helps to speed up the process of the digital transformation, create new employment opportunities and improve the quality of life.

3 Operating systems

- Operating systems are essential for managing and operating modern electronic and smart devices.
- Routers, switches, and other network equipment use operating systems for network management, settings, and security advantages.
- Gaming consoles feature exclusive operating systems tailored for gaming and multimedia purposes.
- Wearable devices, such as smartwatches and fitness trackers, use operating systems tailored to their distinct functions and needs.
- Modern cars and vehicles often have operating systems to control various functions such as infotainment, navigation and driver assistance technologies while driving and controlling the vehicle.

4 Installing programs

- If the operating system doesn't have the program you need, you can get the program from a storage unit or by downloading it online.
- Installation process depends on the form in which the program comes.
- Installation procedures differ from a program to another.
- The downloaded file may be compressed. You need to unzip it before accessing the file and selecting the SETUP. EXE icon.

5 Remove or uninstall a program

- Uninstalling a program means that you delete all the files of the program that you want to remove from your computer.
- Removing unused programs saves disk storage space and speeds up and eases the use of the device.

6 Setting up and configuring hardware

- The operating system installed the correct "Driver" for the attached device, so that you can use the new attached device with its full features.
- The Setup program automatically copies the driver files and the setup information file "inf." into a dedicated folder.

Three days are enough

- Operating systems support many devices attached to computer such as printers, webcams, scanners in a way that varies depending on the type of operating system.
- Modern operating systems include a list of drivers for many peripheral devices.
- If the operating system finds a matching driver for the new peripheral, it installs the correct driver file(s) and makes other necessary adjustments to the system.
- To install a local printer, it is connected to the USB port, and the Plug and Play feature will automatically install it.

7 E-mail

- An email is one of the cloud computing tools and one of the most popular means of communication in the world.
- It's used to share texts, files, images and other information.
- An email address consists of three main components "User name", The@symbol (at sign) and "Domain name".
- To establish a Google account, choose "Create my personal account".
- Choose the password you want, and confirm it again, making sure that it is difficult to guess.

8 Cloud computing

- It's called cloud storage service or computer storage. It is storing files and folders over the Internet.
- The benefits of cloud computing are.
  1. Ease of access
  2. Availability of the service
  3. Reducing material costs
  4. Sharing digital resources with others
- We use cloud computing applications in daily life, such as :
  1. Communication
  2. Computer storage
  3. Producing projects
  4. Education
  5. Entertainment
- Data processing and storage in cloud computing depends on :
  1. Data collection
  2. Data transfer
  3. Data processing
  4. Data storage
  5. Data management
  6. Data access

- The requirements to obtain cloud computing services are :
  1. A computer or mobile phone
  2. An Internet browser or application
  3. An Internet connection
  4. Creating an account
- The most famous cloud computing services providers are :
  1. Amazon web services
  2. Microsoft Azure
  3. Google Cloud Platform

9 Google Meet

- "Google Meet" is a video conferencing service developed by Google.
- You must have a Google account to access "Google Meet".
- You can start an instant meeting in "Google Meet" by going to the main page of the "Google Meet" application and click on the "New meeting" button.
- You can send the meeting link to the participants via one of the communication tools "Email - WhatsApp".
- The Google Meet also enables you to create a meeting for a later time, and keep its link until the time you want to meet whomever you want to invite to attend.

10 Database Design

- Databases are a collection of data and information organized and linked to each other.
- Organization, efficiency, accuracy, security and sharing are the main characteristics of using databases.
- The amount of data is increasing and growing rapidly due to the rapid development of digital technologies such as :
  1. Artificial Intelligence (AI)
  2. The Internet of Things (IoT)
- As data continues to increase, expand, and spread, new big data tools are emerging to help companies collect, process, and analyze data at the speed needed to get the most out of it.
- Excel and Word are programs used to create spreadsheet, but Excel is difficult to use when we have a large amount of complex data.
- Microsoft Access is one of the applications used to create databases. It can build a complex structure for data and manage in more efficiently.

11 Forms & queries

- Form is a graphical interface designed specifically to interact with data stored in the database.
- The Access program creates the form, and through the form the data for each student's record is displayed individually.
- Access provides many methods that allow you to create a query, using the "Query Design" view.
- Queries are tools used to obtain data from the database according to specific criteria or conditions.
- If a record matches all the criteria you entered in the query grid, the record will appear in the query results.

12 Digital project

- The stages of any successful project are divided into main interconnected stages which contributes to achieving the desired goals.
- To start a project, determine a clear, achievable idea.
- Collect data and information you need for the project.
- Prepare the tools, devices and applications required to prepare and equip for the project.
- Continuous follow - up by the teacher and the head of each group to monitor the progress of the project.

1. Identify the problems facing
2. Collect the tasks
3. Present the project of each working group
4. Students choose the best project

- The applications you need during the implementation of the project are :

* Google App
  - Google Docs
  - Google sheets
  - Google slides

- To use these applications and various Google Cloud Computing services, you must register with your account that you previously created.

Day 2 Important Definitions

Word	Definition
Green technology	- It is occasionally referred to as sustainable technology or clean technology that help to protect the environment. - It optimizes the use of its resources.
Green buildings	The design and construction of buildings using eco-friendly, energy-efficient materials while enhancing ventilation and insulation.
Smart transportation	Utilizing electric vehicles to improve energy efficiency within the transportation sector.
Sensors	Devices that detect the presence of objects and can trigger actions like turning the taps of water or electricity on & off.
Geothermal energy	Using the heat from the Earth's internal to generate electricity.
Bioenergy	Using organic materials like soybeans and corn for energy production.
Digital transformation	The combination of digital technology into all aspects of business to enhance workflow efficiency, lower costs, and innovate products and services.
Digital Egypt Platform	It is a governmental digital platform offering various electronic services to citizens including bill payments. The application is accessible for download and use on mobile devices.
Meeza	It's an electronic payment cards offer convenience by providing easy, fast, and secure electronic payment methods for individuals.
INSTAPAY	It is an application for electronic payments licensed and approved by the Central Bank of Egypt, enabling the transfer and reception of funds via a bank account or digital wallet including bill payments.
Operating system	It is an interface between the user, hardware and software. It is responsible for managing the hardware components, running all software and helping the user accomplish their various tasks on the computer easily and smoothly.

Word	Definition
Servers	They use operating systems like : - Linux - Microsoft Windows Server that are used to manage network resources and deliver a range of services.
Gaming Consoles	Gaming Consoles such as PlayStation, Xbox, and Nintendo Switch feature exclusive operating systems tailored for gaming And multimedia purposes.
Point of sale terminals	Are electronic devices that enable customers to pay for purchased products by deducting the price from their bank account instead of using cash.
Desktop	The operating system startup screen (desktop) includes a set of symbols called Icons.
Icons	A set of symbols that appear arranged in a specific order over background.
Background	An image or color that the user selects.
Industrial control systems (ICS)	It is a broad term that includes many industrial control systems and devices used in industrial facilities.
USB port	A connector used for connecting devices to a computer, often enabling Plug-and-Play functionality.
Wizard program	Find the driver for the new peripheral.
Printer driver package	A software package that includes setup programs for printer installation.
Email	It is a digital communication system used to send and receive messages between users over the Internet. It is one of the cloud computing tools.
User name	It is the part that is located at the beginning of email address, and it is a unique and distinctive name that is not reserved by anyone else.
The @ symbol (at sign)	It is a symbol that separates the user name from the name of email service (domain name) used.

Word	Definition
Domain name	It is the name of the email server that hosts the email account and is a place to store your email messages.
Google account	It includes the email service and obtain other Google services, you must create a Goolge Account. - A Google Account consists of a user name and a password.
Cloud computing	It is a model for providing digital services over the Internet, such as : • Cloud storage service • Software service • Electronic resource sharing service
Social networking	Enable us communicate with others and share content on social media platform such as Facebook, Twitter, and Instagram.
Messaging services	We use messaging applications such as WhatsApp and Telegram to communicate and share files and photos.
File storage services	Such as Google Drive and One Drive to store, share, and access files at anytime and anywhere.
Data backup	It protects our data from loss in case of any damage happens to our devices.
Producing projects	We use cloud word processing programs such as Google Docs, Microsoft Word Online to create, edit and share documents with others.
Spreadsheets	We use cloud spreadsheets such as Google sheets and Microsoft Excel Online to organize and analyze data and create charts.
E-learning platforms	We use e-learning platforms to access educational materials and interact with teachers and students.
Collaboration tools	We use collaboration tools to work on projects and assignments with others such as Google Classrooms and Microsoft Teams.
Healthcare Services	It stores medical records.
Google Meet	It is a video conferencing service developed by Google that enables users to conduct group video calls, share screens, chat, collaborate in real time, and work together on joint projects among students.

Word	Definition
Databases	A collection of data and information organized and linked to each other. It is used to store and retrieve information easily and efficiently and managed digitally using dedicated programs and applications.
Big Data	- It refers to a very large and diverse sets of structured, unstructured and simi-structured data that continue to grow significantly over time. - It's also large and complex data in terms of size, growth rate and diversity that traditional data management systems cannot store, process and analyze them.
Data Table	- A data table is a basic element in building databases and is the only source of data within the database. - It consists of rows and columns, where each row represents a single record of data.
Microsoft Access	Is one of the applications used to create databases. It builds a real database, where you can build a complex structure for data and manage it more efficiently.
Primary Key	- It is a field in a database table that is used to uniquely identify each record in that table. - The primary key value is never repeated within the same table.
A Form	- It is a graphical interface designed specifically to interact with data stored in the database. - It is a screen that displays specific information from the database and allows the user to enter, modify or delete this information in an organized and convenient way.
Queries	Are tools used to obtain data from the database according to specific criteria or conditions.
Criteria	It helps you to identify specific items in an Access database.
Starting the project stage	Determine a clear, achievable idea and achievable goals.

Word	Definition
Project planning stage	- Develop detailed plans and studies that include a work plan. - Determine project requirements.
Implement the project stage	Form a work team, assign roles and responsibilities to each individual then begins the project according to the plans set.
Evaluation and assessment stage	Follow-up and evaluation and problem management then delivery and evaluation the find project outputs and documenting lessons learned and offering thanks and appreciation to all those who contributed to the completion of the project.

Day 3 Devices and tools that are used in computer and information technology

Resources conservation (water - electricity).

- Green technology aids in optimizing water and electricity usage through various means, including :

Body Sensors

Water conservation:

– Which detect the presence of a hand under the tap, control the flow of water by turning the taps on /off.

Electricity conservation :

– It can optimize electricity usage in both residential and commercial settings by employing sensors to regulate lighting based on need.



Solar Energy Technology

Electricity conservation:

Relies on photovoltaic panels to convert solar energy → into electrical energy.

Operate automatically when required



Sensors usages : Sensors are used in numerous tasks, including :

- detecting smoke from fires
- regulating temperatures
- operating the lights through various methods

Sensors uses

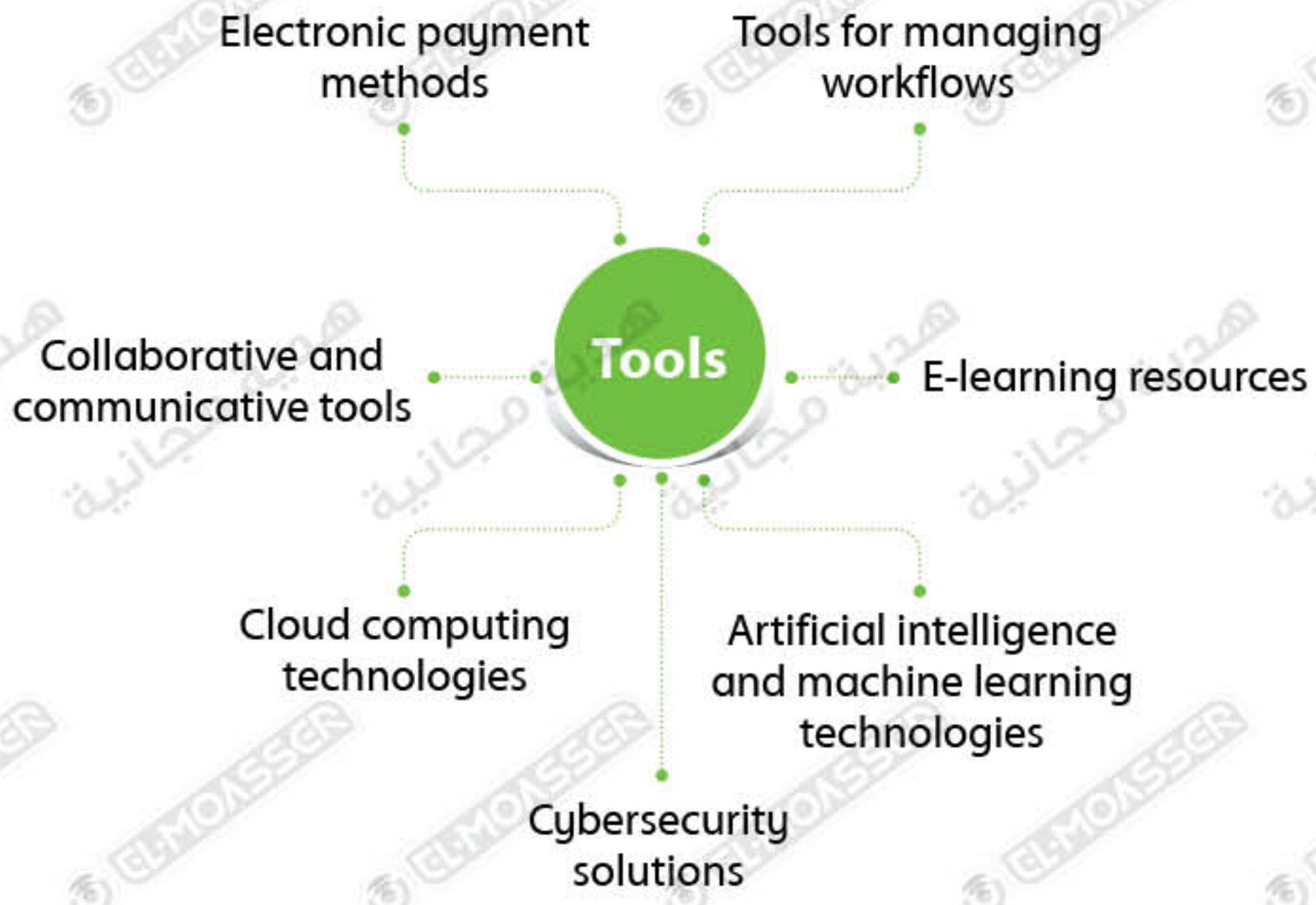


"Digital Transformation"

The combination of digital technology into all aspects of business to

- enhance workflow efficiency
- lower costs
- innovate products and services

Tools of digital transformation



First Tools for workflow management

The "Digital Egypt" Platform

* It is a government electronic portal that provides many electronic services to citizens, such as paying **electricity and water bills.**
* The application can be downloaded and used on mobile device.

مصر الرقمية
حياة أسهل لأهلها

Second Electronic payment methods such as

1. "Electronic payment cards "meeza"

meeza ميزة

2. INSTAPAY application for electronic payments
[Licensed and approved by the Central Bank of Egypt]

INSTAPAY

Third Collaboration and Communication Tools

Applications : ▸ ZOOM ▸ Google Meet

Google Meet

* It is a video conferencing application.
* It enables face-to- face communication with others.

The most important common axes between green technology and digital transformation

1. Enhancing resource utilization efficiency
2. Reducing harmful emissions
3. Supporting sustainability

Examples of the integration of green technology and digital transformation applications

Smart energy grids | Precision farming | Smart buildings | Smart transportation | Smart cities

Three days are enough

Operating systems manage hardware and software components



The key functions of the operating system

- File system management
- Hardware management
- User interface
- **The key functions of the operating system**
- Memory management
- Security and protection

Modern electronic devices, smart devices, and operating systems used in our daily lives :

* Operating systems are necessary for the operating and managing a variety of modern electronic and smart :

Such as

- Personal computers (PCs)



- Mobile Devices



- Wearable Devices



- Network Devices



- Automotive Systems



Learn : Operating systems used in some smart devices



Linux



iOS



Windows



Tizen

There are various operating systems used in :

- Automotive systems



- ATMs



- Factories



Embedded Systems

* Operating systems are used in embedded systems **like** :
- Automated Teller Machine (ATM).
- Point of Sale Terminal.





Three days are enough

Bars contain

- icons that symbolize software installed on the operating system
- icons to adjust some system settings such as : date, time, sound settings and network



Industrial Control Systems (ICS)

* To control the performance of machines and industrial processes. Industrial control systems work on the following :

1. Control and monitor the progress of industrial processes
2. Provide a safe environment for health and operational safety
3. Industrial control systems are used in most industrial sectors

* **How you start the installation process depends on → the form in which the program comes:**

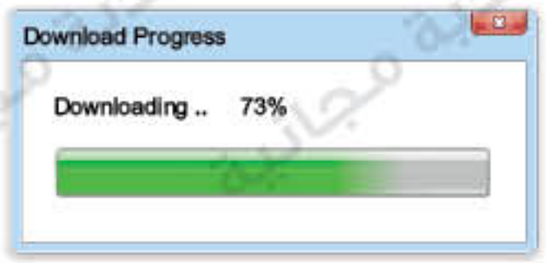
1

* If you purchased the program, the program comes on a CD or DVD → you use this CD to install the program.



2

* On the other hand , if you downloaded the program from the Internet , the program is in the form of a file and this file is used to install the program.



First Installing the program from a CD of DVD

1. Insert the software disc, the AutoPlay box will appear.
2. Click Run SETUP. EXE
3. Follow the installation instructions provided by the software .

Second Installing the program from an Internet-downloaded file

1. Use the "This PC" icon to access the downloaded file.
2. Double -clicking the file starts up the installer.

Third Installing the program from a compressed file

1. Extract the compressed files.
2. Next, double-click the installation file.
3. Follow the installation instructions provided by the software.

Remove or uninstall a program :

* Uninstalling a program means that you delete all the files of the program that you want to remove from your computer.

There are two methods to remove or uninstall the program

- The program does this itself
  - many programs come with their own removal or uninstallation command
- Control Panel
  - The operating system helps you uninstall the program

Steps for uninstalling a program on the device

1. Access the "Control Panel window" 
2. Clicking on "Uninstall a program " will prompt the window displaying installed programs to appear.
3. Click on the program you wish to uninstall.
4. Then select Uninstall.

Install a Non-Plug and Play Printer



1. Access the "Control Panel"
2. Select Hardware and Sound
3. Open Devices and Printers
4. Click on "Add a printer"
5. We press the printer that I want is not listed"
6. Select Add a local printer or network printer with manual settings

* **To complete the setup process :**

- First you need to determine which port your printer is connected to, for most older printers that connect to a parallel port the correct choice is the **LPT1** port while modern printers use the **USB** port.

1. Click "Next" to choose the appropriate driver.
2. From the list of drivers available in the Driver Store you can choose the one that is compatible with your printer type.

Installation of HP Laser Jet 5200 Series PCi 5 Printer Driver :

- If you don't find the driver you need → Click " **Have Disk**"
- Browse your storage devices for the driver you need

If you don't have a driver to identify your printer.
If you suspect that a newer version is available.

Click Windows Update to update the list of printers

The last step in the printer setup process is :

to give the printer a name.

✔ Advantages of using email

1. Speed
2. Cost
3. Ease
4. Diversity
5. Reliability
6. Digital services

✗ Drawbacks of using email

1. Hacking
2. Spam
3. Fraud
4. Viruses
5. Privacy

Three days are enough

Providers of Email Services

There are many free email providers available

Such as

Hotmail/Outlook

Yahoo Email

Gmail

Steps to create a Google Account:

1. Download the Google website **/https://www.google.com.eg**
2. Click **Sign in**
3. Choose **Create Account**
4. To establish a Google account, choose **"Create my personal account"**
5. Insert your **"First name"** and **"Last name"** then click the **"Next"** button.
6. Enter your **date of birth** and **gender**, then click **"Next".**
7. Type the username you want in the **"Username"** field and then click **"Next"** .
8. Choose the **password** you want, and confirm it again, making sure that it is difficult to guess.
9. Enter **an alternative email address** used to recover the account and you can skip this.
10. Check and confirm your email address.
11. To complete the steps to create your email , review the terms of service and click **"I agree"** if you accept them.

Gmail email interface

- The interface language can be modified by selecting the settings icon → then choosing "See all settings"
- From the "General" menu, select the Arabic language under "Gmail display language".
- When you choose the Arabic language and click the "Save Changes" button, the Gmail email window interface appears in Arabic.

Sign out of your Gmail account

- Click on your profile picture icon and then choose "Sign out".

How can you access "Google Meet"

- From your PC via the link https://meet.google.com

For Android devices by downloading the "Google Meet" application by using the Google Play Store.

Create a meeting from "Google Meet"

- To create a meeting from "Google Meet" there are several options through which you can hold a meeting.

First **You can start an instant meeting in "Google Meet" by :**

Going to the main page of the "Google Meet" application and follow these steps:

1. Click on the "New meeting" button
2. Click on Start an instant meeting.
3. Click on the copy icon to share the meeting link.
4. Send the meeting link to the participants via one of the communication tools (Email-WhatsApp).

Second **Create a meeting for a later time :**

1. Follow the same previous steps to create an instant meeting.
2. Click on "Create a meeting for a later time"
3. A small window will appear with a link to the session.
4. Copy the meeting link.
5. Send the link to the people you want to hold the meeting with.

Joining a meeting in "Google Meet"

- If you are invited to attend a meeting session using "Google Meet" , using a link :
  1. Clicking on the link directly.
  2. Sometimes , when you click on the meeting link:
- It may take some time to join until the meeting organizer approves your request to join the meeting.
  3. You should not send the meeting link to someone else, and you must ask the meeting owner's permission.

During a "Google Meet" meeting

General rules to follow during the meeting

1. While one participant is speaking , the rest of the participants must listen and turn off the microphone.
2. Raising your hand in the session to ask to speak helps organize sessions, talk and intervene in an organized and smooth manner.
3. When you are allowed to speak, the microphone icon will open and you can speak.

Send messages in the session to participants:

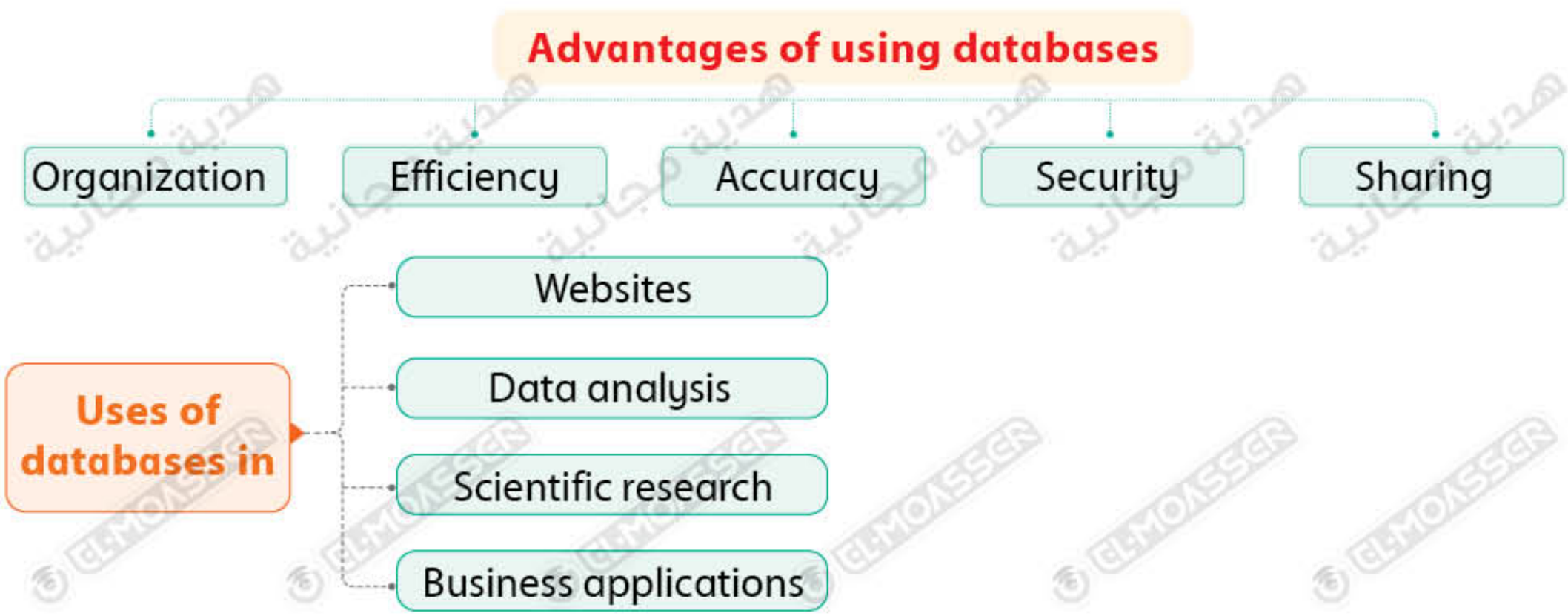
While you are in a "Google Meet" session , you can communicate with the attendees by sending messages to the participants in the session by clicking on the "In call messages" icon at the bottom of the page.

Sharing the presentation with participants

1. You can share your entire screen with participants or a specific window at the bottom of the page.
2. Click on ⬆ the **"Share screen"** icon now.
3. Click on one of the tabs (entire screen, window or tab).
4. Then , click on the **"Share"** button.

Stop sharing presentation:

In the **"Google Meet"** window, click **"Stop sharing".**



Three days are enough

Programs used to create a spreadsheet

In Word

- You can create simple table , but you can't get a record of all students whose names include letter "Y".
- is used to create a simple spreadsheet

In Excel

- You can arrange and sort students grades.
- You can perform simple calculations
- It's difficult to use if you have a large amount of complex data.

Microsoft Access is used

When

- You have a large amount of complex data
- You need to create relations between data
- You want to create custom applications to manage data
- You need higher data security

Steps to create a Table in Access

A **Table Design**

To write the names of the table fields and specify their data type

B **Datasheet View**

To enter and display the table data

First Table Design

*** To choose the "Table Design" style, follow the following steps :**

1 Choose **"Create".** 2 Choose the **"Table Design".**

*** The Table Design window opens, and consists of :**

1 Field Name ➡ To write the field name

2 Data Type ➡ To choose the statement type.

3 Design View ➡ Design display style.

Save the Table

1 Click the **"Save"** icon. 2 Type the table name.

Datasheet View

To enter and view the table data.

1 Choose **"View"**.

2 Choose **"Datasheet View"**, and the **Data View window** will appear.

3 Enter your data and your colleagues' data in the table.

4 To return to the design mode from **"View"**, select **"Design View"**.

Create a Form

* A **new form** can be created under the name **"Enter student Grades"** using the **Form Wizard**.

To Create a Form from the current table "Student Grades"

1 Click on the table name **"Student Grades"** in the **Navigation Pane** on the left of the screen.

2 The data for **"Student Grades"** table will appear on the right of the screen.

3 Choose the **Create** tab. 4 Click **Form**.

* **The Access program** creates the Form, and through it the data for each student's record is displayed individually.

To Create "Layout View"

1 **"Layout View"** is where the data of the first record is displayed.

2 Click on the **"Next record"** icon to display the data of the next record.

3 Click on the **"Last record"** icon to display the data of the last record.

4 Click on the **"First record"** icon to display the data of the first record.

Steps to create a new query using the Query Design method

1. Choose the **Create** tab.
2. Click on **Query Design**. A screen will appear.
3. Select the data source table to be used, which is "**Students Grades**".
4. Click **Add**, then **Close**. A "**Design View**" window will appear.

The Design View window is divided into two parts

- The upper part — contains the data source table
- The lower part — is the query design grid

Add a field to the design grid

1. Use the **drag and drop** method for the field name.
2. Drag the field from the data source table in the upper part of the "**Query Design**" window to the design grid to the "**Field**" row in the lower part of the "**Query Design**" window.
3. When you add a field by **drag and drop**, Access automatically fills the **"Table row"** in the design grid with the name of the table used" "**Student Grades**", to show the data source of this field.

Execute the query

1. On the **Design** tab.
2. Click on the **Run** icon ! in the **Results** group.

* **The query result** appears in the form of a table, showing all student data.

Hide a field or fields from the query result :

1. To hide one or more fields from the query result.
2. From the **"View"** menu, choose **"Design View"**.
3. The query design window will appear.
4. Click on the ✓ sign in check box in the **Show row** in the design grid below the columns Computer score and English score.
5. The sign will be removed, which means hiding the field/fields in the query result.
6. Click on the **Run** icon in the **Results** group and the result will appear.

How to add Criteria or Conditions in a Query :

To add Criteria to a query, you must :

1. Open the query in **Design View**.
2. Type the criterion or criteria in the **Criteria** row.
3. Type the search criterion="**Yasmin**" in the **"Student Name"** column in the **Criteria** field.

Stages of Project Implementation

1. Starting the project
2. Project Planning
3. Implement the project
4. Project evaluation and assessment

Tools, devices, and applications required to prepare and equip for the project

- Identify the computer and the required peripherals
- Prepare and equip the applications and programs used
- Determine the time period for the project
- Identify direct and indirect communication tools
- Identify reliable sources

Some applications and digital tools needed to implement the project

- **Google Slides**
- **Google Sheets**
- **Google Docs**

Sign in using a Google Account to deal with Google Drive :

1. Type **Google.com** in the browser.
2. Click the **Google apps** icon.
3. Select the **Drive** icon.
4. Enter the **username**.
5. Click **"Next"**.
6. Enter the **password** then click **Next**.
7. Now, registration has been completed using your Google account.

A day is enough

راجع وتمكن في يوم واحد

Lesson 1 Green Technology

1 Choose the correct answer from a, b, c or d.

1. Egypt has recently used electric vehicles powered by ..... .
   a. gas b. fuel c. wind-power d. batteries

2. Green technology is sometimes referred to as ..... technology.
   a. sustainable b. clean c. both a & b d. digital

3. ..... are used to convert sunlight into electricity.
   a. Solar panels b. Smart transportation
   c. Hydropower d. Wind

4. We use ..... to enhance energy efficiency within the transportation sector.
   a. smart transportation b. turbines
   c. solar panels d. organic materials

5. ..... are used to regulate temperatures and operate lights in different ways.
   a. Sensors b. Solar energy c. Recycling d. Water treatment

Answer		Explanation
(1)	batteries	Egypt has used electric vehicles powered by batteries as an alternative to fuel powered cars to protect the environment and rationalize the use of its resources.
(2)	both a & b	Green technology is referred to as sustainable technology or clean technology, as green technology is based on technological tools that help protect the environment.
(3)	Solar panels	Green technology has used solar energy to generate electricity from sunlight through solar panels.
(4)	smart transportation	Smart transportation is using electric vehicles to improve energy efficiency in the transportation sector.
(5)	Sensors	Sensors are used in numerous tasks, including regulating temperatures, operating the lights various methods and detecting smoke from fires.

2 Put (✓) or (×) for the following sentences.

1. Wind turbines are used to generate electricity from air movement. (✓)
2. Bioenergy involves using organic materials like soybeans and corn to produce energy. (✓)
3. Industrial buildings are designed and constructed using environmentally friendly materials. (×)
4. 📖 The idea of sensors in water taps depends only on stopping water automatically. (×)
5. Organic waste is transformed into nutrient-rich compost to improve soil fertility. (✓)

Answer		Explanation
(1)	✓	Green technology uses wind energy to generate electricity from air movement through wind turbines.
(2)	✓	Green technology uses bioenergy through the use of organic materials like soybeans and corn to generate electricity.
(3)	×	Green technology is used for the rationalization of energy consumption through using green buildings because they are designed using environmentally friendly materials that save energy, improve ventilation and enhance insulation.
(4)	×	The concept of body sensors on turning water or electricity turn on/off automatically due to the presence of an object under a tap or lamp.
(5)	✓	Green technology uses waste recycling, such as transforming organic waste into nutrient-rich compost to improve soil fertility.

3 Complete the following sentences.

1. Vehicle emissions has raised carbon dioxide percentage in the atmosphere and intensifying global warming and resulting in ..... .
2. The idea of green technology is based on ..... that help protect the environment.
3. ..... are used to generate electricity from the movement of water.
4. Green technology is used for rationalization of energy consumption by using energy ..... .
5. Smart efficient irrigation systems like ..... are used for water treatment.

Answer		Explanation
(1)	environmental pollution	The impact of vehicle emissions has raised the percentage of carbon dioxide in the atmosphere. Global warming and resulting in environmental pollution.
(2)	technological tools	Green technology is based on technological tools that help protect the environment and rationalize the use of its resources.
(3)	Dams	Green technology uses hydropower from dams to generate electricity from water movement.
(4)	electrical appliances	Green technology is used in rationalizing energy consumption by using energy - saving electrical appliances and high-efficiency computers.
(5)	drip irrigation	Green technology is used for water treatment through using smart efficient irrigation systems like drip irrigation.

Lesson 2 Digital transformation and its importance in our daily lives

1 Choose the correct answer from a, b, c or d.

1. ..... is the combination of digital technology into all aspects of business to enhance workflow efficiency.
   a. Green technology b. Performance tasks
   c. Digital transformation d. Industrial

2. Digital transformation is essential for institutions and companies following except ..... .
   a. enhance efficiency and productivity
   b. creating new employment opportunities
   c. wasting energy
   d. enhance the quality of services

3. Digital transformation is a national project that moves Egypt to deal through a/an ..... environment that links all government agencies to each other.
   a. information b. technical c. industrial d. vegetative

4. 📖 You can use electronic payment applications through the ..... application.
   a. INSTAPAY b. Google Meet c. WhatsApp d. Email

5. ..... are video calls and online conferencing applications.

a. Google Meet b. Word c. Zoom d. Both a & c

Answer		Explanation
(1)	Digital transformation	The combination of digital technology into all aspects of businesses to enhance workflow efficiency and innovate products and services.
(2)	wasting energy	Digital transformation is crucial for institutions and companies for various reasons including increasing efficiency and production, raising the level of services and products provided to customers, increasing sales and revenues, innovation and creativity, maintaining competitiveness, improving decision - making , reducing the use of energy and resources and creating new job opportunities.
(3)	information	Digital transformation is a national project that moves Egypt to deal through an information environment that links all government agencies to each other .
(4)	INSTAPAY	INSTAPAY is an electronic payment application . It enables the sending and receiving money through a bank account or electronic wallet and provides many services such as paying bills.
(5)	Both a & c	Zoom and Google Meet are collaboration and communication tools. They are video conferencing applications that enables face-to-face communication with others.

2 Put (✓) or (×) for the following sentences.

1. Digital transformation provides various services and products to citizens in an easier and faster way. (✓)
2. Digital Egypt Platform is a type of electronic payment method that is licensed and approved by the Central Bank of Egypt. (×)
3. Enhancing the efficiency of resource use is a common axe between green technology and digital transformation. (✓)
4. In order to access any digital services or products , an email address is required. (✓)

5. INSTAPAY electronic payment system serves as a government electronic gateway offering a variety of online services. (×)

Answer		Explanation
(1)	✓	Digital transformation enables citizens to access all their services through the Internet and mobile applications, so that various services and products are provided to citizens in an easier and faster way.
(2)	×	INSTAPAY is an electronic payment method which licensed and approved by the Central Bank of Egypt.
(3)	✓	Enhancing the efficiency of resource use , reducing harmful emissions and supporting sustainability are common axes between green technology and digital transformation.
(4)	✓	To obtain any of the services or digital products , you must have an email.
(5)	×	The "Digital Egypt" Platform is a government electronic portal that provides many electronic services to citizens, such as paying electricity and water bills and the application can be downloaded and used on mobile device.

3 Complete the following sentences.

1. The tools of digital transformation include ..... , ... and ..... .
2. Digital transformation can assist you in improving decision marking by providing ..... and ..... .
3. Digital transformation allows citizens to access all their services through ..... and ..... .
4. Instapay allows for sending and receiving money via ..... and ..... .
5. ..... and ..... are examples of the integration of green technology and digital transformation applications.

	Answer	Explanation
(1)	collaborative and communicative tools, e-learning resources and cloud computing technologies	Digital transformation tools are such as, tools for managing workflows, electronic payment methods, collaborative and communicative tools, e-learning resources, artificial intelligence and machine learning technologies, cloud computing technologies, and cybersecurity solutions.
(2)	data, information and analysis in a timely manner	Digital transformation can assist you in improving decision - making by providing data, information and analysis in a timely manner.
(3)	the Internet and mobile applications	Digital transformation allows citizens to access all their services through the Internet and mobile applications , so that various services and products are provided to citizens in an easier and faster way.
(4)	a bank account and electronic wallet	Instapay allows for sending and receiving money via a bank account or electronic wallet and provides many services such as paying bills.
(5)	Smart buildings and smart energy grids	Smart buildings , smart energy grids and precision farming are examples of the integration of green technology and digital transformation applications.

Lesson 3 Operating Systems

1 Choose the correct answer from a, b, c or d.

1. ..... is responsible for managing hardware components and running all other software.
   a. Antivirus b. Operating system c. Word Processing d. Painter
2. The operating system runs all software and accomplishes tasks in a/an ..... way.
   a. difficult b. easy c. slow d. complex
3. Personal computers (PCs) use operating systems such as ..... .
   a. Microsoft Windows b. macOS c. both a & b d. Xbox
4. Smartphones rely on the iOS operating system from ..... .
   a. Google b. Apple c. Linux d. macOS

5. ..... use operating systems like Linux and Microsoft Windows Server.

a. Game consoles b. Servers c. Mobile devices d. Google

Answer		Explanation
(1)	Operating system	The operating system is responsible for managing the hardware components, running all software and helping the user accomplish their various tasks on the computer easily and smoothly.
(2)	easy	The operating system is responsible for running all software and helping the users accomplish their tasks easily and smoothly.
(3)	both a & b	Desktop and laptop computers use operating systems like Microsoft Windows, macOS, and different distributions of Linux.
(4)	Apple	Smartphones and tablets rely on operating systems like Apple's iOS and Google's Android operating system.
(5)	Servers	Servers use operating systems like Linux operating system with its diverse distributions, Microsoft Windows Server operating system and specialized server operating systems are used to manage network resources and deliver a range of services.

2 Put (✓) or (×) for the following sentences.

1. 📖 Smart TVs operate on various operating systems such as Android TV, Tizen, and webOS. (✓)
2. Gaming consoles like Xbox feature exclusive operating systems tailored for gaming applications. (✓)
3. 📖 Using wearable devices like smartwatches and fitness trackers doesn't require an operating system. (×)
4. Routers and switches use operating systems for network management. (✓)
5. Modern cars and vehicles have embedded systems. (×)

Answer		Explanation
(1)	✓	Smart TVs operate on operating systems like Android TV, Tizen, webOS and others to offer smart advantages such as streaming services, applications, and Internet connectivity.
(2)	✓	Gaming consoles like the Nintendo Switch, Xbox, and PlayStation feature exclusive operating systems tailored for gaming applications and multimedia purposes.
(3)	×	Using wearable devices like smartwatches and fitness trackers require operating systems tailored to their distinct functions and needs.
(4)	✓	Routers, Switches, and other network equipment use operating systems to manage the network, settings, and security advantages of the network.
(5)	×	Modern Cars and vehicles use automotive systems.

3 Complete the following sentences.

1. ..... are electronic devices that enable customers to pay for products from their bank accounts instead of using cash.
2. ..... control and monitor the progress of industrial processes and provide a safe environment for health and operational safety.
3. ..... includes a set of symbols called Icons.
4. The background is ..... or ..... that the user selects.
5. ..... contain icons that symbolize software installed on the operating system.

Answer		Explanation
(1)	Point of sale terminals (POS)	Point of sale terminals are electronic devices that enable customers to pay for purchased products by deducting the price from their bank account instead of using cash.
(2)	Industrial control systems (ICS)	Industrial control systems control and monitor the progress of industrial process, provide a safe environment for health and operational safety, and are used in most industrial sectors such as energy.
(3)	Desktop	The operating system startup screen (desktop) includes a set of symbols called Icons.
(4)	image or color	Background is an image or color that the user selects.
(5)	Bars	Bars contain icons that symbolize software installed on the operating system and other icons to adjust some system settings such as date, time, sound settings and network.

Lesson 4 Installation and removal of software and digital peripherals

1 Choose the correct answer from a, b, c or d.

1. When you download a program from the Internet, the program is in the form of a ..... .
   a. digital platform b. file c. images d. spreadsheet
2. If you download a compressed file, you must first ..... the file to interact with it.
   a. Extract (unzip) b. install c. download d. save
3. Uninstalling a program means you ..... all the files associated with the program to be removed.
   a. compress b. save c. delete d. install
4. Removing unused programs saves disk ..... and speeds up and eases the use of the device.
   a. storage space b. programs c. control panel d. files
5. When the operating system automatically detects a new attached device, it ..... .
   a. deletes the appropriate driver for the attached device
   b. installs the appropriate device driver for the attached device
   c. shuts down the computer
   d. restarts the computer

Answer		Explanation
(1)	file	If you downloaded the program from the Internet, the program is in the form of a file and this file is used to install the program, but if the program comes on a CD or DVD, we use this CD to install the program.
(2)	Extract (unzip)	The downloaded file may be compressed, so you need to unzip it before accessing the file and selecting the SETUP. EXE icon.
(3)	delete	Uninstalling a program means that you delete all the files of the program that you want to remove from your computer.
(4)	storage space	Removing unused programs saves disk storage space and speeds up and eases the use of the device.
(5)	installs the appropriate device driver for the attached device	When the operating system automatically detects a new attached device, it installs the appropriate device driver for the attached device.

2 Put (✓) or (×) for the following sentences.

1. The Setup program automatically deletes device driver files. (×)
2. Many programs come with their own removal or uninstallation command. (✓)
3. When you connect a new peripheral device with the Plug and Play feature, the operating system shuts down the computer. (×)
4. Operating systems don't support devices connected to the computer. (×)
5. To install a local printer that supports Plug and Play, connect it to a USB port, and the Plug and Play feature will automatically initiate the installation. (✓)

Answer		Explanation
(1)	×	The setup program automatically copies the driver files and the setup information file ".inf" into a dedicated folder.
(2)	✓	The program itself removes or uninstalls programs because many programs come with a dedicated removal or uninstallation command.
(3)	×	When you connect a new peripheral device with the Plug and Play feature, the operating system automatically installs the correct and appropriate device driver for the new peripheral device.
(4)	×	Operating systems support many peripherals connected to the computer, such as printers and webcams.
(5)	✓	To install a local printer (i.e., directly connected to the computer) that supports Plug and Play, connect it to a USB port, and the Plug and Play feature will automatically install it.

3 Complete the following sentences.

1. You can use ..... to assist the operating system in uninstalling a program.
2. Modern printers use the ..... port, while older ones use the ..... port.
3. The final step in printer setup is ..... .
4. Modern operating systems include a list of ..... for a variety of peripheral devices.
5. If the printer driver package includes a setup program, run the setup program and through it, you can identify the printer within ..... .

	Answer	Explanation
(1)	the control panel	Through the Control Panel, the operating system helps you remove or uninstall the program.
(2)	USB - LPT1	Most older printers that connect to a parallel port the correct choice is the LPT1 port, while modern printers use the USB port.
(3)	giving the printer a name	The last step in the printer setup process is to give the printer a name. The default name usually includes the manufacturer and model of the printer; you can change this value to a more descriptive name now or later.
(4)	device drivers	Modern operating systems include a list of device drivers for a variety of peripheral devices.
(5)	the operating system	If the printer driver package includes a setup program, run the setup program and through it you can identify the printer within the operating system.

Lesson 5 Email

1 Choose the correct answer from a, b, c or d.

1. "....." is a digital communication system used to send and receive messages between users over the Internet.
   a. Text messages b. Email c. User name d. Spam messages
2. ..... is a unique and distinctive name that is not reserved by anyone else and is located at the beginning of the email address.
   a. User name b. Domain name c. Virus d. Gmail
3. The domain name is the name of the ..... that store your email messages.
   a. User name b. Gmail c. email server d. @ symbol
4. 🕮 Through email, you can ..... .
   a. delete files b. use cloud computing applications
   c. install programs d. print files
5. Email offers a variety of ..... products online.
   a. manual b. digital c. written d. high-cost

Answer		Explanation
(1)	Email	Email is a digital communication system used to send and receive messages between users over the Internet.
(2)	User name	User name is the part that is located at the beginning of the email address, and it is a name that the user chooses and specifies because it is a unique and distinctive name that is not reserved by anyone else.
(3)	email server	Domain name is the name of the email server that hosts the email account and is a place to store your email messages.
(4)	use cloud computing applications	Email is one of the cloud computing tools through it we can use cloud computing applications.
(5)	digital	Registration is done using email on the websites of service providers and digital products online.

2 Put (✓) or (×) for the following sentences.

1. Email is one of the most common direct communication methods in the world. (×)
2. The # symbol separates the username from the email server name. (×)
3. Drawbacks of using email include hacking, spam messages, and fraud. (✓)
4. Google provides various online services, including email services. (✓)
5. To access Google services, a Google account must be created. (✓)

Answer		Explanation
(1)	×	Email is one of the most common communication methods in the world and one of the indirect communication tools.
(2)	×	The @ symbol separates the username from the email server name (domain name) used.
(3)	✓	Drawbacks of using email include hacking, spam messages, fraud, viruses, and privacy issues, as email messages are not always completely secure.
(4)	✓	Google provides various online services, including email services.
(5)	✓	To access Google services, a Google Account must be created. It consists of a username and a password.

3 Complete the following sentences.

1. There are many free email providers available such as ..... and ..... .
2. ..... is used to share texts, files, images and other information.
3. A Google Account enables you to use other Google features and services such as ..... , ... , ... and ..... .
4. When creating a Google account, it must include a ..... that it's difficult to guess.
5. To sign out of your Gmail account, click the ..... icon.

Answer		Explanation
(1)	Gmail and Yahoo E-mail	There are many free email providers available such as Gmail, Yahoo E-mail, Hotmail and Outlook.
(2)	Email	Email is used to share texts, files, images and other information.
(3)	Google Meet, Google Docs, Google Drive and YouTube	A Google Account enables you to use other Google features and services such as Google Meet, Google Docs, Google Drive and YouTube.
(4)	password	When creating a Google account, it must include a user name and a password that it's difficult to guess.
(5)	Sign out	To sign out of your Gmail account, click on your profile picture icon and then choose "Sign out".

Lesson 6 Cloud Computing

1 Choose the correct answer from a, b, c or d.

1. 📖 The computer storage service is ..... .
   a. storing files and folders locally on the computer
   b. storing files and folders over the Internet
   c. deleting and exchanging files
   d. Google classroom
2. All the following are the benefits of cloud computing except for ..... .
   a. ease of access
   b. availability of service
   c. reducing material costs
   d. downloading files without the Internet

3. Applications like ..... are used to store, share, and access files at anytime and anywhere.
   a. Google Drive
   b. One Drive
   c. Paint
   d. both a & b

4. To produce projects in cloud computing, we use ..... .
   a. Word processing programs
   b. Spreadsheets
   c. both a & b
   d. Paint

5. Cloud computing in education allows us to access educational materials and interact with teachers and students through ..... .
   a. E-learning platforms
   b. Video games
   c. Spreadsheets
   d. Video streaming services

Answer		Explanation
(1)	storing files and folders over the Internet	Cloud storage service or computer storage is storing files and folders over the Internet.
(2)	downloading files without the Internet	Cloud computing has many benefits such as ease of access, availability of the service, reducing material costs and sharing digital resources with others.
(3)	both a & b	File storage services are one of cloud computing services. We use applications such as Google Drive and One Drive to store, share, and access files at anytime and anywhere.
(4)	both a & b	Producing projects by using Word processing programs such as Google Docs and spreadsheets such as Google Sheets is one of the usages of cloud computing.
(5)	E-learning platforms	We use cloud computing in education through E-learning platforms. We use E-learning platforms to access educational materials and interact with teachers and students such as the Ministry of Education Platform.

2 Put (✓) or (×) for the following sentences.

1. Microsoft Word is used to work on projects and assignments with others. (×)
2. Data processing and storage in cloud computing depend on a weak infrastructure. (×)

3. We communicate with others and share content on social media platforms such as Gmail and Outlook. (×)
4. Cloud computing services can be obtained without the need to own a computer with high specifications. (✓)
5. Cloud computing is used in online banking to transfer money and pay bills. (✓)

Answer		Explanation
(1)	×	We use cloud collaboration tools such as Google Classroom and Microsoft Teams to work on projects and assignments with others.
(2)	×	Data processing and storage in cloud computing depend on a huge infrastructure that includes data collection, transfer, processing, storage, management, and access.
(3)	×	Cloud computing applications, such as social media networks, are used to communicate with others and share content on social media platforms like Facebook, Twitter, and Instagram.
(4)	✓	One of the cloud computing benefits is that cloud computing services can be obtained without the need to own a computer or mobile phone with high specifications, whether as hardware or software components.
(5)	✓	Cloud computing can be used in online banking such as paying bills and transferring money.

3 Complete the following sentences.

1. We use messaging applications such as ..... and ..... to communicate and share files and photos.
2. ..... are used to protect our data from loss in case of any damage happens to our devices.
3. There are some requirements to obtain cloud computing services such as ..... or ..... .
4. The most famous cloud computing service providers are ..... and ..... .
5. ..... is a model for providing digital services over the Internet.

Answer		Explanation
(1)	WhatsApp/ Telegram	Cloud computing applications such as messaging applications like WhatsApp and Telegram are used for communicating and sharing files and photos.
(2)	Cloud backup services	We use cloud backup services which are considered computer storage, to protect our data from loss in case of any damage happens to our devices.
(3)	a computer or mobile phone and Browser	The requirements to obtain cloud computing services are a computer or mobile phone, an Internet browser or application, an Internet connection and creating an account with one of the computing service providers.
(4)	Amazon - Microsoft Azure	Amazon Web Services, Microsoft Azure and Google Cloud Platform are the most famous cloud computing service providers.
(5)	Cloud computing	Cloud computing is a model for providing digital services over the Internet.

Lesson 7 Google Meet and Project Management

1 Choose the correct answer from a, b, c or d.

1. ..... is a video conferencing service developed by Google that enables users to conduct group video calls, share screens and collaborate.
   a. Google Meet b. Google Account c. Google play d. YouTube
2. To express your opinion in an organized manner during a Google Meet session, you can click on the ..... .
   a. meeting link b. hand icon
   c. speak at any time d. exit before the meeting ends
3. You can share your entire screen or a specific window with participants at the bottom of the page by clicking on the ..... icon.
   a. In call messages b. Stop Sharing c. Messages d. Share Screen
4. Google Meet is a method of ..... communication.
   a. indirect b. direct c. slow d. difficult
5. You can start an instant meeting in Google Meet through all of the following except ..... .
   a. clicking the "New Meeting" button b. clicking "Start an instant meeting"
   c. clicking "Copy" d. clicking "Sign out"

Answer		Explanation
(1)	Google Meet	Google Meet is a video conferencing service developed by Google that enables users to conduct group video calls, share screens, chat, collaborate in real time, and work together on joint projects among students.
(2)	hand icon	Pressing hand icon helps organize sessions, talk and intervene in an organized and smooth manner.
(3)	Share Screen	You can share your entire screen with participants or a specific window at the bottom of the page, click on ⬆ the "Share screen" icon now.
(4)	direct	Google Meet is a method of direct communication between users to make video calls and online conferences to exchange data, information and ideas as you can use them to communicate with others face to face.
(5)	clicking "Sign out"	Your can start an instant meeting in "Google Meet" by : Going to the main page of the "Google Meet" application and follow these steps : 1. Click on the "New meeting" button. 2. Click on Start an instant meeting. 3. Click on the "Copy" icon, ⧉ to share the meeting link.

2 Put (✓) or (×) for the following sentences.

1. To express your opinion in an organized manner during a Google Meet session, you can speak at any time. (×)
2. You can access the Google Meet application on Android devices through Gmail. (×)
3. During a Google Meet session, whether you're the organizer or the invitee, you can use various options and features. (✓)
4. While one participant is speaking, the rest of the participants must listen, and turn off the microphone. (✓)
5. Google Meet is a service that only provides audio. (×)

Answer		Explanation
(1)	×	To express your opinion in an organized manner during a Google Meet session, you can send a message.

(2)	✗	You can access the Google Meet application on Android devices by downloading it through the Google Play Store.
(3)	✓	During a Google Meet session, whether you're the organizer or the invitee, you can use various options and features that help maintain an organized and enjoyable meeting environment.
(4)	✓	One of the rules that you should follow during the meeting is when one participant is speaking, the rest must listen, and turn off the microphone.`
(5)	✗	Google Meet is a video conferencing service that you can use to communicate with others face to face (audio & video).

3 Complete the following sentences.

1. To access Google Meet services, you must have a ..... .
2. To help organize sessions, talk and intervene in an organized and smooth manner, you should ..... .
3. Send the meeting link to the participants via one of the communication tools ..... or ..... .
4. If you are invited to a meet through a link, you should not sent the ..... to someone else, and you must ask the meeting owner's permission.
5. To create a meeting for next week through Google Meet, we click on ..... .

Answer		Explanation
(1)	Google Account	In order to access the "Google Meet" service, you must have a "Google Account"
(2)	listen to the speaker	You should listen to the speaker in order to help in organizing the sessions, talk and intervene in an organized and smooth manner.
(3)	Email or WhatsApp	You should use email or WhatsApp when you send the meeting link to the participants.
(4)	meeting link	You should not send the meeting link to someone else, and you must ask the meeting owner's permission.
(5)	create meeting for a later time	When you create a meeting for next week through "Google Meeting", you should click on "Create a meeting for a later time"

Lesson 8 Database Design

1 Choose the correct answer from a, b, c or d.

1. ..... are a collection of data and information organized and linked to each other.
   a. Charts b. Software services
   c. Databases d. Collaboration tools
2. All the following are the usages of databases except for ..... .
   a. saving students' information b. saving medical records
   c. tracking inventory in stores d. writing text documents
3. ..... is a term that refers to extremely large and diverse sets of structured and unstructured data.
   a. Data table b. Big Data
   c. Database d. Word processing
4. ..... is used to create Data Table.
   a. Word b. Excel c. Google Meet d. Both a & b
5. ..... is used to create custom applications to manage data and if you have a large quantity of complex data.
   a. Word b. Excel c. Access d. Paint

Answer		Explanation
(1)	Databases	Databases are a collection of data and information organized and linked. Databases store data and information.
(2)	writing text documents	Databases are used in saving students information, saving medical records in hospitals and in tracking inventory in stores.
(3)	Big Data	The term Big Data refers to very large and diverse sets of structured, unstructured and semi-structured data that continue to grow significantly over time .
(4)	Both a & b	With "Word" and "Excel" , you can create a Data Table.
(5)	Access	Microsoft Access is used when you * have a large amount of complex data. * need to create relations between data. * want to create custom applications to manage data. * need higher data security.

2 Put (✓) or (×) for the following sentences.

1. 📖 A Data Table is a non-essential element in building databases. (×)
2. Word is used to arrange and sort students' grades and perform simple calculations. (×)
3. "Table Design" is used to write the names of the table fields and specify their data type. (✓)
4. We use "Datasheet View" of the table to enter and view the table data. (✓)
5. Choose "Table Design" to display the data view window. (×)

Answer		Explanation
(1)	×	A Data Table is an essential element in building databases and the only source of data within the database.
(2)	×	Excel is used to arrange and sort students' grades and perform simple calculations
(3)	✓	You can create a "Table" in Access through "Table Design" to write the names of the table fields and specify their data type.
(4)	✓	"Datasheet View" is one of the steps in creating "Table" in Access to enter and view data in the table.
(5)	×	To display the Data View window, choose "Datasheet View".

3 Complete the following sentences.

1. ..... is one of the applications used to create databases and build a complex structure for data and its management.
2. A ..... consists of rows and columns.
3. The advantages of using databases include ..... , ... , and ..... .
4. Databases are used in ..... and ..... .
5. ..... is a field in a database table that is used to uniquely identify each record in that table.

Answer		Explanation
(1)	Microsoft Access	It is one of the applications used to create databases . It builds a real database, where you can build a complex structure for data and manage it more efficiently.

(2)	Data Table	A Data Table consists of rows and columns, where each row represents a single record of data, and each column represents a specific field of data.
(3)	organization, efficiency, and accuracy	Organization, efficiency, accuracy, security and sharing are advantages of using databases.
(4)	websites and data analysis	Databases are used in websites, data analysis, scientific research and business applications.
(5)	Primary key	It is a field in a database table that is used to uniquely identify each record in that table, and the primary key value is never repeated within the same table.

Lesson 9 Forms & Queries

1 Choose the correct answer from a, b, c or d.

1. A form is a graphical interface designed specifically to interact with data stored in the ..... .
   a. information b. database c. books d. queries
2. Click on the " ..... " icon to display the data of the last record.
   a. Last record b. Next record
   c. First record d. Layout View
3. Data can be entered through the spreadsheet or through ..... .
   a. student grades b. queries
   c. form d. information
4. Examples of queries include creating a query to display data from a student's record or ..... .
   a. database
   b. tools to obtain data
   c. query design
   d. a list of students who scored the highest grades in the subject
5. The ..... in a query helps you identify specific items in an Access database.
   a. results b. Design View
   c. criteria d. show

Answer		Explanation
(1)	database	A form is a graphical interface designed specifically to interact with data stored in the database.
(2)	Last record	Click on the "Last record" icon to display the data of the last record.
(3)	form	Data can be entered through the spreadsheet or through form.
(4)	a list of students who scored the highest grades in the subject	Examples of queries include creating a query to display data from a student's record or a list of students who scored the highest grades in the subject.
(5)	criteria	The criteria in a query helps you identify specific items in an Access database.

2 Put (✓) or (×) for the following sentences.

1. A form is a graphical interface designed to interact with data stored in the database. (✓)
2. Access provides several methods that allow you to create a query. (✓)
3. We use the query design view (Query Design) to display query results. (×)
4. When you add a field using drag and drop in the design grid , Access automatically fills the Table row in the design grid with the name of the table used "Student Grades" to indicate the data source for that field. (✓)
5. When you remove the ✓ sign from the computer score columns in the Show row in the design grid , this means that these field will appear when executing the query. (×)

Answer		Explanation
(1)	✓	It is a screen that displays specific information from the database and allows the user to enter, modify or delete this information in an organized and convenient way.
(2)	✓	It is a program that provides many ways to create a query.

(3)	×	To create a new query.
(4)	✓	When you add a field using drag and drop in the design grid , Access automatically fills the Table row in the design grid with the name of the table used "Students Grades" to clarify the data source for that field.
(5)	×	It means not appearing the field when executing the query .

3 Complete the following sentences.

1. The "Design View" window is divided into ..... parts.
2. You can create a new form through ..... .
3. The form allows the user to ..... , ... or ..... the information in an organized way.
4. The ..... in query helps you to identify specific items in an Access data base.
5. Queries are tools used to obtain ..... from the database according to specific criteria or conditions.

Answer		Explanation
(1)	two	The "Design View" window is divided into two parts, the upper part contains the data source table and the lower part is the query design grid.
(2)	The Form Wizard	A new form can be created using the Form Wizard.
(3)	modify, enter or delete	The form is a screen that displays specific information from the database and allows the user to enter, modify or delete this information in an organized way.
(4)	criteria	The criteria in a query helps you to identify specific items in an Access database.
(5)	data	Queries are tools used to obtain data from the database according to "specific criteria or conditions ", and through the query, information can be obtained from the database based on the data stored in the database.

EL-Moasser Sample Tests

نماذج اختبارات من كتاب المعاصر



Sample Test 1

1 Choose the correct answer from a, b, c or d.

1. ..... is an essential element in creating databases.
   a. Row b. Column
   c. Data Table d. Digital transformation

2. You can access the meeting from "Google Meet" by clicking on ".....".
   a. Send b. Share c. Chat d. Link

3. ..... is a national project that involves integrating digital technology into aspects of work to develop products and services.
   a. Digital Transformation b. Electric cars
   c. Green technology d. Email

4. Sound is turned on during the meeting in "Google Meet" by clicking on ".....".
   a. Mute sound b. Sound c. Microphone icon d. Share sound

5. ..... are tools used to obtain data from a database based on specific criteria and conditions.
   a. Forms b. Digital transformation
   c. Emails d. Queries

2 Complete the following sentences.

1. Cloud computing can be used in education through ..... .
2. Google Meet is used to make ..... calls.
3. Modern operating systems include a list of ..... for several Peripheral devices.
4. Network devices like ..... and ..... to manage the network.
5. The background is a ..... or ..... that the user can select.

3 Put (✓) or (×) for the following sentences.

1. Digital transformation helps increase efficiency and productivity. ( )
2. Operating systems are essential for running and managing devices. ( )

3. The "Design View" is used to enter and display data in the table. ( )
4. Cloud computing is a model for providing digital services without Internet. ( )
5. An email address consists of five main components. ( )

Sample Test 2

1 Choose the correct answer from a, b, c or d.

1. Programs can be installed through the ..... .
   a. CD or DVD b. Internet
   c. both (a) and (b) d. Maps
2. ..... is an application that allows sending and receiving money through a bank account or electronic wallet.
   a. WhatsApp b. Facebook c. Telegram d. INSTAPAY
3. A/An ..... is one of the requirement for using cloud computing.
   a. printer b. program c. Internet browser d. electric car
4. Smartphones and tablets depend on operating systems like Apples's ..... .
   a. Android b. iOS c. macOS d. Linux
5. The ..... feature means the operating system installs the correct and suitable program for the device.
   a. Plug and Play b. Control Panel c. CD d. Alt+cut

2 Complete the following sentences.

1. ..... is an example of green technology.
2. ..... is a device that detect the presence of a hand under the tap and control the flow of water.
3. Messages are sent and received quickly through ..... .
4. ..... are types of queries that can be created in databases.
5. You can uninstall or install a program through the ..... .

3 Put (✓) or (×) for the following sentences.

1. The (#) symbol separates the user name from the email server name. ( )
2. Cloud computing can be used in e-commerce. ( )

3. Tablets are only used to connect to the Internet. ( )
4. The operating system ensures the safety of computer data. ( )
5. We only use routers to manage the network. ( )

Sample Test 3

1 Choose the correct answer from a, b, c or d.

1. ..... provide easy, secure, and fast methods to facilitate electronic financial transactions for individuals.
   a. Electronic payment cards b. Digital Egypt Platform
   c. INSTAPAY d. Emails
2. We can remove programs through ..... .
   a. control panel b. browsing websites
   c. opening folders d. downloading programs
3. ..... is one of the ways for installing programs on a computer.
   a. Mobile phone b. Downloading from the Internet
   c. Smart device d. Car system
4. To create a "Google Meet" session and organize the meeting, you should ..... when speaking.
   a. raise your hand b. speak at anytime
   c. send a link d. exit the meeting
5. ..... is the operating systems that smart TVs rely on.
   a. Android TV b. POS c. WhatsApp d. ATM

2 Complete the following sentences.

1. Databases are a collection of ..... data and information.
2. The Excel program is used to create ..... .
3. The Access program is used to create ..... .
4. ..... helps to improve efficiency and productivity in the workplace.
5. A query in a database is a tool used to ..... .

3 Put (✓) or (×) for the following sentences.

1. You can select the language for a Google Meet session through "Change Language". ( )
2. When installing a program, we use "This PC" icon to access the downloaded file. ( )
3. A user name is unique, distinctive, and not reserved by anyone else. ( )

4. To remove a program, click on Uninstall. ( )

5. Smartphones rely on operating systems like Android and iOS. ( )

Sample Test 4

1 Choose the correct answer from a, b, c or d.

1. ..... are devices that can be set up and installed on a computer.
   a. Printers b. Electric cars c. ATMs d. USB devices

2. Desktop and laptop computers use operating systems like ..... .
   a. macOS b. Microsoft windows
   c. iOS d. both a & b

3. The "Wizard Program" is used to ..... .
   a. find the driver for the new peripheral device
   b. delete programs
   c. change device settings
   d. store programs

4. Green technology helps to ..... .
   a. reduce the effects of climate change
   b. increase carbon emissions
   c. increase pollution
   d. consume resources

5. When creating a new query in access, choose ".....".
   a. Insert b. Create c. Delete d. Open

2 Complete the following sentences.

1. You can modify a record data from ..... or .....
2. ..... is one of the disadvantages of using the email.
3. You can send a Google Meet meeting link through ..... .
4. You can use cloud computing for messaging services, such as ..... .
5. To uninstall a program, use the ..... .

3 Put (✓) or (×) for the following sentences.

1. Green technology helps to reduce carbon emissions. ( )
2. Electric cars contribute to increase pollution. ( )
3. Recycling materials helps to protect the environment. ( )
4. Databases don't allow to store products data. ( )
5. The value of the primary key can be repeated within the same table. ( )

Sample Test 5

1 Choose the correct answer from a, b, c or d.

1. ..... is one of the email service providers.
   a. Gmail b. Paint c. Youtube d. Google Docs

2. Cloud computing is a model for providing ..... online.
   a. digital services b. development of software
   c. audio communication between people d. removing folders

3. ..... is a tool for collaborating and communicating with others face-to-face.
   a. Word b. Zoom c. Excel d. Access

4. To stop a sharing your screen in Google Meet, click ..... .
   a. "New" b. "Create" c. "Sign in" d. "Stop sharing"

5. To add a criteria or conditions to queries in Access, click ..... .
   a. "Delete" b. "Add" c. "Edit" d. "Enter criteria"

2 Complete the following sentences.

1. Cloud computing can be used in ..... , such as accessing educational materials.
2. ..... helps to reduce the emission of harmful substances from exhausts and reduce fuel consumption.
3. Sustainable technology is another name for ..... .
4. Data from the "Student Grades" table is displayed in ..... .
5. You can create a new form through ..... .

3 Put (✓) or (×) for the following sentences.

1. Google Meet is one of the services provided by Microsoft. ( )
2. Servers use operating systems like Linux. ( )
3. ATMs use embedded operating systems. ( )
4. We use servers to manage network resources and provide different services. ( )
5. You can use a smartphone without an operating system. ( )

Sample Test 6

1 Put (✓) in front of the correct sentence and (×) in front of the wrong one.

1. The electric cars decrease environmental pollution. ( )
2. Digital transformation reduces the quality of life. ( )
3. The user name is located at the end of the email address. ( )
4. In Access you can only modify the data through the form. ( )
5. It is difficult to use databases on websites. ( )
6. The Google Meet service allows users to create collaborative projects. ( )
7. Cloud computing enables you to store files and folders. ( )
8. To uninstall the program, use the Control Panel. ( )

2 Choose the correct answer from a, b or c.

1. "Google Meet" is ..... .
   a. audio-only service b. Voice-only service
   c. video conferencing
2. The" ....." program can browse large data stored within a database.
   a. Word b. Access c. Excel
3. Electric cars use ..... instead of fuel.
   a. turbines b. batteries c. transformers
4. You can install the printer through ..... .
   a. USB b. CD c. GPR
5. ..... is a government electronic portal that provides many electronic services.
   a. Google Meet b. Zoom c. The Digital Egypt Platform
6. All of the following are examples of operating systems except ..... .
   a. Windows b. Linux c. PHP
7. One of the disadvantages of using email is ..... .
   a. speed b. cost c. hacking
8. ..... is one of the uses of cloud computing in the field of storage.
   a. Google Drive b. Excel c. Telegram

3 Complete the following sentences with suitable words between brackets.

(Android or IOS - Save - query design - Huge - Windows - Insert)

1. Smartphones and tablets rely on ..... operating systems.
2. The correct way to save a Data Table in "Access" is by clicking on ..... icon.
3. You can create a new query from the database using ..... .
4. "Big Data" is..... sets of data.

Sample Test 7

1 Put (✓) in front of the correct sentence and (✗) in front of the wrong one.

1. A data table is not a basic element in building databases. ( )
2. Email is used to share texts, files, images and other information. ( )
3. Servers use operating system such as Linux OS. ( )
4. Uninstall program unused slow down the computer. ( )
5. The primary key field is used to uniquely identify each record in the table. ( )
6. Digital transformation is the combination of digital technology into all aspects of business. ( )
7. Cloud computing is known as a model for providing digital services over the Internet. ( )
8. Green building lead to increased energy consumption. ( )
9. The operating system helps you uninstall the program. ( )
10. "Microsoft Access" is one of the applications to create databases. ( )
11. To access the "Google Meet" service, you must have a bank account. ( )
12. "YouTube" is one of the Email service providers. ( )

2 Complete the following sentences using word between brackets.

(icons - User name - Forms - INSTABAY - file -@ - Background - Data Table)

1. When you download software from the Internet, is the form of a/an ..... .
2. ..... allows sending and receiving money.
3. A ..... consists of rows and columns
4. ..... is the part that is located at the beginning of the email address.
5. Desktop includes a set symbols called ..... .
6. ..... is graphical interface designed specifically to interact with data in the database.

3 Choose the correct answer from a, b, c or d.

1. Google ..... is video conferencing service.
   a. Account b. Meet c. Docs d. Drive
2. In the data Table, each..... represents a single record of data.
   a. row b. column c. cell d. file
3. ..... service is storing files and folders over the Internet.
   a. Software b. Cloud storage
   c. Electronic resources d. Cloud computing
4. ..... is one of the examples of operating systems in embedded systems.
   a. Modern b. ATM c. Converter d. Router
5. Green technology is referred to as ..... technology.
   a. sustainable b. traditional c. parallel d. harmful
6. One of the disadvantages of using email is ..... .
   a. speed b. cost c. ease d. hacking

Sample Test 8

1 Put (✓) in front of the correct sentence and (×) in front of the wrong one.

1. The Internet of Things is a term that refers to a very large and diverse collection of structured and unstructured data. ( )
2. Google Drive is one of the most popular cloud computing providers. ( )
3. Personal computers (PC) (desktop and laptop) use operating systems such as Android. ( )
4. To make a new form using the Form Wizard in Microsoft Access, we use the Create tab. ( )
5. When you stop sharing the display in the Google Meet window, we click the Share Screen icon. ( )
6. Digital Egypt Platform is a government electronic portal that provides many electronic services to citizens. ( )

2 Complete the following sentences using words between brackets.

(Queries - Make group video calls - User Name - Control Panel - Water treatment - Microsoft Access)

1. You can remove or uninstall any program from the operating system through the ..... .

2. ..... they are tools used to obtain data from the database according to specific criteria.
3. ..... is one of the applications used to create and manage databases more efficiently.
4. Green technology is used in many areas of life and including ..... .
5. ..... one of the components of an email address, which must be a unique name and not reserved for another person.
6. Google Meet allows users to ..... .

Sample Test 9

1 Put (✓) in front of the correct sentence and (×) in front of the wrong one.

1. YouTube is one of the email service providers. ( )
2. The operating system helps you uninstall the program. ( )
3. An example of cloud word processing programs is Google Docs. ( )
4. All data entered through the form does not appear in the table. ( )

2 Choose the correct answer from a, b, c or d.

1. A Google account consists of ..... .
   a. user name only b. password only
   c. user name and password d. your friend's name
2. Modern operating systems include a list of ..... for many peripherals.
   a. Harmful programs b. Viruses c. Songs d. Drivers
3. To get data from a database according to specific conditions, we use ..... .
   a. Forms b. Queries c. Tables d. Data sources
4. We determine the type of the grades fields statement from the type ..... to perform a calculation on them.
   a. Date b. Text c. Word d. Number

3 Complete by using the following words.

(INSTAPAY - Meeting for a later time - Google Cloud Platform – Row)

1. In a spreadsheet, each ..... represents one record of data.
2. To create a meeting next week through "Google Meet" you choose ..... .
3. ..... terminals are electronic device that enable customers to pay for products they purchased.
4. The most famous providers of cloud computing services are ..... .

Sample Test 10

1 Put (✓) in front of the correct sentence and (×) in front of the wrong one.

1. Green technology referred to unsustainable technology or clean technology. ( )
2. Digital Egypt application can't be used on mobile devices. ( )
3. Microsoft Word responsible for managing hardware of the computer. ( )
4. The program can't uninstall itself. ( )
5. Email is one of the direct communication tools. ( )
6. Cloud computing service can be obtained by any computer. ( )
7. Meeting owner can accept or reject the person's joining. ( )
8. Primary Key field can be repeating in a database table. ( )

2 Choose the correct answer from a, b, c or d.

1. Electric cars operate using ..... .

a. Coal b. Fuel c. Batteries d. Natural Gas

2. ..... application used for electronic payments.

a. INSTAPAY b. JavaScript c. PowerPoint d. Instagram

3. Smart TVs operate on various operating systems like ..... .

a. Linux b. Tizen c. Xbox d. all of them

4. To Exit of your Gmail account, click ..... in your profile picture.

a. Exit b. Sign in c. Sign up d. Sign out

5. From famous cloud computing service providers is ..... .

a. Microsoft Edge b. Microsoft Azure c. Microsoft Excel d. all of them

6. Can be Send the meeting link to others via ..... tool.

a. Email b. WhatsApp c. Facebook d. all of them

7. ..... is the basic element in building databases.

a. Query b. Primary Key field c. Form d. Data Table

8. To execute the query; from the Design tab, click the ..... icon.

a. Execute b. Run c. Save d. Play

3 Complete using the guide words.

(Zoom - User name – Sensors – Efficiency – Driver – Form – Android –Telegram)

1. We can use ..... for regulating temperatures and operating the lights.
2. From video conferencing applications; Google Meet and ..... .
3. New devices include a CD or DVD for setup that contains ..... files.
4. Smartphones and tablets depend on ..... OS.
5. ..... is located at the beginning of the ..... email address.
6. From messaging services used to communicate with others; WhatsApp and ..... .
7. From advantages of using databases is ..... .
8. To create a Form; click Create tab then click ..... .

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