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Question 1

(a) Define information transmission.
(b)   D ifferentiate between:
1. Internet and intranet;
2. LAN and WAN.
(c)   List **four** devices used in a LAN environment.

Observation

The question tested the knowledge of the candidates in the definition of information transmission and networking terms. The Chief \examiner reported that most of the candidates were able to give the definition of the terms listed.

The expected answer is:

  ○ **Definition of information transmission**

Information transmission is the act of sending and receiving/ transfer of/ exchange of information/ message from one a person/place to another through a medium
OR
Information transmission is the exchange of information in any form (voice, data, text and images) from a sender to a receiver(s) over a medium (air, cable, water, etc) using natural, or man-made equipment or tools.

  ○ **Difference between:**
    ■ **Internet and Intranet**

Internet	Intranet
A network of computers connected globally	A computer networks within an organization
A public network	A private network
Network of networks	A single network
Information is broad and unlimited	Information is limited to the organisation's needs

Internet is not owned by anyone	Intranet is owned by an organisation
It can be accessed by anyone	It can only be accessed by employees and members of the organisation
It is less secured and not safe	It is often firewalled, restricted and considered secured and safe
Unlimited number of users	Has limited number of users as designed by the organisation
Support various services and protocols such as; **_http, ftp, smtp, gopher, telnet, irc,_**	Support limited services of the organisation, such as collaboration, shared calendar, training, Video and Audio Conferencing
High network traffic	Low network traffic

- **LAN and WAN**

Local Area Network (LAN) is a network of computers that covers a small geographical area while Wide Area Network (WAN) is a network that spans a large geographical location across states, regions and continents.

- **Devices used in a LAN environment**

- Hub
- Switch
- Server
- Bridge
- Connectors
- Bluetooth Radio
- Wireless Adapters
- Routers
- Repeater
- LAN Card/ NIC (Network Interface Card)
- LAN Extender
- Access points
- Printer
- Smart Devices
- Mobile Phone
- Scanner
- Digital camera
- Workstation/Computer/ Laptop/Desktop

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Question 2

A medium scale enterprise intends to create a database to manage its staff records with the following fields: staff ID, Name, Address, Photograph and Department.
1. (i) What is a Database?

(ii) List **three** *DBMS* the firm can use to achieve the stated objectives.
1. (i) Mention **two** tasks that can be performed on staff photographs using graphic packages.

(ii) Give **three** examples of graphic packages that can be used for the tasks in 2 (b) (i)

Observation

The question tested the candidates' skill in DBMS.
The Chief Examiner reported that a good number of the candidates who attempted this   question struggled with the task.

 The expected answer is:
(a) (i) A database is an organized collection of data or information electronically for easy access and management
OR
Database is a collection of information that is organized so that it can easily be accessed, managed and updated.
OR
A database is an organized collection of structured information, or data, typically stored electronically in a computer system.
OR
A database refers to a collection of logically related information organized so that it can be easily accessible, managed and updated.

(ii) **Examples of DBMS**

1. MySQL
2. Microsoft Access
3. SQL Wizard
4. Microsoft SQL Server
5. Oracle
6. RDBMS
7. dBASE
8. Fox Pro
9. PostgreSQL
10. MongoDb
11. Teradata
12. IBM DB2
13. Informix

   SAP ASE/SYBASE
1. amazon's simple db
2. Filemaker
3. Adabas
4. SQLite
5. Toad
6. phpMyAdmin
7. CouchdB
8. Redis
9. IBM DB2
10. IBM Lotus Approach
11. Lotus Note
12. Bigtable

   Cloud Spanner

   (b) (i) **Tasks performed using graphic packages**

- Resize
- Photo manipulation
- Rotate
- Mirroring
- Crop
- Remove background
- Edit
- Apply artistic effects
- Contrast/Brightness Adjustment
- Blurring
- Filtering
- Add effects
- Photo enhancement
- Transparency
- Flip
- Change to 3D
- Adding watermarks

   (ii) **Examples of graphic packages**

- Print Artist
- Corel Paint/
- Paint PRO
- CorelDraw
- Instant Artist
- Harvard Graphics
- Photoshop
- Logo Graphics
- Animation software
- Print
- Computer Aided Design

- Canva
- Gimp
- Pixlr
- Inkscape
- MsPaint
- photoscape
- Adobe Dreamweaver
- Adobe illustrator
- Adobe photoshop
- SumoPaint
- Blender
- Sketch
- Mega Creator

- Logic Graphics
- Affinity Designer
- Adobe Indesign
- VisMe
- SVG-edit

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Question 3

(a) (i) What is a presentation package?
(ii)   Give **two** examples of presentation package.
(iii) State three features of a presentation package.
1. Highlight the steps followed to find and replace data in MS Excel.

Observation

The question tested the candidates' knowledge of presentation package. However, it was reported that most of the candidates who attempted this question performed relatively well.

The expected answer is:

(a)(i) **Definition of presentation package**
A Presentation package is a software used to display information in form of slide show.
OR
A Presentation package is a software program with the ability to add charts, graphic, sound, images, and videos to communicate visually with audience
(ii) **Examples of presentation package**

- Ms PowerPoint
- Apple Keynote
- Corel presentations
- IBM Lotus Freelance Graphics
- SoftMaker
- Slide beans
- Renderforest
- Sklides
- Google Slide
- HAIKU DECK
- Slide dog

- Prezi
- Macromedia flash
- Legend
- Windows Movie Maker
- Open office impress
- Canva
- Corel RAVE

- Libre office Impress

(iii) **Features of a presentation package**

- Slide creation
- Adding Animation
- Insert Chart/Shapes
- Adding Macros
- Adding Narration
- Slide transition
- Automate presentation
- Recording
- Formatting slides, texts and graphics
- Slide manipulation (Copy/Paste/Duplicate)
- Slide show
- Timing of presentation
- Text, sound, graphics, and video insertion

(b) **Steps to find and replace data in MS Excel**
- Type Ctrl+F while the worksheet is opened
- Type what to find in the" Search for what" text box/ what to replace with, in the
"Replace   with what" text box
- Click on Replace/Replace All
OR
- Click on find and select button on the Home Tab and select Find from the Drop
Down menu
- Type what to find in the" Search for what" text box/ what to replace with, in the
"Replace with what" text box
- Click on Replace/Replace All

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Question 4

 A professional photographer uses analogue cameras and a computer system for his business. The computer is used to prepare documents and keep records of clients' accounts. Copies of these documents are stored in CD-ROMs and Floppy disks. The photographer now plans to innovate by using digital cameras and the computer for taking, editing and printing photographs.

1. State **two** hardware changes required on the photographer's computer to achieve the planned innovation.
2. Give one reason:
3. for each of the changes in 4(a).
4. why the photographer should use external hard disk instead of floppy disk to store data.

(c)   State two advantages of switching from analogue to digital camera.

Observation

The question tested the candidates' knowledge on computer application as it applies to real life situation. It was reported that most of the candidates who attempted this question demonstrated poor knowledge of computer application to solve real life problems.

 The expected answer is:

(a) **Hardware changes on the photographer's computer to achieve the planned innovation**

-    Hard Disk size
-    Higher processor/ processor speed
-    Increase RAM size
-    Install Graphic Adaptor/Card
-    Digital Camera
-    Printer
-    Multiport Adapter
-    DVD writer/Drive
-    Docking port / USB cable interface for the camera

- Card Reader
- SD Card
- Monitor with higher resolution.

(b)(i) **Reasons for the changes**

- Increase hard device size will accommodate more storage capacity.
- A higher processor will ensure efficiency in processing of tasks
- Increased RAM size will improve performance of the computer.
- Docking point/ USB cable interface/ Multiport Adapter for the camera will ensure easy transfer of images from the camera to the computer.
- Increased monitor resolution will enable the photographers to properly edit the images and give a good output
- Graphic adaptor to connect graphic display to enhance the graphical capabilities of the system.
- Printer to print copies of photographs.
- Card Reader to transfer photographs to and from SD Card to the computer/camera
- DVD writer/Drive to transfer photographs to CD-ROM

(b) (ii) **Reasons for using external hard disk**

- More durable
- More Storage Space/ Capacity
- Usable on Multimedia devices
- Faster access time
- Robust storage media

(c) **Advantages of switching from analogue to digital camera**

- Better resolution
- Faster processing
- Long term cost effectiveness
- Instantaneous satisfactory
- Multiple functions
- Video camera
- Easy to share
- Smaller and lighter
- Easy editing
- Massive storage space for photos

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Question 5

A class captain was asked to create a database in *MS Access* for all the student in the class without using any template and name it Student_Record. The table created is to be named Students and should have **five** columns/fields with the following names:
ID_Number
Full Name
Date of Birth
Age
Home_Address

1. Highlight the procedures the captain will follow to create the database.
2. List the step the captain would take to create the table in *Design View.*
3. Give the data type suitable for **each** column/field provided.
4. Which field can be used as the primary key?
5. Mention one importance of primary keys.
6. List **three** SQL command statements the class captain can perform on the database.
7. Give the SQL query the captain will use to display all the columns in table Students.

Observation

The question tested candidates' skills on database management system.
The Chief Examiner reported that candidates' responses in this question revealed poor practical skills in DBMS among majority of those who attempted the question.
The expected answer is:

(a) **Procedures for creating database**
- Open the MS Access
- On the File tab/Office button, click New and then click Blank Database
- Type "**Student_Record**" in the file name box
- Click Create

  OR

- Open the MS Access
- Click Blank desktop database
- Type "**Student_Record"** in the file name box
- Click Create

(b) **Steps for creating the table in Design view**
- Click on "Create" on the Menu bar
- Click on "Table Design"
- Type the field name and select appropriate data type
- Save the table as Students.
 OR
- Click on "create table" in design view
- Click on design view icon on the menu bar.
- Type the field name and select appropriate data type
- Save the table as Students
 OR
- Double click on "create table "in design view
- Type the field name and select appropriate data type
- Save the table as Students.

(c) **Data types suitable for the columns/fields provided**
ID- Number ---------- Number/ Auto Number
Full Name -----------------Text/ Short Text
Date of Birth -------------Date/ Time
Age ---------------------- Number
Home Address ----------- Long Text/Memo
(d) **Importance of primary key**
ID- Number field can be used as primary key
(e) **Field used as primary key**
-    It is used for secondary index
-    It uniquely identifies a record in a database
-    It stands as a common link between two or more tables in relational database.
-    It cannot contain Null value
-    Values in the primary key field cannot be duplicated
(f) **SQL command statements that could be performed on the database**

- SELECT
- UPDATE
- INSERT
- APPEND/ INSERT INTO
- DELETE
- CREATE DATABASE
- INNER JOIN
- ALTER DATABASE
- CREATE TABLE
- ALTER TABLE
- DROP TABLE
- CREATE INDEX
- DROP INDEX
 (g) **SQL Query used to display all the columns in table Students**
- SELECT * from Students

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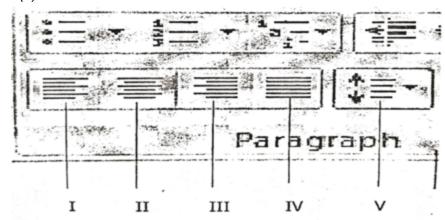
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Question 6

(a) Outline the steps taken in *MS word* to:
(i)   create   a   table   with   **4**   columns   and   **6**
rows;

(ii) insert a hyperlink on a text.

Figure 1 is a portion of Microsoft Word interface. *Use the figure to answer question* **6***(b)*.

Observation

This question also tested candidates' skills in using Microsoft Word for data processing. It was reported that though most of the candidates showed poor skill in Microsoft Word.

The expected answer is:

(b) State the function of the parts labelled **I** to **V** in **Figure 1**.

 The expected answer is:

 (a) (i) **Steps in creating a table**
-   Click on the "Insert" tab
-   Click on "Table"
-   Click on "Insert Table"
-   Type in 4 in the "Number of columns" and 6 in the "Number of Rows" Text boxes respectively
-   Click on Ok.

OR
-   Click on the "Insert" tab
-   Click on "Table"
-   Hover the mouse to select 4 columns and 6 rows on the displayed grids
-   Click/ Press Enter on the keyboard

OR
- Click on the "Insert" tab
- Click on "Table"
- Click on "Draw Table"
- Use the pencil tool to draw 4 columns and 6 rows

(ii) **Inserting a hyperlink on the text**
-Select the text
-Click on the "Insert" tab/ Right Click
-Click on hyperlinks
-Type in the link address in the "Address" box
-Click on Ok

(b) **Functions of the labelled parts**
I.   Left aligned: This is used to line up text with left margin.
II.   Center: This makes a text to appear in the middle of the line.
III.   Right-aligned: This is used to line up text with the right margin
IV.   Justified; This is used to align text both left and right such that the text is stretched across the page possibly with more than one space between words.
V.   Line spacing: This is used to select the length of space between lines of text.