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GRADE 11 EXAMINATION
JUNE 2023

COMPUTER APPLICATIONS TECHNOLOGY: PAPER II (THEORY)

MARKING GUIDELINES

Time: 2½ hours

Marks: 125

SECTION A

QUESTION 1

1.1	B
1.2	C
1.3	D
1.4	A
1.5	C
1.6	A
1.7	D
1.8	C
1.9	D
1.10	B

(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)

[10]

QUESTION 2

	COLUMN A	COLUMN B
2.1	FTP	I
2.2	Biometric input	K
2.3	EULA	E
2.4	Encryption	H
2.5	Malware	L
2.6	Wildcard	C
2.7	Utility software	D
2.8	Meme	A
2.9	Server	J
2.10	IM	B

(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)
(1)

[10]

[SECTION A: 20 MARKS]

SECTION B**QUESTION 3: SYSTEM TECHNOLOGIES**

3.1

Q	Image	Main Function	
3.1.1	SSD (Solid State Drive)✓	A storage device where data is stored on flash memory chips. These chips offer fast read and write speeds, making SSDs a fast data storage medium.✓	(2)
3.1.2	Fan✓	A computer fan is any fan inside or attached to a computer case used for active cooling to prevent a computer from overheating. ✓	(2)
3.1.3	Central Processing Unit/CPU✓	A piece of hardware that carries out the instructions of a computer program. It performs the basic arithmetic, logic, and input/output operations of a computer system. ✓	(2)
3.1.4	Instagram✓	A free, online photo-sharing application and social network platform which allows users to edit and upload photos and short videos through a mobile app. ✓	(2)

3.2

3.2.1 Primary:

Any **TWO** facts: ✓✓ The component of a computer that holds data, programs and instructions that are currently in use / main memory inside a computer / directly accessed by CPU.

Example:

RAM / flash memory / cache memory

Secondary:

Any **TWO** facts: ✓✓ Non-volatile memory that is accessed by a device that is part of a computer system / not directly accessed by the CPU / permanent or long-term storage / retains data with or without electrical power.

Example:

HDD / SSD / ROM

Removable:

Any **TWO** facts: ✓✓ Any type of storage device that can be removed from a computer while the system is running/plug and play storage.

Example:

USB flash drive, CD, DVD, external hard drive

- 3.2.2 A portion of the hard disk or solid-state drive (SSD) is used as an extension of the physical memory. ✓ When the physical memory becomes full, the operating system transfers less frequently used data from RAM to the disk, ✓ freeing up space for more actively used data. This process is known as paging or swapping. (2)

3.3

- 3.3.1 Input device:

Any **ONE**: ✓ microphone, joystick, trackball, eye-controlled mouse, foot mouse, special keyboard (ergonomic, braille, large keys), tongue drive system, puff-suck switch, any other acceptable answer.

An appropriate description of use. ✓

(2)

Output device:

Any **ONE**: ✓ Speaker, screen magnifier, braille display, braille printer, any other acceptable answer.

An appropriate description of use. ✓

(2)

- 3.3.2 Any **THREE**: ✓✓✓ Screen readers, voice recognition software, zoom tool, predictive text, sticky keys, on-screen keyboards, eye-tracking software, any other acceptable answer. (3)

[26]

QUESTION 4: SYSTEM TECHNOLOGIES

4.1

- 4.1.1 Advantages:

Any **TWO**: ✓✓ saves costs on purchasing storage devices/infrastructure, can be accessed anywhere with internet connectivity, not lost if device stolen/damaged/lost, saves space on the device, synchronisation of data between devices, easy sharing of data, advanced security, any other acceptable answer. (2)

Disadvantages:

Any **TWO**: ✓✓ needs a reliable Internet connection, transferring data could be slow depending on the speed of connection, no control over security, if servers are down, data cannot be accessed, potential loss of data if the company ceases to exist, limited control and ownership of data, costs associated with additional storage, any other acceptable answer. (2)

(2)

- 4.1.2 Any **ONE**: Google Drive, OneDrive, iCloud, Dropbox, or any other acceptable answer. (1)

(1)

4.2

Q	Problem	Solution
4.2.1	The monitor is blank.	Any ONE: In hibernate/sleep mode – click the mouse or press any key Check if the computer/monitor is plugged in Check the monitor cable on desktop Check graphics card has power/is installed correctly Check device driver Check if the display brightness is turned down

(1)

4.2.2	The mouse or keyboard stopped working.	Any ONE : Check if plugged in (wired devices) Check batteries (wireless devices) Update device driver Rollback to the previous version of the device driver Perform system restore	(1)
4.2.3	The printer is not responding.	Any ONE : Check if plugged in and switched on Check cable connection Check drivers Check the paper in the paper tray Check ink/toner	(1)
4.2.4	The computer is not switching on.	Any ONE : Check if plugged in and switched on Check for power failure/load shedding Check for hardware damage	(1)
4.2.5	Screen Error: Non-System Disk or Hard Drive not found	Any ONE : Check if there is a CD/DVD in the drive which is not bootable Check if there is a USB flash drive or external hard drive plugged into the USB port Check that BIOS has the correct start-up device or restore BIOS defaults Check if BIOS still has stored information, as the motherboard battery may not have charge Check connection cable to the main storage device from the motherboard is secure Check if the hard drive is damaged or corrupt, and check if the file structure is readable	(1)

- 4.3 Any **TWO**: ✓✓
Virus and threat protection, account protection (sign-in), firewall and network protection, app and browser control, device performance and health, parental control, and any other acceptable answer. (2)

- 4.4 4.4.1 A software program that allows the operating system to communicate with hardware or peripheral devices. (2)
- 4.4.2 The driver program for many generic and specific devices is pre-loaded on the computer as part of the operating system. It is automatically installed when the device is plugged into the computer. (1)
- 4.4.3 A computer device/component can be connected or removed without switching off the computer. (1)

4.5 Minimum requirements:

The system has to have these specifications. They are the bare minimum specifications needed to install and use the software. The software will not run without these minimum specifications. (2)

Recommended requirements:

The system should have these requirements for the software to have better usability. These will ensure that the software runs effectively/efficiently/at its best. (2)

4.6 Patch:

A patch refers to a piece of code or software update released by the software developer that is designed to fix issues, vulnerabilities, or bugs in an existing software application. (1)

Service pack:

Service packs are usually larger in size compared to individual patches or updates as they contain a collection of fixes and updates rolled into a single package. They are intended to provide users with an efficient way to update their software to the latest version without the need to install multiple individual updates. (1)

[22]**QUESTION 5: NETWORK TECHNOLOGIES**

5.1 Any **THREE**: ✓✓✓ consist of at least 10 characters, have upper- and lower-case letters, include numbers, include symbols, should be changed frequently (e.g. every 90 days), never share with anyone, different password for different apps, any other acceptable answer. (3)

5.2 5.2.1 UTP:

Unshielded Twisted Pair ✓ There is no metallic shielding around the copper wire ✓ (2)

STP:

Shielded Twisted Pair ✓ The copper wires are enclosed in a shield that removes the corrupting Electro-magnetic interference (EMI) ✓ (2)

5.2.2 Any **TWO**: ✓✓ eavesdropping, attenuation, crosstalk, EMI, slower data transfer speed, covering shorter distances, easily stolen. (2)

5.3 5.3.1 Hybrid (1)

Connection of different topologies ✓ together as a single network ✓ (2)

5.3.2 A large organisation, e.g., a bank head office (1)

Where each floor of the building houses different departments, each with its own topology, which all join the main bank network. (1)

5.3.3 Advantage:

Any **ONE**: share hardware, software resources, communication, share data, collaborate, centralised storage and backup, enhanced security, Internet access. (1)

Disadvantage

Any **ONE**: Security risks, infrastructure, complexity, management, cost, performance issues, dependence, compatibility. (1)

5.4 Hotspot (1)

- 5.5 5.5.1 Internet Protocol address (1)
- 5.5.2 A unique numerical label ✓ which is assigned to each device or node connected to a computer network so that the device can communicate on the Internet. ✓ (2)
- 5.5.3 A suitable address with 32 bits, 4 numbers separated with dots ✓ subtract a mark if any of the numbers are less than 0 or more than 255 ✓ (2)
- 5.6 Peer-to-peer: Each computer shares its files equally with the others; there is no central storage or authentication of users. ✓
- Client-server: There is a dedicated computer called the server that controls all aspects of the network. It stores shared information, provides an Internet connection, stores emails, and limits access to the network. ✓ (2)
- 5.7 Bluetooth (in metres): Approximately 10 metres (1)
- WiMAX (in kilometres): Approximately 50 kilometres (1)
- [26]

QUESTION 6: SOLUTION DEVELOPMENT

- 6.1 6.1.1 Editor / Spell Check (1)
- 6.1.2 Save is used when saving a document for the first time or when making changes to the current document. ✓
- Save As creates a new file containing any changes made to the original document, including a change in the file name. ✓ (2)
- 6.1.3 Any **TWO** benefits: ✓✓ editing a document is much easier; when modifying a style, all text formatted in the document in that style will automatically update, allowing you to create an automatic table of contents and any other acceptable answer. (2)
- 6.1.4 Find and Replace (1)
- 6.1.5 In the Header and Footer options, make sure the Different First Page box is ticked. (1)
- 6.1.6 Make sure the Update automatically box is ticked. (1)
- 6.1.7 Watermark (1)
- 6.2 6.2.1 (a) yy/mm/dd 23/10/17 (1)
- (b) dddd dd mmmm yyyy Tuesday 17 October 2023 (1)
- (c) dd-mmm-yyyy 17-Oct-2023 (1)
- 6.2.2 (a) #VALUE: The wrong type of operand or function argument has been used. (1)
- (b) #####: The column isn't wide enough to display all of the cell contents. (1)
- (c) #REF!: A reference is invalid. (1)
- (d) #DIV/0!: Trying to divide by 0. (1)
- 6.2.3 (a) When? a function is copied into other cells. ✓
- Why? The cell reference will not change. ✓ (2)
- (b) \$A\$1:\$M\$21 Dollars inserted for both cell ranges ✓✓ (2)

- 6.2.4 (a) =TODAY() (1)
- (b) =IF (B4>=80,"Distinction") (5)

6.3 6.3.1

6.3.1	endnote	(1)
6.3.2	COUNTA	(1)
6.3.3	thesaurus	(1)
6.3.4	RAND	(1)
6.3.5	bookmark	(1)

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[SECTION B: 105 MARKS]

[GRAND TOTAL: 125 MARKS]