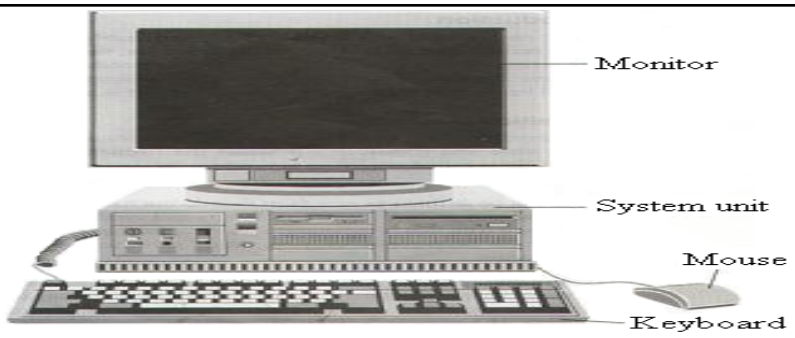
451 COMPUTER STUDIES MARKING SCHEME

Qn	Response	Marks
1	**Peripheral devices** are devices connected to the System unit using special cables called ***data interface cables*** that carry data, programs & information to and from the processor. The cables are connected to the system unit using connectors called ***Ports***	1 1
2	**Program** is a set of related instructions written in the language of the computer & is used to make the computer perform a specific task	2
3	✔ Controls the use of the main memory in storing data and information ✔ Processing and manipulation of data into useful information ✔ Manages execution of instructions ✔ Give commands to all parts of the computer ✔ Control the sequence of operations within the computer	1 1 1
4	✔ Digital/ Discrete Data ✔ Analogue Data	1 1
5a	✔ Device that is used to enter data and instructions into the computer.	1
5b	✔ Keyboard ✔ Mouse ✔ Microphone	1 1 1
6a	✔ Process of converting data into meaningful information.	1
6b	✔ Data – Raw facts which are less meaningful to the user ✔ Information – Data that has been processed and is useful to the user	1 1
7a	They are less powerful than minicomputers & their internal memory is smaller than that of minicomputers.	1
7b	✔ Desktop computers ✔ Laptop Computers ✔ Palmtop and ✔ Pocket Computers	1 1 1 1
8	**Data**: ✔ Unprocessed (raw) facts or figures. (0.5 mark) **Information**: ✔ It is the end-product of data processing (processed data) (0.5 mark)	

	✔ Not arranged. (0.5 mark) ✔ Does not have much meaning to the user. (0.5 mark) ✔ Cannot be used for decision-making. (0.5 mark)	✔ Arranged into a meaningful format. ✔ More meaningful to the user. (0.5 mark) ✔ Can be used to make decisions. (0.5 mark)	
9a	✔ Typing/ alphanumeric keys		½
9b	✔ Numeric keys		½
9c	✔ Function keys		½
9d	✔ Cursor movement keys		½
9e	✔ Special keys		½
9f	✔ Editing keys		½
10	✔ Speed ✔ Accuracy ✔ Reliability ✔ Consistency ✔ Storage ✔ Automation ✔ Diligence		½ ½ ½ ½
11	✔ Diligence- Unlike human beings, a computer can work continuously without getting tired or bored		1
12	✔ Physical size & processing power ✔ Purpose for which they are designed ✔ Functionality (Method/ mode of operation).		1 1 1
13	✔ Data bus- carries data to and from the CPU. Pathway where the actual data transfer takes place ✔ Control bus- is the pathway for all timing and controlling functions sent by the control unit to other parts of the computer		1 1 1

<table>
<tr><td></td><td>✔ Address bus- used to locate the storage position in memory where the next instruction or data to be processed is held.</td><td></td></tr>
<tr><td>14</td><td>✔ 1.Supercomputers
✔ 2.Mainframe computers
✔ 3.Minicomputers
✔ 4.Microcomputers</td><td>½
½
½
½</td></tr>
<tr><td>15</td><td>✔ Home computer
✔ Personal computer (PC).
✔ Workstation</td><td>1
1
1</td></tr>
<tr><td>16a</td><td>✔ i.Embeded Computer- This is a computer that is within another device or system but is not accessed directly
✔ ii.Artificial Intelligence-The ability of computers to mimic human intelligence.
✔ iii.Dedicated Computer- a general-purpose computer that is committed to some processing task</td><td>1

1
1</td></tr>
<tr><td>16b</td><td>✔ 
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<tr><td>16 c</td><td><table>
<tr><td>Computer
✔ Costly due to the technology used.

✔ Bigger in size.
✔ Operate at very high speeds.
✔ Are more accurate – they give up to over 10 decimal places of accuracy.
✔ Flexible – can be used in solving any problem.
✔ Work under the control of programs.</td><td>Calculator
✔ Cheaper – they imitate simple computer technology.
✔ Comparatively smaller.
✔ Slower than computers.
✔ Less accurate – most calculators give up to 8 dp of accuracy.
✔ Mostly used for numerical calculations involving arithmetic/ mathematical operations
✔ Calculators are non-programmable, but if</td></tr>
</table></td><td>1
1
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</table>

	✔ Support a variety of peripherals, e.g. keyboard, mouse, light pen, printer, etc. ✔ Have large internal memory of several KB's. ✔ Support large Backing storage media. ✔ A computer can support several people at the same time. ✔ Have got telecommunication capabilities. ✔ Require well-monitored environmental conditions.	programmable, the range is limited. ✔ They only use Display units & Keyboards of limited capabilities. ✔ their internal memory is very small. Most calculators only use **Registers** for temporary storage during calculations. ✔ Some calculators have got some sort of fixed Backing store, though very limited. ✔ A calculator can serve only 1 user at a time. ✔ Have no telecommunication capabilities. ✔ Do not require well-monitored environmental conditions.
16d	✔ Analogue data ✔ Digital data	1 1
17a	✔ i.Computer- is an electronic machine that processes raw data to give information as output. ✔ ii.Computer System-Is a collection of entities namely Hardware, software and liveware that work together to achieve a certain goal.	2 2
17b	✔ Computers process data faster: ✔ The processing speed of a computer when measured against other devices like typewriters & calculators is far much higher. ✔ Computers are more accurate & reliable: ✔ Computers produce more accurate results as long as the correct instructions & data are entered. They also have the ability to handle numbers with many decimal places. ✔ Computers are more efficient: ✔ A computer requires less effort to process data as compared to human beings or other machines. ✔ Computers can quickly and effectively store & retrieve large amounts of data.	1 1 1 1 1 1
17c	It is electronic. Has a screen.	1 1

	It has a Keypad. Has a Memory. It is programmable.	1 1 1
18a	i. Clicking-Pressing the left mouse button once to select an item or command. ii. Double Clicking-Pressing the left mouse button twice in a quick succession. Iii. Right Clicking-Pressing the right mouse button once to display shortcut menu.	2 2 2
18b	Keyboard- Input device used to enter data and instructions into the computer by typing.	1
18c	Traditional keyboard Ergonomic Keypad Braille Keyboard	1 1 1 1
18d	Serial Ports Parallel ports USB (Universal Serial Bus) Port PS/2 Video Port Firewire port	1 1 1 1
19a	i. Tower type-Is a type of a system unit that is placed upright and is meant to be placed on the floor. ii. Desktop- A type of a system unit that is meant to be placed on top of an office desk.	2 2
19b	Provide stable power supply Install lightining arrestors Control dust and dumpness No foodstuff and Beaverages Insulated cables to avoid short circuit Burglar proof	1 1 1 1
19c	Provide standard furniture Avoid overcrowding Use of antiglare screens Well ventilated rooms Insulated wires	1 1 1
19d	i.Employment ✔ Job creation ✔ Job displacement ✔ Job replacement ii Environment ✔ Pollution (from computer parts) e.g. noise	 1 1 1 1

	✔ Energy consumption	
20a	Super Computer	
20b	Palmtops -are small enough to fit in the pocket, and can be held in the palm when being used. Personal Computer- This is the name given to any computer designed to be used when placed on a desk in an office environment.	2 2
20c	GigaHertz -GHZ	1
20d	Input Process Output	1 1 1
20e	POST-Power-On-Self-Test BIOS-Basic Input Output System CMOS-Complementary Metal Oxide and Semi Conductor PDA-Personal Digital Assistance	1 1 1 1