**451 COMPUTER STUDIES MARKING SCHEME**

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| **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*** | 11 |
| 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
 | 111 |
| 4 | * Digital/ Discrete Data
* Analogue Data
 | 11 |
| 5a | * Device that is used to enter data and instructions into the computer.
 | 1 |
| 5b | * Keyboard
* Mouse
* Microphone
 | 111 |
| 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
 | 11 |
| 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
 | 1111 |
| 8 |

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| **Data** | **Information** |
| * Unprocessed (raw) facts or figures. (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)
 | * It is the end-product of data processing (processed data) (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)
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| 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
 | ½½½½ |
| 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).
 | 111 |
| 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
* Address bus- used to locate the storage position in memory where the next instruction or data to be processed is held.
 | 111 |
| 14 | * 1.Supercomputers
* 2.Mainframe computers
* 3.Minicomputers
* 4.Microcomputers
 | ½½½½ |
| 15 | * Home computer
* Personal computer (PC).
* Workstation
 | 111 |
| 16a | * 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
 | 111 |
| 16b | *
 | 11111 |
| 16 c |

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| 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.
* 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.
 | 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 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.
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| 16d | * Analogue data
* Digital data
 | 11 |
| 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.
 | 22 |
| 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.
 | 111111 |
| 17c | * It is electronic.
* Has a screen.
* It has a Keypad.
* Has a Memory.
* It is programmable.
 | 11111 |
| 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.
 | 222 |
| 18b | * Keyboard- Input device used to enter data and instructions into the computer by typing.
 | 1 |
| 18c | * Traditional keyboard
* Ergonomic
* Keypad
* Braille Keyboard
 | 1111 |
| 18d | * Serial Ports
* Parallel ports
* USB (Universal Serial Bus) Port
* PS/2
* Video Port
* Firewire port
 | 1111 |
| 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.
 | 22 |
| 19b | * Provide stable power supply
* Install lightining arrestors
* Control dust and dumpness
* No foodstuff and Beaverages
* Insulated cables to avoid short circuit
* Burglar proof
 | 1111 |
| 19c | * Provide standard furniture
* Avoid overcrowding
* Use of antiglare screens
* Well ventilated rooms
* Insulated wires
 | 111 |
| 19d | i.Employment * Job creation
* Job displacement
* Job replacement

ii Environment* Pollution (from computer parts) e.g. noise
* Energy consumption
 | 1111 |
| 20a | * Super Computer
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| 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.
 | 22 |
| 20c | * GigaHertz -GHZ
 | 1 |
| 20d | * Input
* Process
* Output
 | 111 |
| 20e | * POST-Power-On-Self-Test
* BIOS-Basic Input Output System
* CMOS-Complementary Metal Oxide and Semi Conductor
* PDA-Personal Digital Assistance
 | 1111 |