**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*** | 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** | **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) | |  |
| 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 * Address bus- used to locate the storage position in memory where the next instruction or data to be processed is held. | 1  1  1 |
| 14 | * 1.Supercomputers * 2.Mainframe computers * 3.Minicomputers * 4.Microcomputers | ½  ½  ½  ½ |
| 15 | * Home computer * Personal computer (PC). * Workstation | 1  1  1 |
| 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 | 1  1  1 |
| 16b |  | 1  1  1  1  1 |
| 16 c | |  |  | | --- | --- | | 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. | | 1  1  1  1  1 |
| 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. * It has a Keypad. * Has a Memory. * It is programmable. | 1  1  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 * Energy consumption | 1  1  1  1 |
| 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 |