



Dear Parent

Students have to learn the following words for the spellathon on 27.08.2026 (Thursday):

**Class -VI**  
**Spellathon No.- 3 (Topic: Technology and Internet)**

| S.N. | Words           | Meaning                                                                               | S.N. | Words          | Meaning                                                                                              |
|------|-----------------|---------------------------------------------------------------------------------------|------|----------------|------------------------------------------------------------------------------------------------------|
| 1    | architecture    | the fundamental structure and organization of a computer system or software           | 11   | interface      | a point of interaction between a user and a software program or between hardware devices             |
| 2    | biometrics      | biological measurements or physical characteristics used for digital identification   | 12   | mainframe      | a high-performance computer used for large-scale, enterprise computing tasks                         |
| 3    | bandwidth       | the maximum capacity of a communication link to transmit data over time               | 13   | metadata       | structured data that provides context or information about other data                                |
| 4    | diagnostics     | programs or tools used to identify errors, problems, or hardware status               | 14   | modem          | a device that converts signals to enable network or internet transmission                            |
| 5    | directory       | an organized file system structure used to store, group, and arrange files            | 15   | peripherals    | auxiliary hardware devices connected to a computer system                                            |
| 6    | decryption      | the process of converting encrypted or coded text back into readable information      | 16   | redundancy     | the inclusion of extra components to ensure system reliability                                       |
| 7    | defragmentation | a process that reorganizes fragmented data on a hard drive to improve performance     | 17   | repository     | a central storage location for data, software packages, or source code                               |
| 8    | firmware        | permanent software programmed directly into a hardware device's memory                | 18   | telemetry      | an automated collection and transmission of system to a remote location                              |
| 9    | gateway         | a network node that serves as an entrance or bridge to another network                | 19   | topology       | the logical arrangement of connected nodes and devices in a network                                  |
| 10   | heuristics      | problem-solving methods that use practical rules or shortcuts to find quick solutions | 20   | virtualization | the creation of a virtual, software-based representation of a computer hardware platform or resource |

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| 1    | asynchronous     | data transmission that occurs independently of a central clock, at varying intervals          | 11   | multi-threading      | a CPU capability that allows multiple execution paths to run concurrently within a program    |
| 2    | authentication   | the process of validating a user or device's identity before granting access                  | 12   | obsolescence         | the state of technological hardware or software becoming outdated and unsupported             |
| 3    | backpropagation  | a fundamental learning algorithm used to train neural networks by calculating error gradients | 13   | packet-switching     | a network transmission method that breaks data into small blocks                              |
| 4    | cryptography     | the mathematical practice of securing digital communications to prevent unauthorized reading  | 14   | protocol             | a standardized set of rules determining how data is transmitted and processed across networks |
| 5    | emulation        | the process enabling one computer system to behave exactly like another distinct system       | 15   | proxy                | an intermediary server standing between a client and a target server to enhance security      |
| 6    | encapsulation    | packaging data with its operating methods in one secure unit to restrict direct access        | 16   | ransomware           | software that encrypts user data                                                              |
| 7    | infrastructure   | the underlying framework of hardware, networks, and software sustaining an it environment     | 17   | symmetric-encryption | a cryptographic system utilizing an identical shared secret key for encryption and decryption |
| 8    | load-balancing   | distributing network traffic across multiple servers to prevent overload                      | 18   | synchronicity        | the real-time coordination of multiple digital systems                                        |
| 9    | micro controller | a compact integrated circuit designed to govern a specific operation in an embedded system    | 19   | throughput           | the actual data passing successfully through a system network per timeframe                   |
| 10   | malicious        | programmed with intent to exploit, damage, or compromise digital systems                      | 20   | tokenization         | replacing sensitive data fields with non-sensitive algorithmic equivalents                    |

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| 1     | anonymization     | stripping personal information to render them completely untraceable                                         | 11    | homomorphic          | encryption allowing mathematical computations                                                         |
| 2     | bi-directional    | capable of transmitting digital signals in two opposing directions simultaneously                            | 12    | hyper-convergence    | an it framework integrating computing, storage, and networking within a single software-driven system |
| 3     | cryptanalysis     | the study of cryptographic systems to decipher encrypted information                                         | 13    | immutable            | a digital record state preventing data from being modified or deleted once finalized                  |
| 4     | cyber-physical    | systems where physical mechanisms are controlled by complex computer algorithms                              | 14    | interoperability     | the technical capacity of disparate computer systems to exchange and utilize data                     |
| 5     | data-provenance   | a record of the historical origin, ownership path, and transformations of data                               | 15    | microservices        | structuring an application as a collection of small, independent services                             |
| 6     | deterministic     | an algorithmic property where a specific input always produces the exact same output                         | 16    | obfuscation          | making source code complex and unreadable to prevent reverse-engineering                              |
| 7     | disintermediation | the elimination of middlemen or central servers in transactions using peer-to-peer technologies              | 17    | polymorphism         | programming handling different data types uniformly                                                   |
| 8     | edge-computing    | a distributed paradigm processing client data at the network periphery to reduce latency                     | 18    | quantum-cryptography | security methods using physics laws to encrypt data and make interception detectable                  |
| 9     | ephemeral-key     | a temporary cryptographic key generated dynamically for a single session and then discarded                  | 19    | steganography        | the practice of concealing a secret file, message, or code within an ordinary file                    |
| 10    | fault-tolerance   | the design capability enabling a system to continue operating uninterrupted during partial component failure | 20    | zero-knowledge       | a method to mathematically prove a statement is true                                                  |

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