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| 1a | |  |  |  | | --- | --- | --- | | **Utility program** | **Security** | **Optimisation** | | Anti-virus | ✓ |  | | Backup |  | ✓ | | Compression |  | ✓ | | Defragmentation |  | ✓ | | Encryption | ✓ |  | | Firewall | ✓ |  | |
| 1b | Software that encrypts (and decrypts) files on a hard disk/data packets over a network. |
| 1c | One mark per bullet:   * The original message is scrambled/using a large digital number/key. * The receiver will use the key to unscramble and then receive the original message. |
| 1d | * Takes longer for messages to be sent/received (1) since it needs to be scrambled and then unscrambled. (1) * A digital certificate is required (1) as it contains part of the key/special code. (1) |