

English – words

1. Composite – a material which is composed of two or more substances having different physical characteristics.
2. Matrix – a chemical compound that binds the reinforcement.
3. Reinforcement – a phase dispersed in a matrix, that provide strength to its composite.
4. Stress – = relaxation
5. Toughness - = sensitivity
6. Hardness – a measure of the resistance to localized plastic deformation
7. Young's Modulus – a mechanical property that measures the stiffness of a solid material.
8. Polymer – a large organic molecule.
9. Thermosetting polymer – a polymer that is irreversibly hardened by temperature-induced cross-linking of polymer chains.
10. Thermosoftening polymer – a pomyler that becomes flexible or moldable.
11. Fibre – a natural or synthetic substance that is longer than wide.
12. Anisotropic – a material whose properties vary systematically.
13. Isotropic – a material whose properties are uniform in all orientations
14. Concrete – a composite material composed of fine and coarse aggregate bonded together with a fluid cement.

1. Electronic circuit – a composition of electronic components.
2. PCB – Printed Circuit Board – connect electronic components using conductive trucks.
3. API – Application Programming Interface – a set of communication protocols and tools for building software.
4. OS – Operational system – a software managing computer systems.
5. Task – a computer program instruction loaded to RAM and executed by processor
6. Layout – something that is laid out
7. IoT – Internet of thing – a concept of communication of all type of devices from microprocessor to end-point devices like browser.
8. Microprocessor – uP – an electronic component that processes data
9. Microcontroller – uC – a microprocessor with additional peripherals like memory
10. Open-source – having a code source freely available.
11. FPGA – structure of programmable electronic blocks
12. A/D Conversion(ADC) – a conversion of analog to digital signal
13. D/A Conversion(DAC) – a conversion of digital to analog signal
14. Memory – data storage device
15. Integrated Development Environment(IDE) – a set of programs used to create software
16. Electromagnetic compability (EC) – an ability to work properly in electromagnetic environment.

17. Embedded system – computer system with mechanical or electrical systems
18. Bare-metal – working without OS

1. Transport Layer Security(TLS) – cryptographic protocol designed to provide security over a computer network
2. Secure Socket Layer(SSL) – predecessor of TLS
3. Cryptography – study of techniques for secure information.
4. Encryption – process of transforming data into ciphertext.
5. Decryption – process of transforming ciphertext to plaintext.
6. Public key – key that is being used for data encryption in specific algorithms.
7. Private key – key that is being used for data decryption in specific algorithms.
8. Symmetric encryption – type of encryption that uses the same key for encryption and decryption.
9. Asymmetric encryption - type of encryption that need public key for encryption and private key to decryption.
10. Authorization – process of verifying identity of a subject
11. Prime number – a number that is divisible only by 1 and by itself.
12. TLS/SSL certificate – certificate used to authorize the server TLS/SSL protocol
13. Browser – application for accessing internet pages
14. HTTP(Hypertext Transfer Protocol) – application layer protocol
15. Cipher suite – algorithms used to secure internet connection

1. Coherence – two waves that the same waveform, frequency and phase.
2. Dye – colored substance that chemically bounds to the substance to which it is being applied.
3. Gain medium – Determining factors of the laser.
4. Optical resonator – two parallel mirrors placed around the gain medium
5. Photon – particle without mass, only with charge
6. Pump source – part that provides energy to the laser system.
7. Spectrum – a condition that that can across a continuum.
8. Spontaneous emission - a process in which an atom transition from an excited energy state to a lower energy state
9. Stimulated emission – a process by which an incoming photon can interact with and excited atomic electron.
10. Wave interference – a process of two waves superpose to form a resultant wave.

1. Automation – the technology performed with minimal human assistance
2. Sensor – device, module or subsystem which detect events or changes in its environment.
3. PLC – digital computer which has been adapted to control of manufacturing processes.
4. Control system – manages the behavior of other devices or systems
5. Photodetector – a sensor of light.
6. Inductive sensor – device build to detect or measure objects.
7. Coil – represents output in PLC programming
8. Switch – represents input of PLC programming
9. SCADA – networked data communications and GUI for process management.
10. Servomotor – performs linear movement.
11. Inputs – a source of information about the process for the algorithm in PLC programming.
12. Outputs –connected to actuators
13. Actuators – final elements of automation system
14. Plant – set of devices in object.

1. Thermographic cameras – device that forms a heat zone image
2. Authentication – the act of confirming the truth of data claimed be true.
3. Implementation – realization of technical specification or algorithm as a program.
4. Histogram – type of graph that show the number of rate within different ranges.
5. Grayscale image – image in which the only colors are shades of grey
6. Gradient – a measure of how steep a slope is
7. Data set – a collection of data
8. Activation function – function that defines the output by given input.
9. Convolution – mathematical operation on two functions to produce a third one.

1. Rolling resistance – a force resisting the motion when a body rolls on a surface
2. Ply – a layer of a folded material
3. Synthetic fibers – fibers make by humans with chemical synthesis.
4. Tread – part of tire that makes contact with the road
5. Sidewall – providing lateral stability
6. Bead bundle – secure the tire to the wheel.
7. Bead chafer – area of tire where thread and sidewall meet.
8. Cord – flexible string
9. Innerliner – airtight layer
10. Grooves – space between two tread ribs
11. Tire aspect ratio – ratio of the height of the tire to it's width
12. Tire load index – maximum load of tire

13. Deflection – change of tire radius after applied load to the tire
14. Retention – the ability to keep something

1. Automotive SPICE – set of technical standards documents for the computer software development.
2. Process – activities that interact to produce a result.
3. Technical standards – norms regarding technical systems.
4. ECU – = electronic control unit.
5. OEM = original equipment manufacturer
6. Software Unit – the smallest elements of software managing one functionality
7. Software detailed design – Documents describes how software units works.
8. Qualification tests – tests checking fulfilment of requirement
9. Software Architecture – plan of whole software system.
10. Unit tests – basic test checking one functionality.
11. V-model – development process that consider a waterfall model.
12. MOLC - = Millions line of software code.

1. Heat gain/loss – the amount of heat that building can take.
2. Thermal performance – the features of material connected with heat
3. Energy balance- the level of energy
4. Photovoltaic cells – a cell that convert solar energy into electrical energy
5. Thin-film – a narrow layer
6. Hinge – a joint that hold elements together
7. Lamella – a thin membrane
8. Glass fibre reinforced polymer – chemical compound that have a thin fibre of glass inside
9. Actuator – a device that change the energy of compressed gas into the mechanical energy
10. Raw material – a material that can be manufactured
11. Sandwich wall – wall that consist of different layers
12. Tensile strength – the strength that appears in case of acting external tensional force
13. Bending stiffness – a tolerance for flexing

1. Industrial Robot – programmable manipulator designed to move materials.
2. Social robot – robot designed to interact with human
3. Mobile robot – robot designed to move their body from one point to another
4. Tool Center Point – TCP
5. Actuator – a motor that translates control signals into movement
6. Encoder – type of feedback sensor.

7. Degree of freedom – number of controlled actuators in one arm.
8. Closed control loop – control which constantly get feedback information from sensor
9. End-effector – device at the end of a robotic arm
10. Precision – inaccuracy
11. Coordinate system – defines a position from which robot position can be measured.
12. Machine vision – the technology provide image-based analysis of the environment

1. Mechanics – the study of the effect of physical forces on objects
2. Versatility – quality of being versatile.
3. Ratio – the relationship between two groups of units.
4. Coefficient - a value that appears in front of another value
5. Fuselage - the main body of hydrofoil or plane
6. Discretization – process of transferring objects to discrete counterparts
7. Computational fluid dynamics – fluid mechanics that uses to analyze problems that involve fluid flows

1. Pulse Oximetry – way to measure oxygen saturation of blood.
2. Pulse Oximeter – device which performing pulse oximetry.
3. Oxygen saturation – oxygen-saturated hemoglobin relative to total hemoglobin in blood.
4. Blood vessels – vessels which transporting blood through body
5. Artery – blood vessel, transporting blood from heart to cells
6. Arterial blood – blood in arteries
7. Veins – blood vessels transporting blood from cells to heart
8. Venous blood – blood in veins
9. Capillaries – the smallest blood vessels in body
10. Systole – heart beat phase when heart muscles contract
11. Diastole – heart beat phase when heart muscles relax
12. Oxyhemoglobin – hemoglobin which is oxygenated
13. Reduced hemoglobin – hemoglobin without oxygen
14. Extinction – wakening of the light beam in the medium

1. Refractive power – a measure of the ability of an optical system to magnify an object.
2. Refractive error – the amount of refractive power needed to focus parallel light
3. Focal point – point where parallel rays converge
4. Retina – part of eye containing photoreceptors
5. Cornea – layer forming front of an eye
6. Crystalline lens – a transparent elastic structure of an eye.
7. Corrective lens – a lens worn in front of an ametropic eye
8. Astigmatism – faulty vision

9. Visual acuity - sharpness of vision
10. Bifocals – a pair of spectacles having two correcting sections: near and distance

1. Database – collection of data
2. Node – Redistribution point
3. Cryptocurrency – digital asset designed to work as a medium of exchange.
4. Transaction – an activity where money is transfer
5. Miners – people who share their computer resources for extract cryptocurrency
6. Validation – ensuring that data which is use fulfil specific criteria.
7. Blockchain – the technology used to create cryptocurrencies
8. White paper – document that explains how the cryptocurrency works.
9. Digital asset – anything that exists in a binary format.
10. Token – object which give permission for some operations

1. Consciousness – the state of being aware of.
2. To enhance – improve the quality
3. Machine learning – study of algorithms and statistical models for computer
4. Neural network – a computer system modelled on the human brain
5. To emulate – match or surpass something