

Englist.me



Vocabulary Builder Reference from...

Kanawat Senanan: How computer memory works |

TED Talk

https://www.ted.com/talks/kanawat_senanan_how_computer_memory_works

All Words

IMPORTANT

This material is a commentary and does not contain any copyrighted material of the reference source. We strongly recommend accessing/buying the reference source at the same time.

Session 1: Word List

retain

v. to keep or continue to possess or maintain something

synonym: possess, hold, keep on

(1) **retain** information, (2) **retain** a lawyer

Computers help people **retain** specific memories.

extension

n. a thing that is added to something to make it longer, larger, or wider; an educational opportunity provided by colleges and universities to people who are not enrolled as regular students; an additional telephone set that is connected to the same telephone line

synonym: addition, augment, supplement

(1) time **extension**, (2) telephone **extension**

They are building an **extension** to the house to add more bedrooms.

instruction

n. detailed direction, order, etc., on how to do or use something

synonym: education, direction, guidance

(1) individual **instruction**, (2) follow his **instructions**

They needed further **instruction** to perform their duties efficiently.

binary

n. a system of numbers that uses only two digits, 0 and 1
synonym: twofold, double

(1) a **binary** number, (2) trading in **binary** options

A **binary** star is a system in which two stars revolve around each other.

digit

n. one of the elements that collectively form a system of numeration; a finger, thumb, or toe

synonym: number, integer, numeral

(1) **digit** identifier, (2) the **digit** in the hundreds place

We must enter a six- **digit** number to unlock the safe.

consist

v. to be composed or made up of

synonym: lie in, comprise, exist

(1) **consist** mainly of cells, (2) **consist** only in knowing facts

This examination **consists** of five problems to solve.

process

n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

synonym: procedure, method, system

(1) **process** improvement, (2) decision-making **process**

The **process** for applying for a visa can be lengthy and complicated.

brain

n. the organ inside the head that is responsible for one's movement, thought, memory, and feeling

synonym: intellect, mind, encephalon

(1) basic **brain** function, (2) permanent **brain** damage

X-rays revealed a small tumor in his **brain**.

exponential

adj. becoming more and more rapid; of or involving mathematical exponents

(1) **exponential** growth, (2) **exponential** function

Since the 1990s, the Internet has continued to experience

exponential growth.

constant

adj. happening repeatedly or all the time

synonym : ceaseless, stable, unchanging

(1) a **constant** wind, (2) a **constant** temperature

Constant dropping wears away the stone.

struggle

v. to make a great effort to do something when it is difficult, or there are a lot of problems; to use force or violence to break away from restraint or constriction

synonym : toil, strive, compete

(1) **struggle** against discrimination, (2) **struggle** to get the job

He could not **struggle** against temptation.

immediate

adj. happening or done without delay or occurring shortly after something else

synonym : prompt, quick, instantaneous

(1) take **immediate** effect, (2) the **immediate** past

Both forts were subject to **immediate** attacks.

permanent

adj. lasting for a long time without essential change

synonym : lasting, ceaseless, endless

(1) literature of **permanent** value, (2) **permanent** life insurance

She is searching for a **permanent** residence.

storage

n. the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information

synonym : storehouse, depository, warehousing

(1) a **storage** battery, (2) **storage** at low temperature

We store customer data in cloud **storage**.

allocate

v. to give or distribute something, such as resources or duties, to someone or something for a particular purpose

synonym : apportion, assign, distribute

(1) **allocate** resource, (2) **allocate** budgets

The company **allocated** a portion of its profits to developing new products.

locate

v. to specify or determine the exact position of someone or something

synonym: discover, find, place

(1) **locate** a missing pet, (2) **locate** a tumor

The robot can accurately **locate** construction material.

retrieve

v. to find or get something back

synonym: recover, fetch, regain

(1) **retrieve** the lost wallet, (2) send and **retrieve** e-mail

She **retrieved** the book from the shelf.

modify

v. to change something slightly, such as a plan, option, law, etc., especially to make it more suitable for a particular purpose

synonym: adjust, alter, revise

(1) genetically **modify** food, (2) **modify** my behavior

We use adverbs to **modify** verbs and adjectives.

latency

n. the fact or state of being present but not being evident, active, or well developed; (engineering) a measure of the time delay experienced by a system

synonym: abeyance, intermission, suspension

(1) low **latency**, (2) **latency** period

Next-generation mobile communication standards will achieve sub-millisecond **latency**.

continuously

adv. without being interrupted or paused; repeatedly

synonym: constantly, frequently, always

(1) use one thing **continuously**, (2) **continuously** removed

The country's domestic coal consumption has been **continuously** declining for decades.

random

adj. made, done, or happening without method, conscious decision, or any regular pattern

synonym : incidental, arbitrary, unanticipated

(1) a **random** choice, (2) bombs fell at **random**

To find drunk drivers, police conduct **random** tests.

ram

v. to strike or push forcefully, often to cause damage; to batter or break open a door or barrier using brute force

synonym : crash, collide, slam

(1) **ram** the door open, (2) **ram** into the ice

The car **rammed** into the wall, causing significant damage.

dynamic

adj. having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)

synonym : energetic, active, vital

(1) a **dynamic** market, (2) **dynamic** person

The sprinter has a **dynamic** way of running.

dram

n. a small unit of weight used for measuring liquids, particularly whiskey and other alcoholic beverages

synonym : drachm, whisky, scotch

(1) have not one **dram** of learning, (2) scotch **dram**

He poured himself a **dram** of whiskey to relax after a long day at work.

transistor

n. a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics

synonym : semiconductor, microchip, circuit

(1) **transistor** radio, (2) **transistor** circuit

The invention of the **transistor** revolutionized the field of electronics.

capacitor

n. a device that is placed inside electronic equipment such as televisions and radios and that stores electrical

charge

synonym : condenser

(1) **capacitor** load, (2) AC **capacitor**

Hundreds of ceramic **capacitors** are used in a single smartphone.

electrical

adj. relating to electricity

(1) an **electrical** storm, (2) degree in **electrical** engineering

Actuators convert **electrical** pulses into motion.

leak

v. to allow liquid or gas to get in or out from a hole or crack in a pipe or container

synonym : outflow, divulge, disclose

(1) **leak** data, (2) **leak** a classified memo

He **leaked** serious accounting irregularities that only people in the company's executive could know.

periodic

adj. happening at regular intervals over a while

synonym : regular, frequent, recurring

(1) the **periodic** blooming of the cherry-blossom,

(2) **periodic** payments

Astronomers are examining whether the **periodic** signals emanating from this star are artificial.

recharge

v. to restore the energy or power of something by supplying it with more energy or power; to refresh or renew oneself by rest or sleep

synonym : renew, refresh, replenish

(1) **recharge** brain and body, (2) **recharge** energy

He needed to **recharge** his phone before the meeting.

nanosecond

n. one thousand millionth or billionth (= 0.000,000,001) of a second

(1) **nanosecond** response, (2) **nanosecond** laser pulse

The processor performs calculations on the **nanosecond** timescale.

modern

adj. of or belonging to the present time or recent times

synonym: contemporary, stylish, current

(1) **modern** poetry, (2) pre- **modern** agricultural society

Their headquarters are in a **modern** skyscraper.

internal

adj. of or relating to the inside of something

synonym: interior, inner, domestic

(1) **internal** organs, (2) the **internal** economy

The prime minister canceled visits to other countries to resolve **internal** disputes.

cache

n. a collection of items hidden away or stored for future use; (computer science) memory that is set aside as buffer storage that is frequently updated

synonym: hoard, stash, stockpile

(1) **cache** memory, (2) hidden **cache**

I found a **cache** of old letters in the attic.

static

adj. not moving or not capable of moving, not changing or not capable of changing

synonym: immobile, unchanging, fixed

(1) **static** electricity, (2) **static** website

The **static** image on the screen took a lot of work to make out.

interlocking

adj. fitting or locking together in a way that makes a continuous and secure whole

synonym: connected, linked, joined

(1) **interlocking** braid, (2) **interlocking** mechanism

The **interlocking** puzzle pieces were difficult to separate.

device

n. a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic

synonym: gadget, instrument, tool

(1) electronic **device**, (2) tracking **device**

I always carry a backup **device** in case my phone runs out of battery.

transfer

v. to move, pass, or change from one person, place, or situation to another

synonym: move, relocate, shift

(1) **transfer** a file, (2) **transfer** power

She **transferred** the money from her savings account to her checking account.

magnetic

adj. having the properties of attracting or repelling certain materials containing iron or steel

synonym: attractive, drawing, hypnotic

(1) **magnetic** field, (2) a **magnetic** tape

The **magnetic** force of the earth keeps our planet spinning.

spinning

n. the act of rotating rapidly around an axis; in the context of textiles, the process of twisting fibers together to form thread or yarn

synonym: whirling, rotating, spinning wheel

(1) **spinning** machine, (2) **spinning** wheel

She took a **spinning** class at the gym to improve her cardiovascular fitness.

disk

n. a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music

synonym: record, platter, plate

(1) **disk** drive, (2) **disk** space

The computer's hard **disk** was full, so she had to delete some files.

rotate

v. to turn around a central point or axis; to move in a circular path around something

synonym: turn, revolve, spin

(1) **rotate** crops, (2) **rotate** about the origin

The Earth **rotates** on its axis once every 24 hours.

optical

adj. of or relating to or light or the ability to see; (noun) the science of light and vision, and to instruments and techniques used in the study and application of light

synonym : visual, ocular

(1) new **optical** glasses, (2) **optical** fiber

The **optical** illusion made it appear like the building was floating in midair.

encode

v. to convert information into a code or format suitable for storage or transmission

synonym : transcribe, convert

(1) **encode** data, (2) **encode** information

The software can **encode** and decode encrypted messages.

spot

n. a particular location or place; a small round or roundish area, differing in color or feels from the surface around it

synonym : dot, mark, place

(1) beauty **spot**, (2) a **spot** on his honor

This remote **spot** is rarely visited.

dye

v. to color a textile or hair by immersing it in a colored liquid or substance

synonym : color, tint, stain

(1) **dye** a T-shirt red, (2) **dye** patterns

She **dyed** her hair purple for a change.

laser

n. a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification

synonym : beam, bar, ray

(1) **laser** printer, (2) pulse **laser**

The company holds patents on core components of **laser** jet printers.

fin

n. a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance

synonym : flipper, appendage, stabilizer

(1) back **fin**, (2) a **fin** of a plane

The shark's powerful **fins** allowed it to swim at high speeds.

solid

adj. hard or firm; characterized by good substantial quality

synonym: stable, reliable, hard

(1) **solid** ally, (2) **solid** employment measures

The **solid-state** of water is called ice.

flash

n. a sudden intense burst of radiant energy; a momentary brightness

synonym: sparkle, gleam, glimmer

(1) a **flash** of lightning, (2) brilliant **flash**

These heavy rains caused **flash** floods on several islands.

stick

v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material

synonym: pierce, adhere, stay

(1) **stick** a key in a lock, (2) fire **stick**

You **stick** a bill in the change machine, and the coins pop out.

trap

n. a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping

synonym: catch, snare, pinfall

(1) set a **trap**, (2) **trap** an animal

The enemy fell right into the **trap**.

structure

n. the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts

synonym: construction, architecture, establishment

(1) the **structure** of a machine, (2) **structure** and function of the brain

The organizational **structure** of start-ups is often flat and

straightforward.

reliable

adj. worthy of being relied on; trustworthy

synonym: dependable, trustworthy, dedicated

(1) **reliable** access, (2) guarantee **reliable** delivery

Trains are **reliable**, inexpensive, and ideal for long-distance travel.

stable

adj. firm and steady; not easily moved, disturbed, or changed

synonym: sturdy, unmoving, durable

(1) in **stable** condition, (2) have a **stable** job

Relations between the two countries have been relatively **stable** due to the summit meeting.

degrade

v. to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others

synonym: demean, disgrace, impair

(1) **degrade** his public image, (2) **degrade** environmental quality

You should not **degrade** yourself by allowing them to use you.

environment

n. the natural world such as air, water, and land in which humans, animals, and plants live

synonym: atmosphere, surroundings, climate

(1) **environment** affairs, (2) chaotic **environment**

Every human is responsible for taking care of the Earth's **environment**.

eventually

adv. finally, particularly after a long time or a lot of struggle, complications, and so on

synonym: finally, someday, ultimately

(1) **eventually** become obsolete, (2) **eventually** succeed

The corporation **eventually** dominated the entire tobacco business.

demagnetize

v. to remove or reduce the magnetic properties of an object, making it lose its magnetic charge or ability to attract magnetically

synonym : degauss, demag

(1) **demagnetize** a credit card, (2) **demagnetize** a keycard

The strong magnetic fields in the MRI scanner tend to **demagnetize** certain types of metals.

addition

n. the act or process of adding something to something else; the process of adding numbers

synonym : accumulation, expansion, addendum

(1) chemical **addition**, (2) **addition** of vectors

In **addition**, private corporations provide healthcare services.

repeatedly

adv. again and again; many times

synonym : frequently, over and over, constantly

(1) use cell phone **repeatedly**, (2) **repeatedly** nod

He claims that his legitimate requests were **repeatedly** ignored.

corrode

v. to destroy or eat away slowly by chemical action; to gradually wear away, weaken, or disintegrate over time

synonym : erode, rust, eat away

(1) **corrode** steel drums, (2) **corrode** pipes

The saltwater can **corrode** metal over time if not properly maintained.

render

v. to bring someone or something into a particular state; to provide something such as service, help, etc.

synonym : deliver, give, provide

(1) **render** an assessment, (2) **render** the contract void

The jury must **render** a decision on this complex case.

useless

adj. not serving any useful purpose; having no practical result

synonym : ineffectual, unhelpful, worthless

(1) **useless** information, (2) **useless** in the kitchen

The old, rusty tools were now **useless** and had to be thrown away.

exploit

v. to make full use of and gain an advantage from resources, opportunities, etc.

synonym : use, abuse, control

(1) **exploit** a security hole, (2) **exploit** a valuable opportunity

We **exploit** our mining resources to strengthen our national power.

quantum

n. the smallest amount or unit of something, especially (electromagnetic) energy

(1) probabilistic **quantum** theory, (2) laws of **quantum** mechanics

Big techs are now eager to develop **quantum** computers.

durable

adj. capable of lasting and being used for a long time without being damaged or destroyed

synonym : enduring, stable, long-lasting

(1) **durable** peace, (2) **durable** materials

Our company's products are made of highly **durable** materials.

immortality

n. the state or quality of being able to live or last forever

synonym : endless life, timelessness, agelessness

(1) the **immortality** of the soul, (2) achieve **immortality**

Many people believe in the concept of **immortality** and an afterlife.

alike

adv. similar or identical in nature or appearance

synonym : similar, identical, comparable

(1) young and old **alike**, (2) **alike** in nature

The two paintings looked **alike** as if the same artist had done them.

Session 2: Spelling

1. tr____er power
v. to move, pass, or change from one person, place, or situation to another
2. eve_____ly succeed
adv. finally, particularly after a long time or a lot of struggle, complications, and so on
3. de_____e environmental quality
v. to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others
4. en____e information
v. to convert information into a code or format suitable for storage or transmission
5. re____n a lawyer
v. to keep or continue to possess or maintain something
6. d__k drive
n. a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
7. beauty s__t
n. a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
8. a st_____e battery
n. the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information
9. ro____e crops
v. to turn around a central point or axis; to move in a circular path around something

ANSWERS: 1. transfer, 2. eventually, 3. degrade, 4. encode, 5. retain, 6. disk, 7. spot, 8. storage, 9. rotate

10. d_e a T-shirt red *v.* to color a textile or hair by immersing it in a colored liquid or substance
11. so__d ally *adj.* hard or firm; characterized by good substantial quality
12. dem_____ze a keycard *v.* to remove or reduce the magnetic properties of an object, making it lose its magnetic charge or ability to attract magnetically
13. tracking de___e *n.* a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic
14. re_____le access *adj.* worthy of being relied on; trustworthy
15. co_____t mainly of cells *v.* to be composed or made up of
16. fire st__k *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
17. scotch d__m *n.* a small unit of weight used for measuring liquids, particularly whiskey and other alcoholic beverages
18. telephone ex_____on *n.* a thing that is added to something to make it longer, larger, or wider; an educational opportunity provided by colleges and universities to people who are not enrolled as regular students; an additional telephone set that is connected to the same telephone line

ANSWERS: 10. dye, 11. solid, 12. demagnetize, 13. device, 14. reliable, 15. consist, 16. stick, 17. dram, 18. extension

19. a fl__h of lightning *n.* a sudden intense burst of radiant energy; a momentary brightness
20. the in____al economy *adj.* of or relating to the inside of something
21. exp_____al function *adj.* becoming more and more rapid; of or involving mathematical exponents
22. st_____le to get the job *v.* to make a great effort to do something when it is difficult, or there are a lot of problems; to use force or violence to break away from restraint or constriction
23. ca_____or load *n.* a device that is placed inside electronic equipment such as televisions and radios and that stores electrical charge
24. r_m the door open *v.* to strike or push forcefully, often to cause damage; to batter or break open a door or barrier using brute force
25. co_____e pipes *v.* to destroy or eat away slowly by chemical action; to gradually wear away, weaken, or disintegrate over time
26. du_____e materials *adj.* capable of lasting and being used for a long time without being damaged or destroyed
27. dy_____c person *adj.* having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)
28. pr_____s improvement *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products

ANSWERS: 19. flash, 20. internal, 21. exponential, 22. struggle, 23. capacitor, 24. ram, 25. corrode, 26. durable, 27. dynamic, 28. process

29. ro___e about the origin *v.* to turn around a central point or axis; to move in a circular path around something
30. l__k data *v.* to allow liquid or gas to get in or out from a hole or crack in a pipe or container
31. lo___e a missing pet *v.* to specify or determine the exact position of someone or something
32. di__t identifier *n.* one of the elements that collectively form a system of numeration; a finger, thumb, or toe
33. la__r printer *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
34. literature of pe_____nt value *adj.* lasting for a long time without essential change
35. time ex_____on *n.* a thing that is added to something to make it longer, larger, or wider; an educational opportunity provided by colleges and universities to people who are not enrolled as regular students; an additional telephone set that is connected to the same telephone line
36. us_____s in the kitchen *adj.* not serving any useful purpose; having no practical result
37. achieve imm_____ty *n.* the state or quality of being able to live or last forever
38. r_m into the ice *v.* to strike or push forcefully, often to cause damage; to batter or break open a door or barrier using brute force

ANSWERS: 29. rotate, 30. leak, 31. locate, 32. digit, 33. laser, 34. permanent, 35. extension, 36. useless, 37. immortality, 38. ram

39. pe____ic payments *adj.* happening at regular intervals over a while
40. int_____ing braid *adj.* fitting or locking together in a way that makes a continuous and secure whole
41. AC ca_____or *n.* a device that is placed inside electronic equipment such as televisions and radios and that stores electrical charge
42. sp_____ng wheel *n.* the act of rotating rapidly around an axis; in the context of textiles, the process of twisting fibers together to form thread or yarn
43. exp_____al growth *adj.* becoming more and more rapid; of or involving mathematical exponents
44. ex_____t a security hole *v.* to make full use of and gain an advantage from resources, opportunities, etc.
45. pulse la__r *n.* a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
46. l__k a classified memo *v.* to allow liquid or gas to get in or out from a hole or crack in a pipe or container
47. so__d employment measures *adj.* hard or firm; characterized by good substantial quality
48. use one thing con_____sly *adv.* without being interrupted or paused; repeatedly
49. de_____e his public image *v.* to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others

ANSWERS: 39. periodic, 40. interlocking, 41. capacitor, 42. spinning, 43. exponential, 44. exploit, 45. laser, 46. leak, 47. solid, 48. continuously, 49. degrade

50. the imm_____ty of the soul *n.* the state or quality of being able to live or last forever
51. al__e in nature *adv.* similar or identical in nature or appearance
52. re___r an assessment *v.* to bring someone or something into a particular state; to provide something such as service, help, etc.
53. permanent br__n damage *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling
54. degree in ele_____al engineering *adj.* relating to electricity
55. du_____e peace *adj.* capable of lasting and being used for a long time without being damaged or destroyed
56. send and re_____ve e-mail *v.* to find or get something back
57. st___c website *adj.* not moving or not capable of moving, not changing or not capable of changing
58. co_____t only in knowing facts *v.* to be composed or made up of
59. us_____s information *adj.* not serving any useful purpose; having no practical result
60. tr_____er a file *v.* to move, pass, or change from one person, place, or situation to another
61. follow his ins_____ons *n.* detailed direction, order, etc., on how to do or use something
62. mo___n poetry *adj.* of or belonging to the present time or recent times
63. ma_____ic field *adj.* having the properties of attracting or repelling certain materials containing iron or steel

ANSWERS: 50. immortality, 51. alike, 52. render, 53. brain, 54. electrical, 55. durable, 56. retrieve, 57. static, 58. consist, 59. useless, 60. transfer, 61. instruction, 62. modern, 63. magnetic

64. int_____ing mechanism *adj.* fitting or locking together in a way that makes a continuous and secure whole
65. d_e patterns *v.* to color a textile or hair by immersing it in a colored liquid or substance
66. decision-making pr_____s *n.* a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
67. electronic de___e *n.* a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic
68. a co_____nt wind *adj.* happening repeatedly or all the time
69. lo___e a tumor *v.* to specify or determine the exact position of someone or something
70. t__p an animal *n.* a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
71. individual ins_____on *n.* detailed direction, order, etc., on how to do or use something
72. young and old al__e *adv.* similar or identical in nature or appearance
73. basic br__n function *n.* the organ inside the head that is responsible for one's movement, thought, memory, and feeling

ANSWERS: 64. interlocking, 65. dye, 66. process, 67. device, 68. constant, 69. locate, 70. trap, 71. instruction, 72. alike, 73. brain

74. trading in bi___y options *n.* a system of numbers that uses only two digits, 0 and 1
75. pre-mo___n agricultural society *adj.* of or belonging to the present time or recent times
76. op_____l fiber *adj.* of or relating to or light or the ability to see; (noun) the science of light and vision, and to instruments and techniques used in the study and application of light
77. back f_n *n.* a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
78. re_____ge energy *v.* to restore the energy or power of something by supplying it with more energy or power; to refresh or renew oneself by rest or sleep
79. a dy_____c market *adj.* having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)
80. use cell phone rep_____ly *adv.* again and again; many times
81. al_____te resource *v.* to give or distribute something, such as resources or duties, to someone or something for a particular purpose
82. new op_____l glasses *adj.* of or relating to or light or the ability to see; (noun) the science of light and vision, and to instruments and techniques used in the study and application of light

ANSWERS: 74. binary, 75. modern, 76. optical, 77. fin, 78. recharge, 79. dynamic, 80. repeatedly, 81. allocate, 82. optical

83. en___e data *v.* to convert information into a code or format suitable for storage or transmission
84. a ra___m choice *adj.* made, done, or happening without method, conscious decision, or any regular pattern
85. ex_____t a valuable opportunity *v.* to make full use of and gain an advantage from resources, opportunities, etc.
86. ad_____on of vectors *n.* the act or process of adding something to something else; the process of adding numbers
87. dem_____ze a credit card *v.* to remove or reduce the magnetic properties of an object, making it lose its magnetic charge or ability to attract magnetically
88. re_____ve the lost wallet *v.* to find or get something back
89. st_____e at low temperature *n.* the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information
90. take im_____te effect *adj.* happening or done without delay or occurring shortly after something else
91. la_____y period *n.* the fact or state of being present but not being evident, active, or well developed; (engineering) a measure of the time delay experienced by a system
92. re_____ge brain and body *v.* to restore the energy or power of something by supplying it with more energy or power; to refresh or renew oneself by rest or sleep

ANSWERS: 83. encode, 84. random, 85. exploit, 86. addition, 87. demagnetize, 88. retrieve, 89. storage, 90. immediate, 91. latency, 92. recharge

93. in____al organs *adj.* of or relating to the inside of something
94. brilliant fl__h *n.* a sudden intense burst of radiant energy; a momentary brightness
95. st_____re and function of the brain *n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
96. re___n information *v.* to keep or continue to possess or maintain something
97. co_____e steel drums *v.* to destroy or eat away slowly by chemical action; to gradually wear away, weaken, or disintegrate over time
98. st___c electricity *adj.* not moving or not capable of moving, not changing or not capable of changing
99. set a t__p *n.* a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping
100. d__k space *n.* a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music
101. ca__e memory *n.* a collection of items hidden away or stored for future use; (computer science) memory that is set aside as buffer storage that is frequently updated
102. have not one d__m of learning *n.* a small unit of weight used for measuring liquids, particularly whiskey and other alcoholic beverages
103. nan_____nd laser pulse *n.* one thousand millionth or billionth (= 0.000,000,001) of a second

ANSWERS: 93. internal, 94. flash, 95. structure, 96. retain, 97. corrode, 98. static, 99. trap, 100. disk, 101. cache, 102. dram, 103. nanosecond

104. genetically mo___y food *v.* to change something slightly, such as a plan, option, law, etc., especially to make it more suitable for a particular purpose
105. chaotic env_____nt *n.* the natural world such as air, water, and land in which humans, animals, and plants live
106. an ele_____al storm *adj.* relating to electricity
107. eve_____ly become obsolete *adv.* finally, particularly after a long time or a lot of struggle, complications, and so on
108. mo___y my behavior *v.* to change something slightly, such as a plan, option, law, etc., especially to make it more suitable for a particular purpose
109. tra_____or radio *n.* a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
110. env_____nt affairs *n.* the natural world such as air, water, and land in which humans, animals, and plants live
111. nan_____nd response *n.* one thousand millionth or billionth (= 0.000,000,001) of a second
112. a bi___y number *n.* a system of numbers that uses only two digits, 0 and 1
113. sp_____ng machine *n.* the act of rotating rapidly around an axis; in the context of textiles, the process of twisting fibers together to form thread or yarn

ANSWERS: 104. modify, 105. environment, 106. electrical, 107. eventually, 108. modify, 109. transistor, 110. environment, 111. nanosecond, 112. binary, 113. spinning

114. low la____y *n.* the fact or state of being present but not being evident, active, or well developed; (engineering) a measure of the time delay experienced by a system
115. chemical ad____on *n.* the act or process of adding something to something else; the process of adding numbers
116. in st___e condition *adj.* firm and steady; not easily moved, disturbed, or changed
117. the st_____re of a machine *n.* the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
118. pe_____nt life insurance *adj.* lasting for a long time without essential change
119. a s__t on his honor *n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
120. a co____nt temperature *adj.* happening repeatedly or all the time
121. rep_____ly nod *adv.* again and again; many times
122. bombs fell at ra____m *adj.* made, done, or happening without method, conscious decision, or any regular pattern
123. the im_____te past *adj.* happening or done without delay or occurring shortly after something else
124. a ma____ic tape *adj.* having the properties of attracting or repelling certain materials containing iron or steel

ANSWERS: 114. latency, 115. addition, 116. stable, 117. structure, 118. permanent, 119. spot, 120. constant, 121. repeatedly, 122. random, 123. immediate, 124. magnetic

125. laws of qu____m mechanics *n.* the smallest amount or unit of something, especially (electromagnetic) energy
126. guarantee re____le delivery *adj.* worthy of being relied on; trustworthy
127. st__k a key in a lock *v.* to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material
128. have a st____e job *adj.* firm and steady; not easily moved, disturbed, or changed
129. con____sly removed *adv.* without being interrupted or paused; repeatedly
130. re____r the contract void *v.* to bring someone or something into a particular state; to provide something such as service, help, etc.
131. hidden ca__e *n.* a collection of items hidden away or stored for future use; (computer science) memory that is set aside as buffer storage that is frequently updated
132. al____te budgets *v.* to give or distribute something, such as resources or duties, to someone or something for a particular purpose
133. st____le against discrimination *v.* to make a great effort to do something when it is difficult, or there are a lot of problems; to use force or violence to break away from restraint or constriction
134. probabilistic qu____m theory *n.* the smallest amount or unit of something, especially (electromagnetic) energy

ANSWERS: 125. quantum, 126. reliable, 127. stick, 128. stable, 129. continuously, 130. render, 131. cache, 132. allocate, 133. struggle, 134. quantum

135. a f_n of a plane *n.* a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance
136. the pe____ic blooming of the cherry-blossom *adj.* happening at regular intervals over a while
137. tra_____or circuit *n.* a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
138. the di__t in the hundreds place *n.* one of the elements that collectively form a system of numeration; a finger, thumb, or toe

ANSWERS: 135. fin, 136. periodic, 137. transistor, 138. digit

Session 3: Fill in the Blanks

1. You _____ a bill in the change machine, and the coins pop out.
 - v. to put something, usually a sharp object, into something; to restrict yourself to doing or using one certain thing and not change; (noun) a thin piece of wood or other material

2. The Earth _____ on its axis once every 24 hours.
 - v. to turn around a central point or axis; to move in a circular path around something

3. She _____ the money from her savings account to her checking account.
 - v. to move, pass, or change from one person, place, or situation to another

4. These heavy rains caused _____ floods on several islands.
 - n. a sudden intense burst of radiant energy; a momentary brightness

5. They are building an _____ to the house to add more bedrooms.
 - n. a thing that is added to something to make it longer, larger, or wider; an educational opportunity provided by colleges and universities to people who are not enrolled as regular students; an additional telephone set that is connected to the same telephone line

6. The _____ illusion made it appear like the building was floating in midair.
 - adj. of or relating to or light or the ability to see; (noun) the science of light and vision, and to instruments and techniques used in the study and application of light

7. The strong magnetic fields in the MRI scanner tend to _____ certain types of metals.
 - v. to remove or reduce the magnetic properties of an object, making it lose its magnetic charge or ability to attract magnetically

ANSWERS: 1. stick, 2. rotates, 3. transferred, 4. flash, 5. extension, 6. optical, 7. demagnetize

8. The corporation _____ dominated the entire tobacco business.
adv. finally, particularly after a long time or a lot of struggle, complications, and so on
9. I always carry a backup _____ in case my phone runs out of battery.
n. a piece of equipment, tool, or technology that serves a particular purpose or function, often mechanical or electronic
10. We store customer data in cloud _____.
n. the act or process of putting in and keeping something in a particular place for use in the future; an electronic memory device that can store information
11. Next-generation mobile communication standards will achieve sub-millisecond _____.
n. the fact or state of being present but not being evident, active, or well developed; (engineering) a measure of the time delay experienced by a system
12. Astronomers are examining whether the _____ signals emanating from this star are artificial.
adj. happening at regular intervals over a while
13. Actuators convert _____ pulses into motion.
adj. relating to electricity
14. The software can _____ and decode encrypted messages.
v. to convert information into a code or format suitable for storage or transmission
15. _____ dropping wears away the stone.
adj. happening repeatedly or all the time

ANSWERS: 8. eventually, 9. device, 10. storage, 11. latency, 12. periodic, 13. electrical, 14. encode, 15. Constant

16. The sprinter has a _____ way of running.

adj. having a lot of energy, ideas, and enthusiasm, and a strong personality; of or relating to dynamics (= the branch of physics and engineering concerned with the forces that cause motions of bodies)

17. Both forts were subject to _____ attacks.

adj. happening or done without delay or occurring shortly after something else

18. Since the 1990s, the Internet has continued to experience _____ growth.

adj. becoming more and more rapid; of or involving mathematical exponents

19. She _____ the book from the shelf.

v. to find or get something back

20. We _____ our mining resources to strengthen our national power.

v. to make full use of and gain an advantage from resources, opportunities, etc.

21. She _____ her hair purple for a change.

v. to color a textile or hair by immersing it in a colored liquid or substance

22. We must enter a six-_____ number to unlock the safe.

n. one of the elements that collectively form a system of numeration; a finger, thumb, or toe

23. The country's domestic coal consumption has been _____ declining for decades.

adv. without being interrupted or paused; repeatedly

24. Every human is responsible for taking care of the Earth's _____.

n. the natural world such as air, water, and land in which humans, animals, and plants live

ANSWERS: 16. dynamic, 17. immediate, 18. exponential, 19. retrieved, 20. exploit, 21. dyed, 22. digit, 23. continuously, 24. environment

25. To find drunk drivers, police conduct _____ tests.

adj. made, done, or happening without method, conscious decision, or any regular pattern

26. Computers help people _____ specific memories.

v. to keep or continue to possess or maintain something

27. Trains are _____ inexpensive, and ideal for long-distance travel.

adj. worthy of being relied on; trustworthy

28. She is searching for a _____ residence.

adj. lasting for a long time without essential change

29. The _____ force of the earth keeps our planet spinning.

adj. having the properties of attracting or repelling certain materials containing iron or steel

30. The car _____ into the wall, causing significant damage.

v. to strike or push forcefully, often to cause damage; to batter or break open a door or barrier using brute force

31. Their headquarters are in a _____ skyscraper.

adj. of or belonging to the present time or recent times

32. A _____ star is a system in which two stars revolve around each other.

n. a system of numbers that uses only two digits, 0 and 1

33. He claims that his legitimate requests were _____ ignored.

adv. again and again; many times

ANSWERS: 25. random, 26. retain, 27. reliable, 28. permanent, 29. magnetic, 30. rammed, 31. modern, 32. binary, 33. repeatedly

34. The _____ image on the screen took a lot of work to make out.
adj. not moving or not capable of moving, not changing or not capable of changing
35. The prime minister canceled visits to other countries to resolve _____ disputes.
adj. of or relating to the inside of something
36. X-rays revealed a small tumor in his _____.
n. the organ inside the head that is responsible for one's movement, thought, memory, and feeling
37. He needed to _____ his phone before the meeting.
v. to restore the energy or power of something by supplying it with more energy or power; to refresh or renew oneself by rest or sleep
38. The _____ puzzle pieces were difficult to separate.
adj. fitting or locking together in a way that makes a continuous and secure whole
39. Big techs are now eager to develop _____ computers.
n. the smallest amount or unit of something, especially (electromagnetic) energy
40. I found a _____ of old letters in the attic.
n. a collection of items hidden away or stored for future use; (computer science) memory that is set aside as buffer storage that is frequently updated
41. The old, rusty tools were now _____ and had to be thrown away.
adj. not serving any useful purpose; having no practical result
42. Our company's products are made of highly _____ materials.
adj. capable of lasting and being used for a long time without being damaged or destroyed

ANSWERS: 34. static, 35. internal, 36. brain, 37. recharge, 38. interlocking, 39. quantum, 40. cache, 41. useless, 42. durable

43. This examination _____ of five problems to solve.
v. to be composed or made up of
44. The two paintings looked _____ as if the same artist had done them.
adv. similar or identical in nature or appearance
45. Relations between the two countries have been relatively _____ due to the summit meeting.
adj. firm and steady; not easily moved, disturbed, or changed
46. He _____ serious accounting irregularities that only people in the company's executive could know.
v. to allow liquid or gas to get in or out from a hole or crack in a pipe or container
47. They needed further _____ to perform their duties efficiently.
n. detailed direction, order, etc., on how to do or use something
48. She took a _____ class at the gym to improve her cardiovascular fitness.
n. the act of rotating rapidly around an axis; in the context of textiles, the process of twisting fibers together to form thread or yarn
49. The company holds patents on core components of _____ jet printers.
n. a device that emits powerful and narrow light that can be used as a tool to cut metal through a process of optical amplification
50. In _____ private corporations provide healthcare services.
n. the act or process of adding something to something else; the process of adding numbers

ANSWERS: 43. consists, 44. alike, 45. stable, 46. leaked, 47. instruction, 48. spinning, 49. laser, 50. addition,

51. The processor performs calculations on the _____ timescale.
n. one thousand millionth or billionth (= 0.000,000,001) of a second
52. Many people believe in the concept of _____ and an afterlife.
n. the state or quality of being able to live or last forever
53. The _____ for applying for a visa can be lengthy and complicated.
n. a series of actions or operations performed to achieve a particular outcome or goal; a systematic procedure or approach used to accomplish a specific task or objective; a method of treating milk to make it suitable for consumption or use in other dairy products
54. The jury must _____ a decision on this complex case.
v. to bring someone or something into a particular state; to provide something such as service, help, etc.
55. He could not _____ against temptation.
v. to make a great effort to do something when it is difficult, or there are a lot of problems; to use force or violence to break away from restraint or constriction
56. The organizational _____ of start-ups is often flat and straightforward.
n. the way of construction of something and the arrangement of its parts, or a complex thing constructed of many parts
57. The _____ of water is called ice.
adj. hard or firm; characterized by good substantial quality
58. The enemy fell right into the _____.
n. a piece of equipment or hole for catching animals or people; (verb) to catch animals or people and prevent them from escaping

ANSWERS: 51. nanosecond, 52. immortality, 53. process, 54. render, 55. struggle, 56. structure, 57. solid-state, 58. trap

59. The company _____ a portion of its profits to developing new products.
- v.* to give or distribute something, such as resources or duties, to someone or something for a particular purpose
60. Hundreds of ceramic _____ are used in a single smartphone.
- n.* a device that is placed inside electronic equipment such as televisions and radios and that stores electrical charge
61. The invention of the _____ revolutionized the field of electronics.
- n.* a semiconductor device that can be used to amplify or switch electronic signals and power which is an essential component in modern electronics
62. We use adverbs to _____ verbs and adjectives.
- v.* to change something slightly, such as a plan, option, law, etc., especially to make it more suitable for a particular purpose
63. This remote _____ is rarely visited.
- n.* a particular location or place; a small round or roundish area, differing in color or feels from the surface around it
64. He poured himself a _____ of whiskey to relax after a long day at work.
- n.* a small unit of weight used for measuring liquids, particularly whiskey and other alcoholic beverages
65. The saltwater can _____ metal over time if not properly maintained.
- v.* to destroy or eat away slowly by chemical action; to gradually wear away, weaken, or disintegrate over time
66. You should not _____ yourself by allowing them to use you.
- v.* to make something worse, especially in quality; to show or treat someone in a way that makes them seem no value and do not have the respect or reasonable opinion of others

ANSWERS: 59. allocated, 60. capacitors, 61. transistor, 62. modify, 63. spot, 64. dram, 65. corrode, 66. degrade

67. The shark's powerful _____ allowed it to swim at high speeds.

- n.* a thin flat part on the body of a fish or other aquatic animal used for propulsion or balance

68. The computer's hard _____ was full, so she had to delete some files.

- n.* a flat, circular plate, typically made of metal, glass, or plastic, used for storing data or playing music

69. The robot can accurately _____ construction material.

- v.* to specify or determine the exact position of someone or something

ANSWERS: 67. fins, 68. disk, 69. locate