

WORD LIST-2 (OCT 07, 2022)

1. bizarre (adjective) – strange, peculiar, curious, unconventional, unorthodox, abnormal.
2. establish (verb) - prove, demonstrate, confirm, validate, show to be true.
3. metaphysical (adjective) – abstract, theoretical, conceptual, notional, philosophical.
4. quantum (noun) – In physics, a quantum (plural quanta) is the minimum amount of any physical entity (physical property) involved in an interaction. For example, a photon is a single quantum of light (or of any other form of electromagnetic radiation).
5. Quantum physics (noun) – the study of matter and energy at the most fundamental level. It aims to uncover the properties and behaviors of the very building blocks of nature. While many quantum experiments examine very small objects, such as electrons and photons, quantum phenomena are all around us, acting on every scale.
6. usher in (phrasal verb) – initiate, put in place, institute, pave the way for, clear the way for.
7. foundational (adjective) - fundamental.
8. cornerstone (noun) – mainstay, backbone, foundation, chief support, buttress, pillar.
9. milestone (noun) – major achievement.
10. dub (verb) - term, call, name, label, classify.
11. in the making (phrase) – developing, burgeoning, up and coming.
12. cryptography (noun) – the science of encrypting (converting an information/data into a code) and decrypting (converting a code into an understandable information/data) is called cryptography.
13. entangled (adjective) – intertwined.
14. photon (noun) – light quantum; the fundamental/elementary particle of visible light.
15. Bell's (inequality) theorem (noun) – Bell's Theorem was devised by Irish physicist John Stewart Bell in 1964 as a means of testing whether or not particles connected through quantum entanglement communicate information faster than the speed of light.

Note:

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16. violation of Bell inequalities (noun) – John Stewart Bell originally proposed the idea for Bell's Theorem in his 1964. In his analysis, he derived formulas called the Bell inequalities, which are probabilistic statements about how often two particles should correlate with each other if normal probability (as opposed to quantum entanglement) were working. These Bell inequalities are violated by quantum physics experiments, which means that one of his basic assumptions had to be false, and there were only two assumptions that are suitable- either physical reality or locality was failing.
17. pioneer (verb) - establish, develop, originate, create (a new method, area of knowledge, or activity).
18. quantum entanglement (noun) – Quantum entanglement is when two particles link/entangle together in a certain way no matter how far apart they are in space. This is a quirk of quantum mechanics which allows two or more particles to exist in an 'entangled state' such that what happens to one particle affects the others immediately, irrespective of how far they may be.
19. quirk (noun) – peculiar habit/characteristic/trait/feature of something; peculiarity, oddity.
20. irrespective of (phrase) - regardless of, without regard to, without reference to, notwithstanding, no matter, disregarding.
21. spooky (adjective) – mysterious, sinister, eerie, weird, frightening, hair-raising.
22. come up with (phrasal verb) – produce, propose, present, put forward.
23. thought experiment (noun) - it is a hypothetical situation in which a hypothesis, theory, or principle is laid out for the purpose of thinking through its consequences.
24. EPR paradox (noun) - The EPR paradox (or the Einstein-Podolsky-Rosen Paradox) is a thought experiment (in 1935) intended to demonstrate an inherent paradox in the early formulations of quantum theory. It is among the best-known examples of quantum entanglement. Einstein developed the EPR paradox as a way of showing that the theory (Copenhagen interpretation of quantum mechanics by physicist Niels Bohr) was inconsistent with other known laws of physics.

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EDITORIAL WORDS

LEARNING ENGLISH & IMPROVING VOCABULARY

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25. The Copenhagen interpretation (noun) - it was first posed by physicist Niels Bohr in 1920. It says that a quantum particle doesn't exist in one state or another, but in all of its possible states at once. It's only when we observe its state that a quantum particle is essentially forced to choose one probability, and that's the state that we observe. Since it may be forced into a different observable state each time, this explains why a quantum particle behaves erratically.
26. Schrodinger's cat (noun) - Bohr's Copenhagen interpretation of quantum mechanics was theoretically proven by what has become a famous thought experiment devised by physicist Erwin Schrödinger in 1935 involving a cat and a box. He imagined a box containing a radioactive atom, a vial of poison and a cat. Considering the principles of Quantum mechanics, Schrödinger suggested that, at the instant just before opening the box, the cat's state is at both possibilities (superposition), that it is alive and dead at the same time.
27. hidden variables (noun) – 'hidden variables' are variables that decide the state of the particles that were separated in space, and there was no real quirk (peculiar feature) in quantum mechanics that caused them to be entangled.
28. entangle (verb) - intertwine, entwine, twist, link together.
29. compatible (adjective) - consistent, appropriate, suitable.
30. improvisation (noun) – the act of improvising something.
31. imply (verb) – indicate, intimate, suggest, hint.
32. indeed (adverb) – in fact, actually, undeniably.
33. intrinsic (adjective) - fundamental, basic, elementary.
34. dictate (verb) – control, dominate, determine.
35. correlation (noun) – similarity, comparison, resemblance, equivalence.
36. teleportation (noun) – a hypothetical mode of instantaneous transportation.
37. Quantum teleportation (noun) – it is a technique for transferring quantum information from a sender at one location to a receiver some distance away.
38. teleport (noun) – transport or be transported instantly.
39. traverse (verb) – travel over, travel across, pass over.
40. exotic (adjective) – unfamiliar, remote, far-flung.
41. promising (adjective) – good, encouraging, hopeful, full of promise, optimistic, positive, heartening, reassuring.

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