

Question 1: Which organelle is called the "powerhouse of the cell"?

- a) Ribosome
- b) Mitochondria
- c) Nucleus
- d) Golgi body

Question 2: When you push a wall but it doesn't move, which force is balancing your push?

- a) Frictional force
- b) Normal reaction force
- c) Magnetic force
- d) Gravitational force

Question 3: Which atmospheric layer blocks harmful UV radiation?

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Exosphere

Question 4: Which reaction is endothermic?

- a) Burning of wood
- b) Respiration
- c) Photosynthesis
- d) Rusting of iron

Question 5: Which wave property decides loudness of sound?

- a) Frequency
- b) Amplitude
- c) Wavelength
- d) Velocity

Question 6: Which of these is not a valid binomial name?

- a) Homo sapiens
- b) Panthera leo
- c) Mangifera indica
- d) Rosea floralis

Question 7: Cytoplasm mainly functions as:

- a) Energy storage
- b) Site of chemical reactions
- c) Genetic control
- d) Protein synthesis

Question 8: A car accelerates from 0 to 20 m/s in 10 s. Acceleration is:

- a) 0.5 m/s^2
- b) 2 m/s^2
- c) 5 m/s^2
- d) 10 m/s^2

Question 9: Weather is formed in which atmospheric layer?

- a) Mesosphere
- b) Stratosphere
- c) Troposphere
- d) Thermosphere

Question 10: Which is a balanced equation?

- a) $\text{H}_2 + \text{O}_2 \rightarrow \text{H}_2\text{O}$
- b) $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
- c) $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}_2$
- d) $\text{Na} + \text{O}_2 \rightarrow \text{NaO}$

Question 11: What happens to wavelength of light when it enters water?

- a) Increases
- b) Decreases
- c) Same
- d) Doubles

Question 12: Which group has only unicellular organisms?

- a) Protista
- b) Plantae
- c) Monera
- d) Fungi

Question 13: Which part of the cell controls activities?

- a) Cytoplasm
- b) Nucleus
- c) Ribosome
- d) Lysosome

Question 14: Which law says: “Every action has equal and opposite reaction”?

- a) First Law
- b) Second Law
- c) Third Law
- d) Gravitation

Question 15: Main gas in troposphere?

- a) Oxygen
- b) Nitrogen
- c) CO₂
- d) Hydrogen

Question 16: Example of decomposition reaction?

- a) $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
- b) $2\text{KClO}_3 \rightarrow 2\text{KCl} + 3\text{O}_2$
- c) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
- d) $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

Question 17: Sound cannot travel through:

- a) Solid
- b) Liquid
- c) Gas
- d) Vacuum

Question 18: Organisms without nucleus belong to:

- a) Protista
- b) Monera
- c) Plantae
- d) Fungi

Question 19: Organelle for protein synthesis:

- a) Ribosome
- b) Mitochondria
- c) Vacuole
- d) Chloroplast

Question 20: Unit of force is:

- a) Joule
- b) Newton
- c) Watt
- d) Pascal

Question 21: Layer helpful in radio communication:

- a) Exosphere
- b) Mesosphere
- c) Ionosphere
- d) Troposphere

Question 22: Reaction releasing heat/light:

- a) Exothermic
- b) Endothermic
- c) Neutralization
- d) Combination

Question 23: Prism splits light due to:

- a) Reflection
- b) Refraction
- c) Dispersion
- d) Diffraction

Question 24: Which is not a living feature?

- a) Reproduction
- b) Respiration
- c) Excretion
- d) Crystallization

Question 25: Plant cell walls are made of:

- a) Protein
- b) Lipid
- c) Cellulose
- d) Starch

Question 26: A boy pushes 40 kg trolley with 80 N. Acceleration = ?

- a) 0.5 m/s^2
- b) 2 m/s^2
- c) 5 m/s^2
- d) 20 m/s^2

Question 27: Gas mainly responsible for greenhouse effect?

- a) Ozone
- b) CO_2
- c) Nitrogen
- d) Helium

Question 28: Reaction type: $\text{Zn} + \text{H}_2\text{SO}_4 \rightarrow \text{ZnSO}_4 + \text{H}_2$

- a) Combination
- b) Decomposition
- c) Displacement
- d) Neutralization

Question 29: Frequency = 50 Hz. Time period = ?

- a) 0.5 s
- b) 0.2 s
- c) 0.02 s
- d) 2 s

Question 30: Broadest classification level?

- a) Family
- b) Phylum
- c) Class
- d) Kingdom

Question 31: Which part stores genetic info?

- a) Vacuole
- b) Nucleus
- c) Ribosome
- d) Cytoplasm

Question 32: If net force on object is zero, motion will:

- a) Accelerate
- b) Stay same
- c) Stop
- d) Reverse

Question 33: Jet planes usually leave white trails in which atmospheric layer?

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Thermosphere

Question 34: Which is a neutralization reaction?

- a) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- b) $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
- c) $2\text{KClO}_3 \rightarrow 2\text{KCl} + \text{O}_2$
- d) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$

Question 35: Speed of light in vacuum is about:

- a) $3 \times 10^5 \text{ m/s}$
- b) $3 \times 10^8 \text{ m/s}$
- c) $1.5 \times 10^8 \text{ m/s}$
- d) $3 \times 10^6 \text{ m/s}$

Question 36: Which is not an arthropod?

- a) Spider
- b) Earthworm
- c) Crab
- d) Butterfly

Question 37: Organelle containing digestive enzymes?

- a) Lysosome
- b) Ribosome
- c) Nucleus
- d) Mitochondria

Question 38: Which equation represents Newton's second law?

- a) $F = ma$
- b) $F = 1/m$
- c) $v = u + at$
- d) $E = mc^2$

Question 39: Which atmospheric layer burns meteors?

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Thermosphere

Question 40: Rusting is which type of reaction?

- a) Combination + Oxidation
- b) Decomposition
- c) Neutralization
- d) Displacement

Question 41: Which sound wave has higher pitch?

- a) 100 Hz
- b) 250 Hz
- c) 400 Hz
- d) 40 Hz

Question 42: Human scientific name is:

- a) Homo erectus
- b) Homo sapiens
- c) Hominid sapiens
- d) Primata humanus

Question 43: Organelle giving green colour to plants?

- a) Ribosome
- b) Chloroplast
- c) Vacuole
- d) Nucleus

Question 44: Object in motion continues unless acted by force — which law?

- a) First
- b) Second
- c) Third
- d) Gravitation

Question 45: Ozone is concentrated in:

- a) Troposphere
- b) Stratosphere
- c) Mesosphere
- d) Exosphere

Question 46: Which equation is incorrect?

- a) $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
- b) $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$
- c) $2\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$
- d) $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$

Question 47: Light bends when entering glass due to:

- a) Reflection
- b) Refraction
- c) Diffraction
- d) Interference

Question 48: Which is a cold-blooded vertebrate?

- a) Dog
- b) Crocodile
- c) Sparrow
- d) Whale

Question 49: Storage sacs in cell are:

- a) Ribosomes
- b) Vacuoles
- c) Chloroplasts
- d) Mitochondria

Question 50: Unit of energy is:

- a) Newton
- b) Joule
- c) Watt
- d) Pascal

Question 51: Northern lights occur in:

- a) Exosphere
- b) Thermosphere
- c) Mesosphere
- d) Stratosphere

Question 52: Which is a combination reaction?

- a) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
- b) $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$
- c) $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
- d) $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

Question 53: Which wave needs no medium?

- a) Sound
- b) Light
- c) Seismic
- d) Water

Question 54: Kingdom of mushrooms?

- a) Monera
- b) Protista
- c) Plantae
- d) Fungi

Question 55: Which organelle packages proteins?

- a) Nucleus
- b) Golgi body
- c) Ribosome
- d) Lysosome

Question 56: Work done = Force $\times$?

- a) Distance
- b) Acceleration
- c) Mass
- d) Energy

Question 57: Which gas absorbs UV radiation?

- a) Ozone
- b) Oxygen
- c) CO₂
- d) Nitrogen

Question 58: Which is an example double displacement reaction?

- a) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- b) $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}_3$
- c) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
- d) $2\text{KClO}_3 \rightarrow 2\text{KCl} + \text{O}_2$

Question 59: Which has shortest wavelength?

- a) Radio waves
- b) Gamma rays
- c) Infrared
- d) Microwave

Question 60: Which is not used in classification?

- a) Cell structure
- b) Mode of nutrition
- c) Habitat
- d) Size of organism

(NOT TO BE EVALUATED)

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