MCQS ON SCIENCE-- SYSTEMS, ENERGY AND FORCES

1: Which system helps remove waste and excess substances from the body?

A) Nervous system

B) Circulatory system

C) Excretory system

D) Respiratory system

2: Which organ is responsible for filtering waste and excess substances from the blood?

A) Liver

B) Kidneys

C) Heart

D) Lungs

3: What is the main function of the excretory system?

A) To absorb nutrients from food

B) To remove waste and excess substances from the body

C) To produce hormones

D) To regulate body temperature

4: Which part of the excretory system stores urine until it is eliminated from the body?

A) Kidneys

B) Liver

C) Bladder

D) Ureters

5: What happens to the waste that is filtered by the kidneys?

A) It is stored in the liver

B) It is eliminated from the body through urine

C) It is absorbed back into the bloodstream

D) It is stored in the muscles

6: Which planet in our solar system has the fastest orbital speed?

A) Earth

B) Saturn

C) Jupiter

D) Mercury

7: What is the force that keeps planets in orbit around the Sun?

A) Gravity

B) Friction

C) Magnetism

D) Electromagnetism

8: Which of the following statements is true about the motion of the Moon?

A) It moves in a straight line

B) It orbits the Earth in a circular path

C) It moves away from the Earth

D) It moves towards the Sun

9: What is the term for the path an object follows as it revolves around a larger body?

A) Orbit

B) Rotation

C) Revolution

D) Axis

10: Which planet takes the longest time to complete one orbit around the Sun?

A) Neptune

B) Uranus

C) Saturn

D) Jupiter

11: What is the term for the relationship between two species where one species benefits and the other is harmed?

A) Mutualism

B) Commensalism

C) Parasitism

D) Predation

12: How do humans impact ecosystems

A) Only positive impacts

B) Only negative impacts

C) Both positive and negative impacts

D) No impacts

13: What is the result of overfishing in an ecosystem?

A) Increased fish population

B) Decreased fish population

C) No impact on fish population

D) Increased plant growth

14: What is the term for the movement of water through a plant, from the roots to the leaves, and is then released into the air as water vapor?

A) Respiration

B) Photosynthesis

C) Transpiration

D) D) Evaporation

15: How do humans benefit from ecosystems?

A) Only through food provision

B) Only through water provision

C) Through various ecosystem services, including air and water purification, soil formation, and climate regulation

D) Through no ecosystem services

16: What is the most common form of energy source used by humans?

A) Solar energy

B) Wind energy

C) Fossil fuels

D) Hydro energy

17: Which of the following is an example of energy transformation?

A) Water flowing downhill

B) A car moving on a road

C) A light bulb glowing

D) A battery charging

18: What is the term for the energy an object has due to its motion?

A) Kinetic energy

B) Potential energy

C) Thermal energy

D) Electrical energy

19: Which energy source is considered renewable?

A) Coal

B) Oil

C) Natural gas

D) Solar energy

20: What is the process by which plants convert sunlight into chemical energy?

A) Respiration

B) Photosynthesis

C) Decomposition

D) Fermentation

21: What is the most common method of electricity generation?

A) Hydroelectric power

B) Nuclear power

C) Fossil fuel-based power

D) Solar power

22: What is the purpose of a transformer in an electrical power system?

A) To generate electricity

B) To transmit electricity

C) To transform voltage levels

D) To distribute electricity

23: Which of the following is a type of electricity transmission line

A) Distribution line

B) Transmission line

C) Substation

D) Generator

24: What is the process of converting electrical energy into mechanical energy?

A) Generation

B) Transmission

C) Transformation

D) Motoring

25: Which device converts electrical energy into light and heat energy?

A) Motor

B) Generator

C) Transformer

D) Light bulb

26: What is the form of energy stored in a stretched rubber band?

A) Kinetic energy

B) Potential energy

C) Thermal energy

D) Electrical energy

27: Which energy conversion occurs in a car engine?

A) Electrical to mechanical

B) Mechanical to thermal

C) Chemical to mechanical

D) Thermal to electrical

28: What is the form of energy produced by a solar panel?

A) Electrical energy

B) Thermal energy

C) Mechanical energy

D) Chemical energy

29: Which energy conversion occurs in a light bulb?

A) Electrical to mechanical

B) Mechanical to thermal

C) Electrical to light and heat

D) Thermal to electrical

30: What is the form of energy stored in a battery?

A) Kinetic energy

B) Potential energy

C) Electrical energy

D) Chemical energy

31: What is the function of a switch in an electric circuit?

A) To provide voltage

B) To control the flow of current

C) To resist current flow

D) To store energy

32: Which component is used to protect an electric circuit from excessive current?

A) Resistor

B) Capacitor

C) Fuse

D) Inductor

33: What is the function of a resistor in an electric circuit?

A) To increase voltage

B) To decrease current

C) To control current flow

D) To store energy

34: Which component is used to store energy in an electric circuit?

A) Capacitor

B) Resistor

C) Inductor

D) Switch

35: What is the function of a wire in an electric circuit?

A) To resist current flow

B) To provide voltage

C) To conduct current

D) To store energy

36: Which of the following is an example of a conductor?

A) Wood

B) Rubber

C) Copper

D) Glass

37: Which type of material has intermediate conductivity between conductors and insulators?

A) Conductor

B) Semiconductor

C) Insulator

D) Superconductor

38: Which of the following is an example of an insulator?

A) Aluminum

B) Silicon

C) Ceramic

D) Steel

39: Which material is used in electronic devices due to its ability to control the flow of current?

A) Conductor

B) Semiconductor

C) Insulator

D) Superconductor

40: Which of the following is a characteristic of conductors?

A) High resistance

B) Low conductivity

C) High conductivity

D) Intermediate conductivity