

**1<sup>st</sup> Unit test (Question Bank)**

**Class: All branches (Fourth Sem K scheme)**

**Environmental Education and Sustainability (314301)**

**Unit I. Environment and Climate Change**

**1. What is the primary cause of global warming?**

- A) Deforestation
- B) Greenhouse gas emissions
- C) Ocean currents
- D) Solar radiation

**Answer:** B) Greenhouse gas emissions

**2. Which of the following gases is a major contributor to global warming?**

- A) Oxygen
- B) Carbon dioxide
- C) Nitrogen
- D) Argon

**Answer:** B) Carbon dioxide

**3. Which of the following human activities is most responsible for increasing carbon dioxide levels in the atmosphere?**

- A) Agricultural activities
- B) Industrial processes
- C) Fossil fuel combustion
- D) Solar energy production

**Answer:** C) Fossil fuel combustion

**4. What is the effect of global warming on sea levels?**

- A) Sea levels decrease
- B) Sea levels remain the same

- C) Sea levels rise
- D) Sea levels fluctuate unpredictably

**Answer:** C) Sea levels rise

**5. Which of the following is a consequence of melting ice caps due to global warming?**

- A) Increased crop yields
- B) Loss of biodiversity
- C) Decreased ocean acidity
- D) Improved air quality

**Answer:** B) Loss of biodiversity

**6. The Kyoto Protocol aimed to reduce emissions of which of the following?**

- A) Methane only
- B) Greenhouse gases
- C) Sulfur compounds
- D) Nitrogen oxides

**Answer:** B) Greenhouse gases

**7. Which of the following is NOT a renewable energy source that can help reduce global warming?**

- A) Wind energy
- B) Solar energy
- C) Natural gas
- D) Hydropower

**Answer:** C) Natural gas

**8. What is the greenhouse effect?**

- A) A natural process where the Earth's atmosphere traps heat from the sun
- B) A phenomenon where the ozone layer blocks sunlight
- C) The cooling of the Earth due to cloud cover
- D) The warming of the Earth caused by volcanic eruptions

**Answer:** A) A natural process where the Earth's atmosphere traps heat from the sun

**9. Which international agreement aims to limit global warming to below 2°C compared to pre-industrial levels?**

- A) The Paris Agreement
- B) The Montreal Protocol
- C) The Rio Earth Summit
- D) The Geneva Convention

**Answer:** A) The Paris Agreement

**10. What is one of the main effects of global warming on the weather?**

- A) Decreased frequency of extreme weather events
- B) A decrease in average global temperatures
- C) Increased frequency of extreme weather events
- D) More stable weather patterns

**Answer:** C) Increased frequency of extreme weather events

**11. What is acid rain?**

- a) Rainwater with a pH greater than 7
- b) Rainwater with a pH less than 7
- c) Rainwater that has high levels of oxygen
- d) Rainwater that is neutral in pH

**Answer:** b) Rainwater with a pH less than 7

**12. Which of the following gases are primarily responsible for the formation of acid rain?**

- a) Nitrogen dioxide and sulfur dioxide
- b) Oxygen and carbon dioxide
- c) Methane and ozone
- d) Nitrogen and hydrogen

**Answer:** a) Nitrogen dioxide and sulfur dioxide

**13. Which of the following is a major natural source of acid rain?**

- a) Volcanoes
- b) Automobiles
- c) Power plants
- d) Agricultural activities

**Answer:** a) Volcanoes

**14. What is the typical pH value of acid rain?**

- a) 5.0 to 6.0
- b) 6.5 to 7.5
- c) 7.0 to 8.0
- d) 8.0 to 9.0

**Answer:** a) 5.0 to 6.0

**15. Which of the following is an environmental impact of acid rain?**

- a) It improves soil fertility
- b) It harms aquatic life by lowering water pH
- c) It increases plant growth
- d) It improves air quality

**Answer:** b) It harms aquatic life by lowering water pH

**16. Acid rain can damage buildings and monuments, particularly those made of which material?**

- a) Glass
- b) Marble and limestone
- c) Wood
- d) Steel

**Answer:** b) Marble and limestone

**17. What is the primary method to reduce acid rain formation?**

- a) Using more fossil fuels

- b) Reducing emissions of sulfur dioxide and nitrogen oxides
- c) Increasing the use of pesticides
- d) Increasing the amount of water vapor in the atmosphere

**Answer:** b) Reducing emissions of sulfur dioxide and nitrogen oxides

**18. What term is used for the process in which acid rain affects the soil, making it less fertile?**

- a) Eutrophication
- b) Soil acidification
- c) Ozone depletion
- d) Desertification

**Answer:** b) Soil acidification

**19. Which of the following human activities contributes the most to the formation of acid rain?**

- a) Burning of fossil fuels for energy production
- b) Agricultural activities
- c) Deforestation
- d) Overfishing

**Answer:** a) Burning of fossil fuels for energy production

**20. What is the main cause of ozone depletion?**

- a) Air pollution
- b) CFCs (Chlorofluorocarbons)
- c) Carbon dioxide
- d) Nitrogen oxides

**Answer:** b) CFCs (Chlorofluorocarbons)

**21. Which layer of the Earth's atmosphere contains the ozone layer?**

- a) Thermosphere
- b) Stratosphere

- c) Mesosphere
- d) Troposphere

**Answer:** b) Stratosphere

**22. What is the effect of ozone depletion on humans?**

- a) Increases plant growth
- b) Reduces the incidence of skin cancer
- c) Increases the risk of skin cancer
- d) Improves air quality

**Answer:** c) Increases the risk of skin cancer

**23. Which of the following compounds is primarily responsible for ozone depletion?**

- a) Sulfur dioxide
- b) CFCs
- c) Methane
- d) Carbon monoxide

**Answer:** b) CFCs

**24. Which international agreement aimed at reducing ozone-depleting substances?**

- a) Kyoto Protocol
- b) Paris Agreement
- c) Montreal Protocol
- d) Geneva Convention

**Answer:** c) Montreal Protocol

**25. Ozone depletion is most significant over which region of the Earth?**

- a) Equator
- b) Tropics
- c) Poles, especially the South Pole
- d) Near the Himalayas

**Answer:** c) Poles, especially the South Pole

**26. What is the "ozone hole"?**

- a) A region of low ozone concentration in the stratosphere
- b) A hole in the ozone layer caused by human activities
- c) A permanent gap in the Earth's atmosphere
- d) A space between the ozone layer and the troposphere

**Answer:** a) A region of low ozone concentration in the stratosphere

**27. What happens when ozone in the stratosphere is depleted?**

- a) Increased UV radiation reaches Earth
- b) Air quality improves
- c) Greenhouse gases are reduced
- d) Temperature of the Earth's surface decreases

**Answer:** a) Increased UV radiation reaches Earth

**28. Which of the following is a natural source of ozone depletion?**

- a) Volcanic eruptions
- b) Car emissions
- c) Air conditioners
- d) Forest fires

**Answer:** a) Volcanic eruptions

**29. Which of the following is NOT a component of the environment?**

- a) Air
- b) Water
- c) Solar energy
- d) Gravity

**Answer: d) Gravity**

**30. The biotic components of the environment include:**

- a) Air and water

- b) Plants and animals
- c) Soil and minerals
- d) Light and temperature

**Answer: b) Plants and animals**

**31. Which of these is an example of an abiotic component?**

- a) Human beings
- b) Plants
- c) Sunlight
- d) Animals

**Answer: c) Sunlight**

**32. The ozone layer protects the Earth from:**

- a) Acid rain
- b) UV radiation
- c) Flooding
- d) Climate change

**Answer: b) UV radiation**

**33. Which of the following gases is primarily responsible for global warming?**

- a) Oxygen
- b) Nitrogen
- c) Carbon dioxide
- d) Hydrogen

**Answer: c) Carbon dioxide**

**34. The term 'biodiversity' refers to:**

- a) The variety of life on Earth
- b) The extinction of species
- c) The impact of pollution on the environment
- d) The process of environmental conservation



**Answer: a) The variety of life on Earth**

**35. Which of the following is an example of a renewable resource?**

- a) Coal
- b) Oil
- c) Wind energy
- d) Natural gas

**Answer: c) Wind energy**

**36. Which of these is a major environmental issue caused by deforestation?**

- a) Soil erosion
- b) Water scarcity
- c) Increased biodiversity
- d) Global cooling

**Answer: a) Soil erosion**

**37. The 'carbon cycle' is important for:**

- a) Recycling water in ecosystems
- b) Regulating Earth's temperature
- c) Producing oxygen in plants
- d) The flow of energy in food chains

**Answer: b) Regulating Earth's temperature**

**38. Which of the following is a non-renewable resource?**

- a) Solar energy
- b) Wind energy
- c) Coal
- d) Geothermal energy

**Answer: c) Coal**

**39. What does the "Refuse" principle in the 5R concept primarily encourage?**

- A) Reusing materials
- B) Recycling products
- C) Rejecting items that are unnecessary or harmful
- D) Rotting organic waste

**Answer: C) Rejecting items that are unnecessary or harmful**

**40. Which of the following best describes the principle of "Reduce" in the 5R concept?**

- A) Cutting down on the use of single-use plastics
- B) Reusing old products
- C) Limiting the amount of waste generated
- D) Composting organic waste

**Answer: C) Limiting the amount of waste generated**

**41. What is the main focus of the "Reuse" principle in the 5R concept?**

- A) Recycling materials into new products
- B) Buying more products
- C) Using items more than once to extend their life
- D) Reducing carbon footprints

**Answer: C) Using items more than once to extend their life**

**42. "Recycle" in the 5R concept means:**

- A) Creating new products from used materials
- B) Refusing to buy new items
- C) Planting trees to offset waste
- D) Rotting organic waste for compost

**Answer: A) Creating new products from used materials**

**43. The principle of "Rot" in the 5R concept is best associated with:**

- A) Making compost from organic waste
- B) Recycling paper products
- C) Refusing to buy products with excessive packaging

D) Reducing energy consumption

**Answer: A) Making compost from organic waste**

**44. Which of the following is NOT part of the 5Rs concept?**

A) Refuse

B) Recycle

C) Restore

D) Reuse

**Answer: C) Restore**

**45. The "Reduce" principle helps in:**

A) Minimizing the waste generated by purchasing fewer goods

B) Maximizing the use of resources in production

C) Increasing the number of recyclable items

D) Improving waste management facilities

**Answer: A) Minimizing the waste generated by purchasing fewer goods**

**46. Which of the following activities aligns with the "Reuse" concept?**

A) Turning plastic bottles into new plastic products

B) Using cloth bags instead of disposable ones

C) Turning waste into compost

D) Refusing packaging materials

**Answer: B) Using cloth bags instead of disposable ones**

**47. What is the environmental benefit of practicing the "Recycle" principle?**

A) Reduces the need for virgin resources

B) Encourages waste production

C) Increases plastic pollution

D) Encourages faster disposal of waste

**Answer: A) Reduces the need for virgin resources**

**48. Which of the following is NOT a Sustainable Development Goal (SDG)?**

- a) Quality Education
- b) Zero Hunger
- c) Economic Growth
- d) Peace and Justice

**Answer:** c) Economic Growth

**49 . How many Sustainable Development Goals (SDGs) are there in total?**

- a) 10
- b) 12
- c) 17
- d) 20

**Answer:** c) 17

**50. Which SDG aims to "end poverty in all its forms everywhere"?**

- a) SDG 1
- b) SDG 2
- c) SDG 3
- d) SDG 4

**Answer:** a) SDG 1 (No Poverty)

**51. Which SDG focuses on "ensuring inclusive and equitable quality education"?**

- a) SDG 4
- b) SDG 5
- c) SDG 6
- d) SDG 7

**Answer:** a) SDG 4 (Quality Education)

**52. Which of the following is the goal of SDG 7?**

- a) Affordable and Clean Energy
- b) Clean Water and Sanitation

- c) Climate Action
- d) Responsible Consumption and Production

**Answer:** a) Affordable and Clean Energy

**53. What is the target year for achieving the Sustainable Development Goals (SDGs)?**

- a) 2025
- b) 2030
- c) 2040
- d) 2050

**Answer:** b) 2030

**54. Which SDG focuses on "gender equality and empowerment of women and girls"?**

- a) SDG 2
- b) SDG 3
- c) SDG 5
- d) SDG 8

**Answer:** c) SDG 5 (Gender Equality)

**55. What is the primary focus of SDG 13?**

- a) Climate Action
- b) Responsible Consumption
- c) Clean Water and Sanitation
- d) Good Health and Well-being

**Answer:** a) Climate Action

**56. Which SDG aims to "ensure healthy lives and promote well-being for all at all ages"?**

- a) SDG 1
- b) SDG 3
- c) SDG 6
- d) SDG 9

**Answer:** b) SDG 3 (Good Health and Well-being)

**57. Which SDG is concerned with "clean water and sanitation"?**

- a) SDG 6
- b) SDG 7
- c) SDG 8
- d) SDG 11

**Answer:** a) SDG 6 (Clean Water and Sanitation)

**58. Which of the following texts mentions the reverence for natural elements and emphasizes the protection of the environment?**

- a) Vedas
- b) Upanishads
- c) Ramayana
- d) Mahabharata

**Answer:** a) Vedas

**59. Which of the following was a primary concern for the Vedic people with regard to the environment?**

- a) Tree cutting
- b) Water conservation
- c) Soil erosion
- d) Wildlife protection

**Answer:** b) Water conservation

**60. In Vedic times, which natural element was considered sacred and worshipped as a deity?**

- a) Fire (Agni)
- b) Sun (Surya)
- c) Wind (Vayu)
- d) All of the above

**Answer:** d) All of the above

**61. The Pre-Vedic period was characterized by which of the following practices to conserve natural resources?**

- a) Agricultural development
- b) Sacred groves and natural sanctuaries
- c) Animal sacrifice
- d) Metal working

**Answer:** b) Sacred groves and natural sanctuaries

**62. Which of the following was an integral part of environmental conservation as mentioned in the Atharvaveda?**

- a) Preservation of rivers
- b) Conservation of animal species
- c) Agricultural practices
- d) Water rituals

**Answer:** a) Preservation of rivers

**63. In Vedic culture, how was the river Ganga regarded?**

- a) As a source of irrigation
- b) As a purifier and sacred river
- c) As a trade route
- d) As a source of spiritual teachings

**Answer:** b) As a purifier and sacred river

**64. The term "Vanaspati" in Vedic literature refers to what?**

- a) Forest deity
- b) Sacred tree
- c) Mountain god
- d) River goddess

**Answer:** b) Sacred tree

## **Unit II. Sustainability and Renewable Resources**

**1. Which of the following is NOT a primary function of forests?**

- A) Oxygen production
- B) Carbon dioxide absorption
- C) Soil erosion prevention
- D) Manufacturing of agricultural equipment

**Answer:** D) Manufacturing of agricultural equipment

**2. What is the main reason for deforestation?**

- A) Increased wildlife population
- B) Urbanization and agriculture expansion
- C) Soil fertility improvement
- D) Protection of endangered species

**Answer:** B) Urbanization and agriculture expansion

**3. What is the term for the process of planting trees to restore forests that have been cut down?**

- A) Afforestation
- B) Reforestation
- C) Deforestation
- D) Desertification

**Answer:** B) Reforestation

**4. Which of the following forest types is most threatened by human activity?**

- A) Boreal forests
- B) Tropical rainforests
- C) Temperate forests
- D) Savannah forests

**Answer:** B) Tropical rainforests



**5. What is the main purpose of forest conservation?**

- A) Increase timber production
- B) Maintain ecological balance and biodiversity
- C) Reduce the need for agricultural land
- D) Boost urban development

**Answer:** B) Maintain ecological balance and biodiversity

**6. Which of the following is an example of a non-timber forest product?**

- A) Timber
- B) Resin
- C) Pulpwood
- D) Wood chips

**Answer:** B) Resin

**7. What is overexploitation of natural resources?**

- A) The sustainable use of natural resources
- B) The excessive use of natural resources beyond their capacity to regenerate
- C) The controlled use of natural resources
- D) The preservation of natural resources

**Answer: B** – Overexploitation refers to the excessive use of natural resources beyond their capacity to regenerate.

**8. Which of the following is a major consequence of overexploitation of forests?**

- A) Biodiversity conservation
- B) Soil erosion
- C) Increase in wildlife population
- D) Decrease in atmospheric CO<sub>2</sub>

**Answer: B** – Overexploitation of forests leads to soil erosion due to the loss of tree cover.

**9. Overexploitation of groundwater can result in which of the following?**

- A) Replenishment of water sources

- B) Depletion of aquifers and reduced water availability
- C) Increase in water table levels
- D) Improvement of agricultural productivity

**Answer: B** – Overexploitation of groundwater leads to the depletion of aquifers and reduced water availability.

**10. Which of the following is an example of overexploitation in mining?**

- A) Sustainable extraction of minerals
- B) Mining at a rate faster than natural replenishment
- C) Reclamation of mined lands
- D) Reduced extraction due to conservation efforts

**Answer: B** – Overexploitation in mining occurs when minerals are extracted at a rate faster than their natural replenishment.

**11. Which of the following practices is most likely to help mitigate overexploitation of natural resources?**

- A) Deforestation and urban expansion
- B) Sustainable resource management and conservation
- C) Overharvesting and depletion of ecosystems
- D) Excessive use of fossil fuels

**Answer: B** – Sustainable resource management and conservation are key to mitigating overexploitation.

**12. How does overexploitation contribute to climate change?**

- A) By reducing greenhouse gas emissions
- B) By increasing atmospheric carbon dioxide through deforestation and fossil fuel use
- C) By reducing the effects of global warming
- D) By enhancing the carbon absorption capacity of ecosystems

**Answer: B** – Overexploitation contributes to climate change by increasing atmospheric CO<sub>2</sub> through deforestation and the burning of fossil fuels.

**13. Which of the following is a type of solar energy technology used to convert sunlight into electricity?**

- a) Wind turbine
- b) Photovoltaic cells
- c) Hydroelectric power
- d) Geothermal energy

**Answer:** b) Photovoltaic cells

**14. What is the efficiency range of most commercial photovoltaic solar panels?**

- a) 1% to 5%
- b) 5% to 20%
- c) 20% to 40%
- d) 40% to 60%

**Answer:** b) 5% to 20%

**15. What is the term for the process of converting sunlight directly into electricity?**

- a) Solar thermal energy
- b) Photovoltaic effect
- c) Solar radiation
- d) Conduction

**Answer:** b) Photovoltaic effect

**16. Which of the following is a disadvantage of solar energy?**

- a) It is non-renewable
- b) It causes air pollution
- c) It is dependent on weather conditions
- d) It requires fuel for operation

**Answer:** c) It is dependent on weather conditions

**17. What is the main component of a solar panel?**

- a) Copper wire

- b) Glass
- c) Silicon
- d) Aluminum

**Answer:** c) Silicon

**18. What is the most common use of solar energy in residential areas?**

- a) Heating water
- b) Charging batteries
- c) Lighting streets
- d) Cooking food

**Answer:** a) Heating water

**19. Which of the following is a significant advantage of solar energy?**

- a) It can be stored in batteries
- b) It is a non-renewable resource
- c) It is expensive to install
- d) It is polluting to the environment

**Answer:** a) It can be stored in batteries

**20. How does solar energy contribute to reducing greenhouse gas emissions?**

- a) It produces electricity without burning fossil fuels
- b) It requires large amounts of water
- c) It releases carbon dioxide into the atmosphere
- d) It produces harmful waste materials

**Answer:** a) It produces electricity without burning fossil fuels

**21. Which of the following is a major benefit of wind energy?**

- a) It is a non-renewable energy source.
- b) It produces no greenhouse gases during operation.
- c) It causes significant air pollution.

d) It is more expensive than fossil fuels.

**Answer:** b) It produces no greenhouse gases during operation.

**22 What type of wind turbines are most commonly used today?**

a) Vertical-axis wind turbines

b) Horizontal-axis wind turbines

c) Circular-axis wind turbines

d) Inclined-axis wind turbines

**Answer:** b) Horizontal-axis wind turbines

**23. What is the main component of a wind turbine that captures wind energy?**

a) Blades

b) Generator

c) Tower

d) Rotor

**Answer:** a) Blades

**24. What is the term used to describe the amount of electricity generated by a wind turbine?**

a) Capacity factor

b) Wind speed

c) Wind capacity

d) Energy output

**Answer:** d) Energy output

**25. What factor primarily determines the efficiency of a wind turbine?**

a) Wind speed

b) Height of the turbine

c) Age of the turbine

d) Size of the blades

**Answer:** a) Wind speed

**26. Which of the following is a disadvantage of wind energy?**

- a) High greenhouse gas emissions
- b) Dependency on favorable wind conditions
- c) Lack of space for turbines
- d) Non-renewable

**Answer:** b) Dependency on favorable wind conditions

**27. What is the principle behind the operation of wind turbines?**

- a) Turning wind energy into chemical energy
- b) Converting mechanical energy into electrical energy
- c) Converting solar energy into electrical energy
- d) Using wind to produce steam for turbines

**Answer:** b) Converting mechanical energy into electrical energy

**28. What is biomass energy?**

- a) Energy derived from fossil fuels
- b) Energy obtained from organic materials
- c) Energy obtained from wind
- d) Energy derived from water

**Answer:** b) Energy obtained from organic materials

**29. Which of these is the primary advantage of biomass energy?**

- a) High energy efficiency
- b) Low cost and renewable
- c) No greenhouse gas emissions
- d) Easy storage

**Answer:** b) Low cost and renewable

**30. Biomass energy is considered carbon neutral because:**

- a) It releases no carbon dioxide into the atmosphere

- b) The carbon dioxide released is absorbed by plants during growth
- c) It produces only oxygen
- d) It is made from waste materials

**Answer:** b) The carbon dioxide released is absorbed by plants during growth

**31. Which of these feedstocks is commonly used for producing bioethanol?**

- a) Sunflower oil
- b) Corn
- c) Wood chips
- d) Cow dung

**Answer:** b) Corn

**32. Which of the following is NOT a type of ocean energy?**

- A) Tidal Energy
- B) Wave Energy
- C) Geothermal Energy
- D) Ocean Thermal Energy

**Answer:** C) Geothermal Energy

**33. Which technology is used to capture energy from the temperature difference between warm surface water and cold deep water?**

- A) Tidal turbines
- B) Ocean thermal energy conversion (OTEC)
- C) Wave energy converters
- D) Solar panels

**Answer:** B) Ocean thermal energy conversion (OTEC)

**34. Tidal energy is primarily generated from which natural phenomenon?**

- A) Solar radiation
- B) Wind currents
- C) Gravitational pull of the moon and sun
- D) Earth's rotation

**Answer:** C) Gravitational pull of the moon and sun

**35. Which of the following is a disadvantage of tidal energy?**

- A) It is unpredictable
- B) It requires high water velocity
- C) It can impact marine ecosystems
- D) It cannot be used in coastal regions

**Answer:** C) It can impact marine ecosystems

**36. Which of the following is the primary source of hydrogen?**

- A) Water
- B) Coal
- C) Petroleum
- D) Uranium

**Answer:** A) Water

**37. What is the process of extracting hydrogen from water called?**

- A) Electrolysis
- B) Distillation
- C) Combustion
- D) Carbonization

**Answer:** A) Electrolysis

**38. Which of these is a major advantage of hydrogen energy?**

- A) High carbon emissions
- B) High energy density and zero emissions
- C) Availability of resources
- D) Low cost of production

**Answer:** B) High energy density and zero emissions

**39. Which of the following is a method of producing hydrogen?**



- A) Thermal decomposition of methane
- B) Water electrolysis
- C) Gasification of coal
- D) All of the above

**Answer:** D) All of the above

**40. Which is the most common fuel cell used for hydrogen-powered vehicles?**

- A) Alkaline fuel cells (AFC)
- B) Proton Exchange Membrane (PEM) fuel cells
- C) Solid Oxide Fuel Cells (SOFC)
- D) Molten Carbonate Fuel Cells (MCFC)

**Answer:** B) Proton Exchange Membrane (PEM) fuel cells

**41. What is a major challenge in the widespread use of hydrogen energy?**

- A) High storage and transportation costs
- B) Low energy efficiency
- C) Lack of raw materials
- D) High emissions

**Answer:** A) High storage and transportation costs

**42 Hydrogen is considered a clean energy source because it produces only which of the following when used in a fuel cell?**

- A) Carbon dioxide
- B) Water vapor
- C) Methane
- D) Nitrogen oxides

**Answer:** B) Water vapor

**43 Which of the following is a common component of a hydropower plant?**

- a) Wind turbine
- b) Penstock

- c) Solar panels
- d) Heat exchanger

**Answer:** b) Penstock

**44. What does the penstock in a hydropower plant do?**

- a) Transports water to the turbine
- b) Stores water
- c) Generates electricity
- d) Filters water

**Answer:** a) Transports water to the turbine

**45. The energy of falling water is converted into which type of energy in a hydropower plant?**

- a) Thermal energy
- b) Chemical energy
- c) Mechanical energy
- d) Electrical energy

**Answer:** c) Mechanical energy

**46. Which of the following best describes the 'head' in a hydropower plant?**

- a) The width of the river
- b) The difference in height between the water source and the turbine
- c) The amount of electricity generated
- d) The capacity of the dam

**Answer:** b) The difference in height between the water source and the turbine

**47. In a hydropower plant, what is the role of the turbine?**

- a) To store water
- b) To convert mechanical energy into electrical energy
- c) To regulate water flow
- d) To generate heat for power production

**Answer:** b) To convert mechanical energy into electrical energy

**48. In which part of the Earth is geothermal energy primarily stored?**

- a) Crust
- b) Mantle
- c) Core
- d) Atmosphere

**Answer:** a) Crust

**49. Geothermal energy is considered renewable because:**

- a) It can be replenished by the Earth's heat
- b) It does not release harmful emissions
- c) It is inexhaustible
- d) All of the above

**Answer:** d) All of the above

**50. What is the main disadvantage of geothermal energy?**

- a) It is non-renewable
- b) High initial costs
- c) Excessive emissions
- d) Inconsistent energy production

**Answer:** b) High initial costs

**51. Which of the following is a type of geothermal power plant?**

- a) Dry steam plant
- b) Flash steam plant
- c) Binary cycle power plant
- d) All of the above

**Answer:** d) All of the above

**52. What is the key factor for the successful location of geothermal energy plants?**

- a) Proximity to large water bodies

b) High temperature of the Earth's crust

c) Earth core heat

d) Abundant geothermal energy

**Answer:** b) High temperature of the Earth's crust