*** Choose the correct alternative from those given below question** [11]

1. What is one major reason Mars cannot currently support life like Earth?
   (A) It has too many volcanoes.
   (B) It is too close to the Sun.
   (C) It lacks a thick atmosphere and liquid water.
   (D) Its magnetic field is too strong.

   Ans. : (B) It is too close to the Sun.

2. Which of these is an example of geodiversity?
   (A) A variety of birds chirping in a forest.
   (B) Different landforms like mountains, valleys, and deserts.
   (C) Changing weather during monsoons.
   (D) Number of different types of fish in a pond.

   Ans. : (B) Different landforms like mountains, valleys, and deserts.

3. If the Earth were smaller with the same density, what might happen to its atmosphere?
   (A) It would become thicker and hotter.
   (B) It would escape into space due to weaker gravity.
   (C) It would become frozen.
   (D) It would cause stronger winds.

   Ans. : (B) It would escape into space due to weaker gravity.

4. In sexual reproduction, why are offspring different from their parents?
   (A) They grow in different climates.
   (B) They eat different food.
   (C) They acquire new instructions after birth.
   (D) They get mixed instructions (genes) from both parents.

   Ans. : (D) They get mixed instructions (genes) from both parents.

5. What makes Earth's position in the solar system ideal for supporting life?
   (A) It is the closest planet to the Sun.
   (B) It lies in the habitable zone, allowing liquid water.
   (C) It has the strongest magnetic field in the solar system.
   (D) It has no atmosphere.

   Ans. : (B) It lies in the habitable zone, allowing liquid water.

6. Why is Venus the hottest planet in the solar system?

(A) It is closest to the Sun.

(B) It has a thick atmosphere, causing a strong greenhouse effect.

(C) It has no magnetic field.

(D) It has liquid water on its surface.

Ans. : (B) It has a thick atmosphere, causing a strong greenhouse effect.

7. Which feature of Earth protects it from harmful cosmic rays and solar wind?

(A) Ozone layer

(B) Liquid water

(C) Magnetic field

(D) Geosphere

Ans. : (C) Magnetic field

8. In sexual reproduction, why are offspring different from their parents?

(A) They grow in different climates.

(B) They receive mixed genes from both parents.

(C) They eat different food.

(D) They acquire new traits after birth.

Ans. : (B) They receive mixed genes from both parents.

9. What is a major cause of the triple planetary crisis?

(A) Earth's circular orbit

(B) Burning fossil fuels

(C) Vegetative propagation

(D) Presence of ozone

Ans. : (B) Burning fossil fuels

10. Assertion (A): Earth is the only planet in the solar system known to support life.
Reason (R): Earth's position in the habitable zone allows liquid water to exist, essential for life.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(C) (A) is true, but (R) is false.

(D) (A) is false, but (R) is true.

Ans.: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

11. Assertion (A): Sexual reproduction leads to variation in offspring.
Reason (R): Gametes from two parents combine to form a zygote with mixed genetic material.

(A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true, but (R) is not the correct explanation of (A).

(C) (A) is true, but (R) is false.

(D) (A) is false, but (R) is true.

Ans.: (A) Both (A) and (R) are true, and (R) is the correct explanation of (A).

*** Answer the following as requested in detail.** **[20]**

12. I wonder what makes the Earth unique for living beings to grow and survive!

Ans. : Earth's uniqueness for supporting life stems from a rare combination of factors. Its distance from the Sun, about 93 million miles, places it in the habitable zone where temperatures (-88°C to 58°C) allow liquid water, essential for life. The atmosphere, rich in nitrogen and oxygen, supports breathing, regulates climate, and shields against harmful radiation via the ozone layer. A strong magnetic field protects the atmosphere from solar wind erosion. Plate tectonics and volcanic activity recycle nutrients and stabilize the climate, while Earth's size and gravity retain a breathable atmosphere without crushing organisms. The Moon stabilizes axial tilt, ensuring predictable seasons, and the planet's chemical composition provides life's building blocks, carbon, hydrogen, and more. This delicate balance, unlike conditions on Mars or Venus, creates diverse ecosystems where life thrives.

13. What would happen if the size of the Earth were too small or too big?

Ans. : If Earth were significantly smaller or larger, its habitability would be compromised due to changes in gravity, atmosphere, and geological processes. A smaller Earth, with weaker gravity, would struggle to retain a dense atmosphere, leading to insufficient pressure for liquid water and poor protection from solar radiation, much like Mars. It might also lack the mass to sustain plate tectonics, limiting nutrient cycling and climate regulation. Conversely, a larger Earth with stronger gravity could trap a thick, oppressive atmosphere, like Venus, potentially causing extreme temperatures and pressure that crush life. Increased geological activity might lead to excessive volcanism, disrupting stable climates. Both scenarios would likely prevent the delicate balance of conditions, liquid water, breathable air, and stable ecosystems required for life as we know it.

14. You are tasked with designing a new settlement for humans on Mars. Name three things you would need to recreate from Earth to support human life there. Which of these do you think is the hardest to replicate, and why?

Ans. : Three Things Needed:

• Liquid Water: Essential for drinking, growing crops, and supporting life processes. Breathable Atmosphere: An oxygen-rich atmosphere for respiration, protected from Mars' thin, carbon dioxide-heavy atmosphere.

• Temperature Control: A system to maintain Earth-like temperatures, as Mars' average temperature is around -60°C.

• Hardest to' Replicate: Creating a breathable atmosphere is likely the hardest. Mars' atmosphere is 100 times thinner than Earth's and is mostly carbon dioxide, requiring complex systems to produce and maintain oxygen at the right pressure for humans. Generating enough oxygen for a settlement, shielding it from radiation, and preventing leaks in a harsh environment is technologically challenging compared to providing water (which can be transported or extracted) or temperature control (achievable with insulated habitats).

15. Discuss five examples of vegetative propagation.

Ans. : Vegetative propagation is asexual reproduction where plant parts like stems, roots, or leaves grow into new plants.
Five examples:
• Money Plant: A stem cutting with a node grows roots when placed in water or soil, forming a new plant.
• Potato: The "eyes" (buds) on a sprouted potato can be planted to grow a new potato plant.
• Ginger: A piece of ginger rhizome with a bud, when planted in soil, develops into a new plant.
• Sugarcane: Stem cuttings with nodes are planted to produce new sugarcane plants, as sugarcane rarely produces seeds.
• Bamboo: Sections of bamboo stems or rhizomes can be planted to grow new bamboo plants, relying on vegetative propagation.

*** Fill in the blanks:** **[5]**

16. Earth's _____ covers about 70% of its surface, making it appear blue from space.

Ans. : Hydrosphere

17. The _____ zone is the range of distances from the Sun where liquid water can exist.

Ans. : Habitable

18. The _____ layer in the atmosphere protects life by blocking harmful ultraviolet rays.

Ans. : Ozone

19. In plants, _____ is the process where pollen is transferred to enable fertilization.

Ans. : Pollination

20. _____ reproduction produce offspring that are exact copies of a single parent.

Ans. : Asexual

* Answer the following questions in short. [42]

21. Why is Venus the hottest planet despite being farther from the Sun than Mercury?

Ans. : Venus is the hottest planet (average 450°C) due to its thick carbon dioxide atmosphere, which causes a strong greenhouse effect, trapping heat. Mercury, despite being closer to the Sun, lacks an atmosphere to retain heat, resulting in a lower average temperature (170°C).

22. How does Earth's geography contribute to its habitability?

Ans. : Earth's gravity is strong enough to hold its atmosphere, preventing gases from escaping into space, unlike Mars. It is not too strong to crush organisms, unlike a larger planet, ensuring a balanced environment for life with oxygen and protection.

23. What role does the hydrosphere play in sustaining life?

Ans. : The hydrosphere, covering 70% of Earth's surface, provides water for drinking, crop growth, and aquatic ecosystems. It drives the water cycle, producing rainfall that supports plants and animals, and acts as a solvent for nutrient transport

24. Differentiate between asexual and sexual reproduction in terms of offspring variation.

Ans. : - Asexual reproduction produces offspring identical to the single parent, with no variation (e.g., vegetative propagation).
- Sexual reproduction involves two parents, combining gametes to create offspring with mixed genetic traits, leading to variation.

25. How does the magnetic field protect life on Earth?

Ans. : Earth's magnetic field deflects harmful cosmic rays and solar wind, preventing atmospheric erosion and ozone depletion. This protects living organisms from damaging UV radiation and maintains conditions for life.

26. What is biodiversity loss, and why is it a concern?

Ans. : Biodiversity loss is the extinction or reduction of species due to habitat destruction, disrupting ecosystems. It is a concern because each species plays a role (e.g., plants provide food), and their loss weakens nature's ability to support life.

27. Explain the significance of India's Mangalyaan mission.

Ans. : Launched in 2013 by ISRO, Mangalyaan studied Mars' atmosphere, surface, and past water presence, exploring its potential to support life. It showcased India's low-cost space technology and contributed to global Mars research.

28. What is the role of Earth's magnetic field in sustaining life?

Ans. : self

29. Why is Earth's atmosphere essential for life?

Ans. : self

30. What is meant by geodiversity?

Ans. : self

31. Name one example of vegetative propagation in plants.

Ans. : self

32. What is one cause of biodiversity loss?

Ans. : self

33. How does the greenhouse effect differ on Earth compared to Venus?

Ans. : self

34. Explain the role of the hydrosphere in supporting life on Earth.

Ans. : self

35. Differentiate between external and internal fertilisation in animals.

Ans. : self

36. Why is the triple planetary crisis a threat to life on Earth?

Ans. : self

37. Describe how Earth's position in the solar system, atmosphere, and geosphere contribute to its ability to support life.

Ans. : self

38. Explain the processes of asexual and sexual reproduction, highlighting how they contribute to the continuity and variation of life.

Ans. : self

39. Discuss the impact of climate change on Earth's ecosystems and suggest two measures to mitigate it.

Ans. : self

40. A town near a river has seen declining fish populations and poor crop yields. Local industries dump waste into the river, and deforestation has occurred for urban expansion.
    (a) What type of pollution is affecting the river, and how does it impact fish?
    (b) How might deforestation contribute to poor crop yields?
    (c) Suggest one solution to address the river pollution.

Ans. : self

41. "Earth is like a giant teamwork project between nature, weather, and life itself. It is a vast, living system where land, air, water, and living things support and affect one another. Even a small change in one part, like cutting down a forest, can impact rainfall, soil, air quality, and the animals that live there."

(a) What are the four main systems mentioned in the excerpt?
(b) How can cutting down a forest affect rainfall?
(c) Why is the balance between these systems important for life?

Ans. : self

*** State whether the following sentences are true or false. Correct the false sentences and rewrite them.** **[5]**

42. Earth's gravity is too weak to hold its atmosphere, causing gases to escape into space.

Ans. : false

43. The greenhouse effect helps maintain Earth's temperature suitable for life.

Ans. : true

44. All planets in the solar system have a thick atmosphere like Earth.

Ans. : false

45. Vegetative propagation is an example of sexual reproduction in plants.

Ans. : false

46. Climate change is caused by human activities like burning fossil fuels.

Ans. : true

*** Answer the following questions in short.** **[30]**

47. Is the temperature or distance from the sun the only factor that makes the Earth habitable?

Ans. : Earth's habitability isn't solely due to its temperature or distance from the Sun, though its position in the habitable zone is crucial for liquid water. Other key factors include a protective atmosphere, a magnetic field shielding against solar wind, active geology like plate tectonics, and a stable rotation and tilt influenced by the Moon. Earth's size, gravity, and chemical composition also provide the essential elements and conditions for life, creating a delicate balance that makes our planet uniquely suited for diverse ecosystems.

48. A city has recently cut down a large patch of forest to build new roads and buildings. Discuss the possible effects this could have on the local climate and biodiversity. How might this affect water availability or quality in the area?

Ans. : • Effects on Local Climate: Deforestation reduces trees that absorb carbon dioxide, potentially increasing local temperatures due to less shade and a weakened greenhouse gas balance. It may also disrupt rainfall patterns, as trees contribute to water vapour for cloud formation.

• Effects on Biodiversity: Loss of forest habitat threatens plants and animals, reducing biodiversity. For example, animals like deer or predators like tigers may

lose food sources or habitats, disrupting ecosystems. Deforestation can reduce water availability by disrupting the water cycle, as trees help retain soil moisture and contribute to rainfall. Soil erosion from cleared land can pollute nearby water bodies with sediment, affecting water quality.

49. A friend says, "The Earth has always had climate changes in the past, so today's global warming is nothing new." How would you respond using what you've learnt in this and other chapters of your science book?

Ans. : While Earth has experienced natural climate changes in the past (e.g., ice ages), today's global warming is different because it is primarily driven by human activities, such as burning fossil fuels, which release large amounts of greenhouse gases like carbon dioxide and methane. These gases intensify the greenhouse effect, causing rapid warming, melting ice caps, rising sea levels, and extreme weather, unlike slower natural changes. The triple planetary crisis (climate change, biodiversity loss, pollution) shows how human actions are disrupting Earth's balance, threatening life. Unlike past changes, current warming requires urgent action, like using renewable energy, to protect ecosystems.

50. If there were no atmosphere on the Earth, would it affect life, temperature, and water on the planet? Explain.

Ans. : Without an atmosphere:

• Life: Life would struggle to survive, as most organisms require oxygen for respiration. The absence of the ozone layer would allow harmful UV rays to damage cells, affecting plants, animals, and humans.

• Temperature: Earth would lose heat to space without the greenhouse effect, becoming extremely cold, similar to the Moon. Daytime temperatures could soar due to unfiltered sunlight, and nights would be freezing.

• Water: Liquid water would evaporate or freeze due to extreme temperature swings and low pressure, making it unavailable for life processes. The water cycle (rainfall, clouds) would cease without atmospheric water vapour.

51. Imagine Earth's magnetic field suddenly disappeared. What kinds of problems could arise for life on Earth? Explain.

Ans. : Without Earth's magnetic field, high-energy particles like cosmic rays and solar wind would directly hit the atmosphere, potentially depleting the ozone layer and allowing harmful UV rays to reach the surface. This could damage living cells, increasing risks like skin cancer in humans and harming plants and animals. The atmosphere might erode over time, reducing oxygen levels and altering the climate, making Earth less habitable. Satellites and communication systems could also be disrupted by unshielded particles, affecting human technology.

52. In a village, the temperature has been increasing, and rainfall has become unpredictable over the past few years. What could be causing this change?

Suggest two ways the village could adapt to these new conditions.

Ans. : Causes: The changes are likely due to climate change, driven by increased greenhouse gases from burning fossil fuels, leading to global warming and altered weather patterns. Deforestation or local land use changes could also reduce moisture and affect rainfall.

Adaptation Strategies:

• Water Conservation: Implement rainwater harvesting and efficient irrigation systems to store water during unpredictable rainfall.

• Sustainable Farming: Use drought-resistant crops and sustainable farming practices to cope with higher temperatures and reduced water availability.

53. You notice tiny green plants growing in cracks on your school wall after the monsoon. Where do you think the seeds came from? What conditions helped these plants grow there?

Ans. : The seeds likely came from nearby plants, carried by wind, birds, or insects. For example, a bird eating a fruit may have dropped or excreted the seed into the crack. The monsoon provided water, which is essential for seed germination. The crack in the wall likely trapped some soil or organic matter, offering nutrients. Sunlight and air, available in the outdoor environment, support photosynthesis and respiration. The moist, sheltered crack created a microhabitat suitable for growth.

54. A village near a forest has experienced hotter summers and reduced rainfall over the past five years. The forest has been partially cleared for farming, and a nearby factory releases smoke and waste into a river. The village's crops are failing, and fish populations in the river are declining.

Q.1. What human activities are likely causing the hotter summers and reduced rainfall?

Q.2. How does forest clearing contribute to these changes?

Q.3. Suggest two measures to improve the village's crop and fish populations.

Ans. : 1. Human Activities: Burning fossil fuels in the factory releases greenhouse gases, intensifying the greenhouse effect and causing hotter summers. Deforestation for farming reduces water vapour, disrupting rainfall patterns.

2. Forest Clearing: Forests contribute to the water cycle by releasing water vapour, forming clouds, and producing rainfall. Clearing trees reduces this process, leading to less rainfall and higher temperatures due to less shade and carbon dioxide absorption.

3. Measures:

- Reforestation: Plant trees to restore the water cycle, increase rainfall, and provide shade, improving crop growth.

- Reduce Pollution: Regulate factory waste to prevent river pollution, protecting fish populations and ensuring clean water for irrigation.

55. In animals, gametes are called sperm (male) and eggs (female). Fertilisation may take place in water, for example, male and female fish or frogs eject sperm and eggs, respectively, into the water where they combine to form the zygote. In birds and mammals, including humans, sperm are deposited inside the female, and fertilisation takes place when the sperm swim towards the egg produced by the female.

Q.1. What is the difference between fertilisation in fish and birds?

Q.2. Why do fish produce many eggs compared to birds?

Q.3. How does internal fertilisation benefit mammals like humans?

Ans. : 1. Difference in Fertilisation: In fish, fertilisation is external, with sperm and eggs released into water to form a zygote. In birds, fertilisation is internal, with sperm deposited inside the female, and the zygote develops into an egg laid for hatching.

2. Fish Produce Many Eggs: Fish produce many eggs because external fertilisation in water exposes eggs to predators, currents, and environmental risks, so a large number increases the chance of some surviving. Birds produce fewer eggs as they provide parental care, like incubation, improving survival rates.

3. Benefit of Internal Fertilisation: Internal fertilisation in mammals allows the embryo to develop inside the female, receiving nutrition and protection from the mother's body, increasing survival chances compared to external development in harsh environments.

56. A science team is planning to create a small habitat on Mars to grow plants for future settlers. They know Mars has a thin atmosphere, extreme cold, and no liquid water, but they can bring Earth soil and water.

Q.1. Why does Mars' thin atmosphere make plant growth difficult?

Q.2. What conditions must the team provide to grow plants in the Martian habitat?

Q.3. Suggest one challenge the team might face in maintaining the habitat.

Ans. : 1. Thin Atmosphere: Mars' atmosphere is 100 times thinner than Earth's, lacking sufficient oxygen for plant respiration and carbon dioxide pressure for photosynthesis. It also fails to protect against UV radiation and extreme cold, hindering plant growth.

2. Conditions Needed: The team must provide liquid water, nutrient-rich Earth soil, an oxygen-rich atmosphere, temperature control (around 15°C), artificial sunlight for photosynthesis, and radiation shielding to mimic Earth's habitable conditions.

3. Challenge: Maintaining a stable oxygen-rich atmosphere is challenging due to Mars' low pressure and potential leaks in the habitat, requiring constant oxygen production and monitoring to support plant respiration.

*** Answer the following questions in details [4 marks]** **[20]**

57. Describe the processes of sexual reproduction in plants and animals and highlight their key differences.

Ans. : - Plants: Sexual reproduction involves flowers with male (anther, producing pollen) and female (ovule) parts. Pollination, often by wind or insects, transfers pollen to the stigma. Fertilization forms a zygote, developing into a seed, with the flower's fleshy part becoming a fruit for dispersal.

- Animals: Sexual reproduction involves male (sperm) and female (egg) gametes. In aquatic animals like fish, fertilization is external in water. In birds, internal fertilization produces eggs that develop externally during hatching. In mammals, internal fertilization and embryo development occur inside the female, who provides nutrition.

- Differences: Plants use pollination for gamete transfer, while animals rely on direct sperm-egg interaction. Plant zygotes form seeds, while animal zygotes develop into embryos. Animals may provide parental care (e.g., bird egg incubation), unlike plants, which rely on seed dispersal.

58. Explain how Earth's position, atmosphere, and magnetic field make it uniquely suitable for life.

Ans. : Earth's unique suitability for life stems from:

- Position: Located in the habitable zone, Earth's distance from the Sun allows liquid water to exist, essential for all known life forms. Its nearly circular orbit ensures stable temperatures, avoiding extreme heat or cold.

- Atmosphere: The atmosphere provides oxygen for respiration, supports photosynthesis, and includes an ozone layer that blocks harmful UV rays. The greenhouse effect traps heat, maintaining temperatures suitable for liquid water.

- Magnetic Field: Generated by molten iron in the core, it shields Earth from cosmic rays and solar wind, preventing atmospheric loss and protecting life from radiation damage. These factors create a balanced environment, unlike Venus (too hot) or Mars (too cold, thin atmosphere), enabling diverse life forms to thrive.

59. Explain how reproduction ensures the continuity of life and allows adaptation to changing environments.

Ans. : Reproduction ensures life's continuity and adaptation:

- Continuity: Reproduction produces new individuals, preventing species extinction. Asexual reproduction creates identical offspring, ensuring continuity in stable environments (e.g., bacteria dividing). Sexual reproduction produces offspring with mixed traits, maintaining species diversity

- Adaptation: Sexual reproduction introduces genetic variation through the combination of gametes from two parents, allowing offspring to develop new traits (e.g., camels' humps for desert survival). Over generations, these variations enable species to adapt to environmental changes, like bacteria becoming antibiotic-resistant.

- Mechanisms: In asexual reproduction, a single parent produces exact copies (e.g., vegetative propagation in plants). In sexual reproduction, gametes combine to form a zygote with unique traits, promoting variation (e.g., pollination in plants, fertilization in animals). This dual ability ensures species survival and evolution in changing conditions.

60. How do Earth's systems (atmosphere, hydrosphere, geosphere, biosphere) interact to sustain life?

Ans. : Earth's systems interact to support life:
- Atmosphere: Provides oxygen for respiration, carbon dioxide for photosynthesis, and traps heat via the greenhouse effect, maintaining suitable temperatures.
Hydrosphere: Water (70% of Earth's surface) supports aquatic life, provides freshwater, and drives rainfall through the water cycle, influencing habitats.
- Geosphere: Soil and rocks supply nutrients (e.g., nitrogen, potassium) for plants, while geodiversity creates varied habitats.
- Biosphere: Plants produce food and oxygen, animals consume plants or other animals, and decomposers recycle nutrients, maintaining ecosystem balance.
- Interactions: Plants use water, sunlight, and carbon dioxide to produce oxygen, supporting animals. Water transports nutrients in plants and regulates animal temperature. Soil supports plant growth, sustaining food chains. Disruptions like deforestation affect all systems, reducing rainfall and biodiversity.

61. Discuss the triple planetary crisis and suggest three measures to mitigate its impact.

Ans. : The triple planetary crisis includes:
- Climate Change: Burning fossil fuels releases greenhouse gases, intensifying the greenhouse effect, causing global warming, sea level rise, and extreme weather.
Biodiversity Loss: Habitat destruction reduces species, disrupting ecosystems (e.g., loss of grasses affects herbivores and predators).
- Pollution: Air, water, and soil pollution from factories, vehicles, and waste harms health, crops, and aquatic life.
- Mitigation Measures:
- Use Renewable Energy: Adopt solar and wind energy to reduce greenhouse gas emissions.
- Conserve Habitats: Protect and restore ecosystems like forests to maintain biodiversity.
- Improve Waste Management: Promote recycling and sustainable practices to reduce pollution in the air, water, and soil. These measures help restore Earth's balance, ensuring long-term habitability.

*** Answer the following questions in on sentence** **[10]**

62. What is the habitable zone?

Ans. : The habitable zone is the range of distances from the Sun where temperatures allow liquid water to exist, supporting life.

63. Why is Earth called the Blue Planet?

Ans. : Earth appears blue from space because about 70% of its surface is covered with water.

64. What is the role of the ozone layer?

Ans. : The ozone layer absorbs harmful ultraviolet (UV) rays from the Sun, protecting living organisms.

65. What generates Earth's magnetic field?

Ans. : The movement of molten iron in Earth's core generates its magnetic field.

66. What is vegetative propagation in plants?

Ans. : Vegetative propagation is asexual reproduction where plant parts like stems, roots, or leaves grow into new plants.

67. What are gametes in sexual reproduction?

Ans. : Gametes are specialised cells (e.g., sperm, eggs, pollen, ovules) carrying half the genetic material of a parent.

68. Name one component of the triple planetary crisis.

Ans. : Climate change is a component of the triple planetary crisis.

69. What is geodiversity?

Ans. : Geodiversity is the variety of landforms, rocks, soils, and geological processes creating diverse habitats.

70. What is pollination in plants?

Ans. : Pollination is the transfer of pollen to the ovule, enabling fertilization and seed production.

71. How does the greenhouse effect benefit Earth?

Ans. : The greenhouse effect traps heat to maintain Earth's temperature, allowing liquid water and life to exist

*** Match the Following.** **[8]**

72.

Column A	Column B
Q.1. Habitable Zone	(a) Protects against UV rays
Q.2. Ozone Layer	(b) Allows liquid water to exist
Q.3. Magnetic Field	(c) Produces identical offspring

Q.4. Asexual Reproduction	(d) Shields from cosmic rays

Ans. :

Column A	Column B
1. Habitable Zone	(b) Allows liquid water to exist
2. Ozone Layer	(a) Protects against UV rays
3. Magnetic Field	(d) Shields from cosmic rays
4. Asexual Reproduction	(c) Produces identical offspring

73.

Column A	Column B
Q.1. Greenhouse Effect	(a) Produces seeds through fertilization
Q.2. Hydrosphere	(b) Traps heat to maintain temperature
Q.3. Sexual Reproduction	(c) Includes oceans, lakes, and rivers
Q.4. Triple Planetary Crisis	(d) Breakdown of rocks provides nutrients

Ans. :

Column A	Column B
1. Greenhouse Effect	(b) Traps heat to maintain temperature
2. Hydrosphere	(c) Includes oceans, lakes, and rivers
3. Sexual Reproduction	(a) Produces seeds through fertilization
4. Triple Planetary Crisis	(d) Climate change, biodiversity loss, pollution

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