*** Choose The Right Answer From The Given Options.** [16]

1. What motivates humans to explore, ask questions, and conduct experiments?
   (A) The need for relaxation and leisure activities
   (B) A focus on maintaining familiar habits
   (C) To avoid new experiences
   (D) Curiosity and the desire to understand the world

   Ans. : (D) Curiosity and the desire to understand the world

2. What happens to water when it is cooled and heated respectively?
   (A) It turns into a gas when cooled and a solid when heated
   (B) It turns into ice when cooled and steam when heated
   (C) It turns into a liquid when cooled and a solid when heated
   (D) It remains unchanged when cooled or heated

   Ans. : (B) It turns into ice when cooled and steam when heated

3. How do people understand the difference between hot and cold water?
   (A) By measuring the water's colour
   (B) By using their sense of touch
   (C) By observing the water's movement
   (D) By the sound the water makes

   Ans. : (B) By using their sense of touch

4. Which of the following best describes the scientific method?
   (A) A process of memorising information about different topic
   (B) A step-by-step process for investigating questions, including observing, hypothesising, experimenting, analysing, and concluding
   (C) A method of guessing answers without testing them
   (D) A way to only analyse existing data without conducting new experiments

   Ans. : (B) A step-by-step process for investigating questions, including observing, hypothesising, experimenting, analysing, and concluding

5. What is science primarily concerned with?
   (A) Mathematics
   (B) History
   (C) The world we live in
   (D) Literature

   Ans. : (C) The world we live in
   Explanation:
   Science helps us understand and explore the world around us and the universe. It involves studying natural phenomena and discovering how things work.

6. What quality is most important for exploring science?

(A) Patience (B) Curiosity (C) Creativity (D) Speed

Ans. : (B) Curiosity

Curiosity is key in Science because it drives us to ask questions and explore new ideas to understand the world better.

7. What does every new discovery in science lead to ?

(A) A confirmed fact

(B) More questions and further exploration

(C) A finished projects

(D) A final answer

Ans. : (B) More questions and further exploration

Explanation:

Each new discovery in Science often leads to more questions and further exploration, expanding our knowledge.

8. What kinds of questions does science help us answer?

(A) Questions about daily chores

(B) Questions about the natural world and its processes

(C) Questions about historical events

(D) Questions about popular culture

Ans. : (B) Questions about the natural world and its processes

9. What happens when new discoveries are made in science?

(A) They reinforce existing knowledge

(B) They often change our understanding of the world.

(C) They are quickly forgotten

(D) They provide definitive answers

Ans. : (B) They often change our understanding of the world

Explanation:

New discoveries can revise or change our understanding of how things work and the world around us.

10. What is the primary goal of science?

(A) To memorize facts and figures

(B) To understand the world we live in and uncover the secrets of the universe

(C) To perform experiments without any purpose

(D) To follow instructions without questioning

Ans. : (B) To understand the world we live in and uncover the secrets of the universe

11. What is the most important trait needed to explore and understand the world through science?

(A) Memorization (B) Discipline (C) Curiosity (D) Obedience

Ans. : (C) Curiosity

12. Which of the following science is compared to?

(A) A complex equation (B) A big adventure

(C) A boring task (D) A straightforward activity

Ans. : (B) A big adventure

13. What is one of the fascinating aspects of science?

(A) It is limited to laboratories.

(B) It only involves studying large objects.

(C) It is like a giant and unending jigsaw puzzle.

(D) It has a fixed amount of knowledge to discover.

Ans. : (C) It is like a giant and unending jigsaw puzzle.

14. How is science often conducted?

(A) Alone (B) In large teams

(C) By memorizing facts (D) Without asking questions

Ans. : (B) In large teams

15. How is Science described in relation to exploration?

(A) Like a puzzle with no end (B) Like a routine task

(C) Like a set of rules (D) Like a straightforward path

Ans. : (A) Like a puzzle with no end

Explanation:

16. What kind of questions does Science help us answer?

(A) Questions about daily chores

(B) Questions about the natural world and its processes

(C) Questions about historical events

(D) Questions about popular culture

Ans. : (B) Questions about the natural world and its processes

Explanation:

*** a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option.** [4]

17. Assertion (A) : Science is just about memorising facts and figures or doing experiments.
Reason (R) : It is about following a step-by-step process that helps us find answers to our questions.

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

(B) Both (A) and (R) are true and (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. : (D) (A) is false but (R) is true.

18. Assertion (A) : Along with food, we need water to survive.
Reason (R) : Water is such a delightful substance.

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

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

19. Assertion (A) : Science is like a giant and unending jigsaw puzzle.
Reason (R): There is no limit to what we can discover, since every new piece of knowledge leads to more questions and more things to find out.

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

(B) Both (A) and (R) are true and (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)

20. Assertion (A) : We start exploring our surroundings and asking questions right from our childhood.
Reason (R): The most important thing is to have 'speed' to discover new things.

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

(B) Both (A) and (R) are true and (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. : (C) (A) is true but (R) is false.

*** Fill In The Blanks With Correct Alternative.** **[5]**

21. Some of the most ground breaking discoveries have often come from _____ places.

Ans. : unexpected

22. _____ is the first step in the scientific method.

Ans. : observation

23. Scientists are the people who follow the _____ to solve problems of to discover new things.

Ans. : scientific method

24. Scientists across the world _____ together.

Ans. : work

25. Science is about following a _____ process that helps us find answers to our questions.

Ans. : step-by-step

*** State Whether The Sentences Are True Or False.[1 Marks Each]** **[5]**

26. There is always something new and exciting to discover.

Ans. : True

27. Science is like a giant and unending jigsaw pure puzzle.

Ans. : True

28. Human are naturally curious about the world around them.

Ans. : True

29. Always there is a limit to what we can discover.

Ans. : False

30. The natural curiosity is foundation of science.

Ans. : True

*** Answer The Following Questions In One Sentence.[1 Marks Each]** **[13]**

31. What makes Earth unique?

Ans. : Earth is unique as the only known planet supporting life, showcasing diverse ecosystems and species that thrive across different regions.

32. Why is curiosity emphasized as important in science?

Ans. : Curiosity is crucial because it drives exploration, questioning, and understanding of the natural world, essential for scientific inquiry.

33. Describe scientific discovery.

Ans. : Scientific discovery is likened to solving a continuous puzzle where each new finding adds another piece, expanding our understanding of the world.

34. Give examples that illustrate the broad scope of science.

Ans. : Examples include studying nature, phenomena like cooking and weather, and discoveries from unexpected places, showing Science's pervasive influence.

35. Describe the process of growth in plants and animals.

Ans. : We learn from the chapter about observing transformations like seeds to plants and caterpillars to butterflies, sparking curiosity about their growth mechanisms.

36. What do you think is the role of water?

Ans. : Water is highlighted as essential for life and described through its various forms and uses, from rain and freezing to boiling and hydration.

37. What analogy is used to describe Science?

Ans. : Science is likened to an endless jigsaw puzzle where each discovery adds a piece, continuously reshaping and expanding our knowledge.

38. How does the passage relate everyday problem-solving to science?

Ans. : Everyday problem-solving, like fixing a pen or troubleshooting household issues, mirrors the scientific method of observation, hypothesis, and testing.

39. What message about learning Science do you gather from the chapter?

Ans. : We are encouraged about curiosity, observation, and questioning as fundamental to learning Science, which involves continuous exploration and discovery.

40. What is the purpose of science?

Ans. : The purpose of science is to understand the world we live in by observing, asking questions, and conducting experiments to uncover the secrets of the universe.

41. Why is curiosity emphasized as crucial in science?

Ans. : Curiosity, is emphasized because it drives us to ask questions and seek answers. It fuels scientific inquiry by motivating us to explore and discover new things about our surroundings and the universe.

42. What do organisms need to support their growth?

Ans. : Organisms need food and water to support their growth.

43. What term is used for people who follow the scientific method to solve problems and make discoveries?

Ans. : Scientist

*** Answer The Following Questions In Short.[2 Marks Each]** **[56]**

44. How does Science help us understand the world?

Ans. : Science helps us understand the world by providing a systematic way of thinking and exploring. It allows us to ask questions, conduct experiments, and analyze results to gain knowledge about natural phenomena and how things work.

45. Give an example of applying the scientific method in daily life.

Ans. : An example of applying the scientific method in daily life is troubleshooting why a light bulb isn't working. You observe the problem (the bulb doesn't light up), form a hypothesis (the bulb might be burnt out), test the hypothesis (replace the bulb with a new one), and analyze the results (if the new bulb lights up, your hypothesis was likely correct).

46. Describe the process of scientific inquiry.

Ans. : Scientific inquiry involves several steps: observing something interesting, asking a question about it, formulating a hypothesis (a possible answer),

testing the hypothesis through experiments or further observations, analyzing the results, and drawing conclusions based on evidence.

47. What is the scope of scientific exploration?

Ans. : The scope of scientific exploration is vast and limitless. It ranges from studying our planet Earth and its ecosystems to exploring the depths of oceans, the vastness of outer space, and everything in between— such as materials, living organisms, and natural phenomena.

48. How do everyday activities connect to scientific thinking?

Ans. : Everyday activities often involve problem-solving and decision¬making processes that mirror the scientific method. Whether it's fixing a broken item or cooking, we make observations, form hypotheses, and test them to find solutions.

49. What makes the study of science enjoyable?

Ans. : The study of science is enjoyable because it encourages curiosity, discovery and understanding. It involves exploring fascinating questions, conducting experiments, and uncovering how things work, which can be both exciting and rewarding.

50. What is the advice you learnt as young learners about learning Science?

Ans. : As young learners, the advice about learning Science is to be curious, observe keenly, ask questions (especially "why" and "how"), and explore the world around us. It encourages us to embrace challenges and see learning as a continuous journey of discovery.

51. Describe the collaborative nature of scientific work.

Ans. : Scientific work is often collaborative, with scientists from around the world working together in teams. They share ideas, data, and findings, which accelerates the pace of discovery and allows for more comprehensive understanding of complex problems and phenomena. Collaboration in science fosters creativity, peer review, and validation of research findings.

52. Ho you think curiosity plays a crucial role in the study of science? If yes, give reason to substantiate your answer.

Ans. : Role of Curiosity: Curiosity is the driving force behind scientific inquiry. It motivates us to ask questions and seek answers, leading to new discoveries and a deeper understanding of the world. Without curiosity, the journey of scientific exploration would not be as engaging or fruitful. It is curiosity that sparks our interest in studying various phenomena and pushes us to find explanations for the mysteries we observe.

53. Why can Science be described as a big adventure?

Ans. : Science as a Big Adventure: Science is described as a big adventure because it involves exploring the unknown, asking questions, and making discoveries. The

study of Science is an adventurous journey where we continuously Uncover new pieces of knowledge, much like solving a giant jigsaw puzzle. Each discovery leads to more questions and further exploration, making the process exciting and never-ending.

54. How does Science help us understand natural phenomena like the blooming of a flower or the shining of stars?

Ans. : Understanding Phenomena: Science helps us understand natural phenomena by providing explanations based on observation, experimentation, and analysis. Through scientific inquiry, we learn about the processes and mechanisms behind these phenomena, such as nuclear fusion in stars or the role of environmental cues in flowering.

55. Why is the Earth considered a special planet?

Ans. : Earth as a Special Planet: The Earth is considered special because it is the only known planet that supports life. The variety of plants and animals that thrive in different regions of the Earth. The unique ability of Earth to harbor life makes it a focal point of scientific study.

56. What are some of the daily life situations mentioned in the passage where Science can be applied?

Ans. : Daily Life Situations Applying Science: The passage provides examples of daily life situations where Science is applied, such as figuring out why a pen stops writing, determining why dal spills out of a cooker, identifying the source of a flat bicycle tire, and troubleshooting a non-working light bulb. These examples illustrate how the scientific method is used in everyday problem-solving, demonstrating that Science is not confined to laboratories but is an integral part of our daily lives.

57. Explain the scientific method using the example of a pen that stops writing.

Ans. : Scientific Method and Pen Example: When a pen stops writing, the scientific method involves observing the problem, asking why it happened, guessing possible reasons (hypotheses), and testing these guesses. For instance, one might guess that the ink is finished and check the refill. If the ink Ts not finished, another guess might be that the ink dried up. Testing this hypothesis could involve trying to unclog the pen. This step-by-step process of hypothesizing and testing is the essence of the scientific method.

58. How can studying Science help in solving bigger problems and mysteries of the universe?

Ans. : Solving Bigger Problems with Science: Studying Science equip us with the skills to solve larger and more complex problems by enhancing our ability to observe, analyze, and experiment. It encourages critical thinking and systematic problem-solving, which are essential for addressing global challenges, such as environmental issues, medical advancements, and technological innovations. Science provides the

tools and methodologies needed to explore and understand complex phenomena and find effective solutions.

59. Why is teamwork important in scientific discovery?

Ans. : Importance of Teamwork in Science: Teamwork is crucial in scientific discovery because it allows for the pooling of knowledge, resources, and skills. Scientists often work in large teams to tackle complex problems, share diverse perspectives, and collaborate on experiments. The scientific progress is often a collective effort, and working together enhances the chances of making significant discoveries. Collaborative learning can be more enjoyable and productive too.

60. Describe the role of observation and experimentation in the scientific method.

Ans. : Observation and Experimentation: Observation and experimentation are fundamental components of the scientific method. Observation involves carefully noting and recording phenomena, while experimentation tests hypotheses through controlled and repeatable procedures. The passage illustrates this with the example of troubleshooting a pen or cooking mishaps, where careful observation leads to formulating hypotheses, and experimentation helps verify them. These steps are essential for drawing accurate conclusions and advancing scientific knowledge.

61. Why could we say that Science is everywhere around us?

Ans. : Science is Everywhere Around Us: Science is omnipresent by highlighting its application in various aspects of daily life, from cooking and repairing bicycles to understanding natural phenomena and exploring outer space. Science helps explain the behaviour of water, the growth of plants, and the materials used in everyday objects. This pervasive presence of Science underscores its relevance and importance in understanding and improving our world.

62. What steps should one follow to find answers to scientific questions?

Ans. : Steps to Find Scientific Answers: To find scientific answers, one should follow these steps: observe an interesting phenomenon, ask questions about it, formulate a hypothesis (a possible answer), test the hypothesis through experiments or further observations, and analyze the results to see if they support the hypothesis. This systematic approach helps in drawing accurate conclusions and building a body of scientific knowledge.

63. What is meant by the term scientific method?

Ans. : The scientific method is a step-by-step process used to investigate and answer questions about the world. It involves making observations, asking questions, forming a hypothesis, conducting experiments, analysing results, and drawing conclusions.

64. Why do scientists often work in teams?

Ans. : Scientists work in teams to combine diverse ideas and skills, making discoveries more exciting and effective. Teamwork allows them to tackle complex problems more efficiently and achieve impactful results.

65. What method do scientists use to find reliable answers and solve problems?

Ans. : self

66. What is necessary for a seed to grow into a plant besides water and sunlight?

Ans. : self

67. What drives scientific discoveries?

Ans. : self

68. What temperature does water boil at?

Ans. : self

69. Write the purpose of science.

Ans. : self

70. Explain the process of scientific inquiry.

Ans. : self

71. Give two examples of applying the scientific method in daily life.

Ans. : self

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