

# GENERAL KNOWLEDGE

1. Which characteristic of Earth is most responsible for our seasons?

- (1) Earth's gravitational pull on the moon.
- (2) Orbit around the Sun
- (3) Earth's tilt on the axis.
- (4) Both (2) and (3)



2. Fog would most likely occur when

- (1) Cool rain falls on warmer ground.
- (2) Air pressure increases and water vapour decreases.
- (3) Relative humidity decreases and dew point decreases.
- (4) Moist air passes over cooler ground causing condensation.

3. Which of the following is a safety hazard while working in the science laboratory?

- (1) knowing how to use equipment
- (2) wearing safety goggles
- (3) following directions
- (4) working alone



4. What is the proper safety response if trash catches fire in a lab?

- (1) throw chemical on the fire
- (2) leave the room to seek help
- (3) watch the fire to see if it spreads
- (4) use the appropriate fire extinguisher

5. Growing plants and rearing animals for food, clothing and other useful products is called

- (1) Horticulture
- (2) Apiculture
- (3) Agriculture
- (4) All of these

6. The symbol  shows that the

product inside is:

- (1) toxic product
- (2) unhealthy product
- (3) pressurized gas
- (4) flammable product

7. What does this symbol means?

- (1) high density polymer material
- (2) high density polyethylene material
- (3) high density polymethylene material
- (4) none of these



8. Raman determined the mass of four rock samples. Then, he put each rock sample in a cup of vinegar for three days. The table below represents the data he collected during his investigation.

**Rock Sample Data**

Rock Sample	1	2	3	4
Mass of Rock Before Placed in Vinegar (g)	10	20	15	15
Mass of Rock After Placed in Vinegar (g)	10	20	10	5
Observations	no change	no change	some bubbles	many bubbles

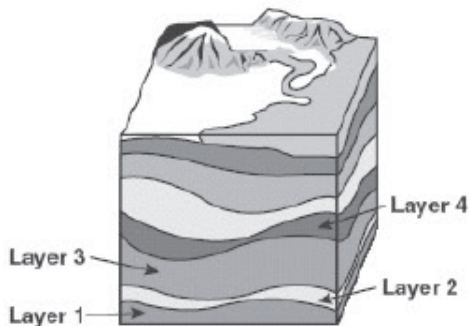
Which statement is the best conclusion from the rock sample data?

- (1) Rocks 1 and 2 are the same type of rock.
- (2) Rock 4 is an igneous rock.
- (3) Rocks 3 and 4 are chemically changed.
- (4) Rocks 1, 2, 3, and 4 are the same type.

9. What is the main reason for clearly recording the procedures for an experiment?
- (1) so the experiment can be modified
  - (2) so the experiment can be connected
  - (3) so the experiment can be repeated
  - (4) so the experiment can be summarized
10. The Tibetan Antelope or Chiru are killed for making
- (1) Shahtoosh shawls (wool)
  - (2) Shahtoosh sarees (silk)
  - (3) Medicines
  - (4) Rubber

## LIFE SCIENCE

11. The study of Algae is called
- (1) Psychology.
  - (2) Phycology.
  - (3) Mycology.
  - (4) Phosphology.
12. Use the illustration and your knowledge of science to answer the question.



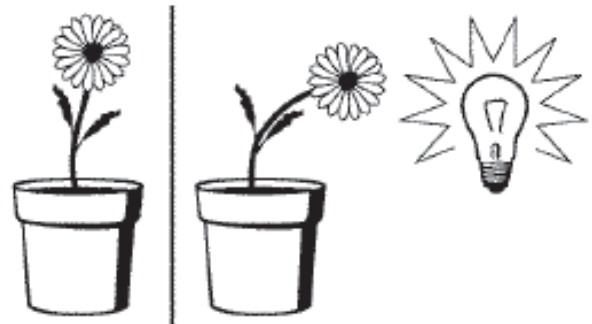
Which layer of sedimentary rock is the oldest?

- (1) Layer 4
  - (2) Layer 3
  - (3) Layer 2
  - (4) Layer 1
13. The contamination of the environment with pollution is called
- (1) Population
  - (2) Pollution
  - (3) Chlorination
  - (4) Erosion
14. Sachin dissected a flowering plant and looked at the stem, roots, leaves, and flower using a microscope. After his observations, Sachin should conclude that all flowering plant structures
- (1) are not living.
  - (2) have the same function.
  - (3) have cells.
  - (4) are green.

15. When was 'Project Tiger' a tiger conservation programme launched?
- (1) 1973
  - (2) 1970
  - (3) 1975
  - (4) 1983



16. Refer the figure below to answer question:

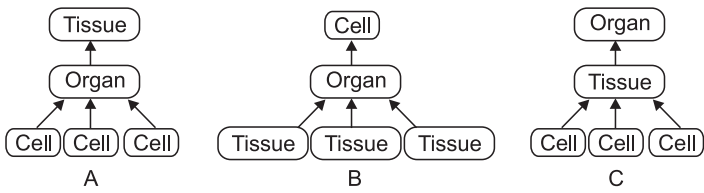


As part of an experiment, a light source is placed next to a plant. After a few days Rahul notices the plant growing toward the light.

Rahul noted the **plant's growth** towards the light in Figure as a:

- (1) stimulus
  - (2) response
  - (3) growth
  - (4) defense
17. The heart, brain, and stomach are made up of groups of:
- (1) organelles
  - (2) organ systems
  - (3) tissues
  - (4) blood

18. Which diagram shows the correct levels of organization in a multicellular organism?



- (1) A (2) B  
(3) C (4) All of these

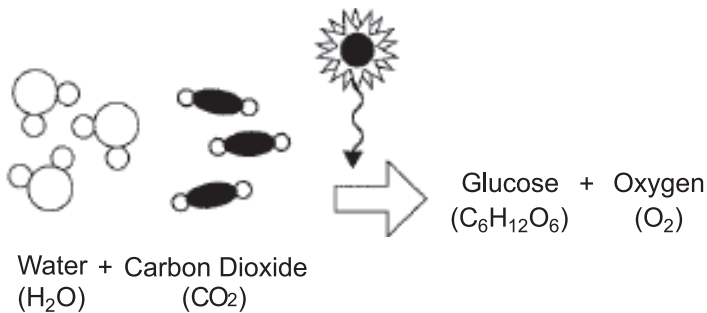
19. The simplest form of element is known as  $a(n)$

- (1) cell (2) atom  
(3) molecule (4) compound

20. \_\_\_\_\_ are substances that include sugar and starch.

- (1) lipids  
(2) carbohydrates  
(3) compound  
(4) water

Refer the figure below to answer questions 21 and 22.



21. Figure shows a chemical reaction. In this chemical reaction, water is:

- (1) a product  
(2) a reactant  
(3) a form of energy  
(4) a lipid

22. A drop of water moves from place to place on Earth through:

- (1) the precipitation cycle.  
(2) the monsoon cycle.  
(3) the weather cycle.  
(4) the water cycle.

23. Where is the hereditary material located in the cell?

- (1) The vacuole  
(2) The cell membrane  
(3) The nucleus  
(4) None of these

24. Which is the first mammal cloned from an adult somatic cell, using the process of Nuclear transfer?

- (1) Female sheep



- (2) Male sheep



- (3) Dog



- (4) Rat



25. The animals which give birth to young ones are called

- (1) Reptiles  
(2) Mammals  
(3) Both (1) and (2)  
(4) All of these

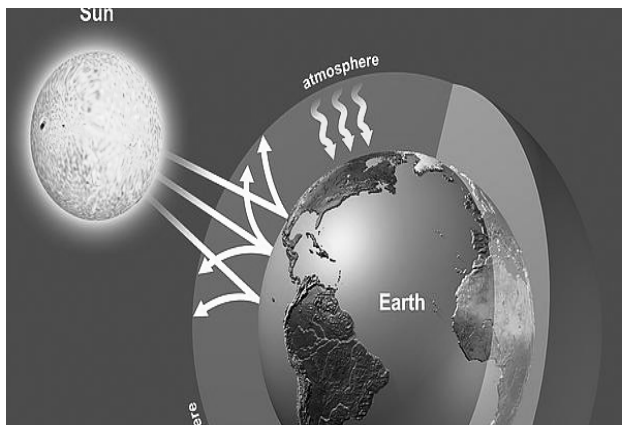
26. Changes in population occur due to change in

- (1) biotic factors  
(2) abiotic factors  
(3) both (1) and (2)  
(4) environmental factors

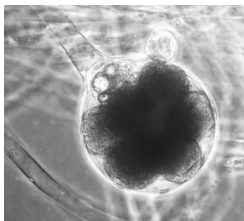
27. Each organelle has a specified

- (1) shape (2) function  
(3) size (4) mass

28. Different organelles assemble together to form a
- (1) cell (2) tissue  
(3) molecules (4) muscle
29. Type of cellular organization in which many organism do not undergo cellular division is called
- (1) unicellular (2) multicellular  
(3) colonial (4) groups
30. Considering elements of nature, elements that make 99% of total mass present does not includes
- (1) Hydrogen, H<sub>2</sub> (2) Magnesium, Mg  
(3) Nitrogen, N<sub>2</sub> (4) Oxygen, O<sub>2</sub>
31. Which disease is caused by drinking chlorinated water?
- (1) Cancer (2) Typhoid  
(3) Jaundice (4) None of these
32. The phenomenon by which radiations from a planet's atmosphere warms the planet's surface to a temperature above what it would be without its atmosphere.



- (1) Global Warming (2) Eutrophication  
(3) Greenhouse effect (4) None of these
33. Which of the following are the examples of Fungi?
- (1) Oomycota



- (2) Sac fungi



- (3) Basidiomycota



- (4) All of these

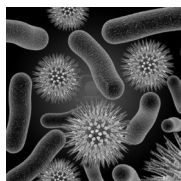
34. Strength is provided to plants by tissues known as
- (1) parenchyma (2) collenchyma  
(3) both (1) and (2) (4) ground tissue
35. Technique of production of animals is known as
- (1) Animal breeding (2) Animal reproduction  
(3) Animal fertilization (4) Animal growth
36. The structural and functional unit of life is called \_\_\_\_\_.
- (1) cell (2) tissue  
(3) organ (4) organism
37. Which of the following cells have irregular shape?
- (1) White Blood Cells (2) Amoeba  
(3) Both (1) and (2) (4) None of these
38. What determines which trait an organism will have?
- (1) DNA (2) Cytoplasm  
(3) The nucleus (4) None of these
39. Unit of inheritance is called \_\_\_\_\_.
- (1) gene (2) nucleus  
(3) cell (4) tissue
40. Several small coloured bodies in the cytoplasm of the cells of tradescantia leaf are called \_\_\_\_\_.
- (1) Organelle  
(2) Plastids  
(3) Vacuoles  
(4) Mitochondria



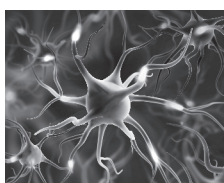
# INTERACTIVE SECTION

41. The largest cell is of \_\_\_\_\_.

(1) bacteria



(2) human neuron



(3) egg of an ostrich



(4) egg of blue whale



42. Which organelle is called power house of the cell?

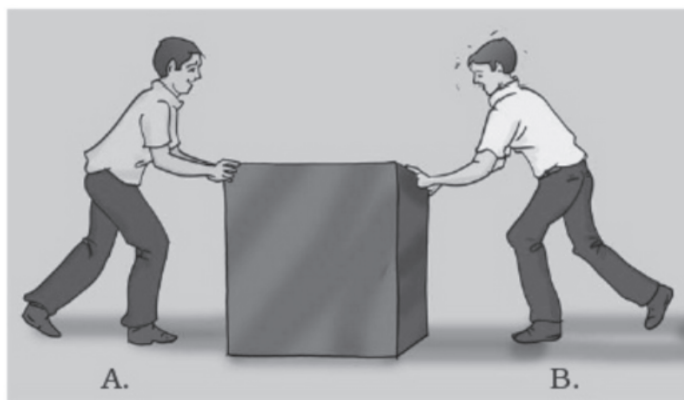
(1) Centrosome

(2) Lysosomes

(3) Plastids

(4) Mitochondria

43. In Fig, two boys A and B are shown applying force on a block. If the block moves towards the right, which one of the following statements is correct?



(1) Magnitude of force applied by A is greater than that of B.

(2) Magnitude of force applied by A is smaller than that of B.

(3) Net force on the block is towards A.

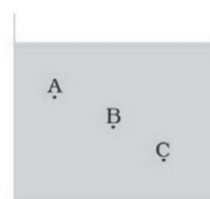
(4) Magnitude of force applied by A is equal to that of B.

44. During dry weather, while combing hair, sometimes we experience hair flying apart. The force responsible for this is

(1) force of gravity. (2) electrostatic force.

(3) force of friction. (4) magnetic force.

45. Fig. shows a container filled with water. Which of the following statements is correct about pressure of water?



(1) Pressure at A > Pressure at B > Pressure at C

(2) Pressure at A = Pressure at B = Pressure at C

(3) Pressure at A < Pressure at B > Pressure at C

(4) Pressure at A < Pressure at B

46. Which one of the following forces is a contact force?

(1) force of gravity

(2) force of friction

(3) magnetic force

(4) electrostatic force

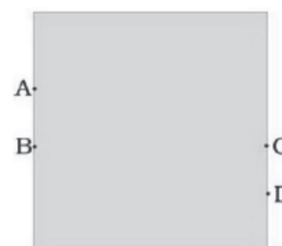
47. A water tank has four taps fixed at points A, B, C, D as shown in Fig. The water will flow out at the same pressure from taps at

(1) B and C

(2) A and B

(3) C and D

(4) A and C



48. Meiotic division helps in formation of two identical daughter cells.

- (1) False (2) True  
(3) Can't say (4) None of these

49. Considering elements of nature, number of bio-elements are

- (1) 16 (2) 26  
(3) 36 (4) 43

50. Branch of biology which deals with study of immune system of animals is classified as

- (1) immunology (2) histology  
(3) socio-biology (4) taxonomy

51. Inhabited part of Earth by living organism is called

- (1) biosphere (2) lithosphere  
(3) stratosphere (4) atmosphere

52. Time of year when mustard plant is sown is

- (1) winter  
(2) summer  
(3) spring  
(4) autumn



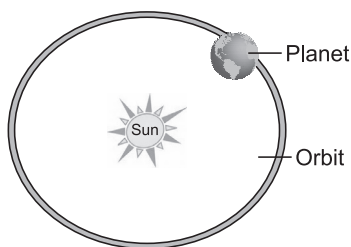
53. The word 'biology' comes from language.

- (1) greek (2) latin  
(3) arabic (4) english

54. Number of elements that are found in nature is

- (1) 62 (2) 69  
(3) 96 (4) 92

55. Each planet takes a different amount of time to revolve around the sun.



- (1) False (2) True  
(3) Can't Say (4) None of these

56. The hardest substance available on earth is

- (1) Gold  
(2) Iron  
(3) Diamond  
(4) Platinum

57. What is the unit for measuring the amplitude of a sound?

- (1) Decibel (2) Coulomb  
(3) Hum (4) Cycles

58. Fathom is the unit of

- (1) Sound (2) Depth  
(3) Frequency (4) Distance

59. The solar cells that produce electrical energy or hydrogen in a process similar to the electrolysis of water.



- (1) Photovoltaic cells  
(2) Electrochemical cells  
(3) Photoelectrochemical cells  
(4) None of these

60. The principal food-conducting tissue in vascular plants.

- (1) Phloem  
(2) Xylem  
(3) Both (1) and (2)  
(4) None of these



**END OF THE EXAM**