APPENDIX-II

ACHIEVEMENT TEST

INVESTIGATOR

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SUPervisor

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Name ____________________________ Age ____________________________
Name of School ____________________________ Gender M/F ____________________________
Class ____________________________ Date ____________________________

INSTRUCTIONS

This is a test of what you know about the six chapters, in your science text-book.
The result of this test will be used to clear any points of difficulty and thus help you to
complete the course successfully.

SECTION - A

Choose the answer that best completes the statement or answers the question out
of the four choices in the following questions:

1. Which of the following constellation resembles a large ladle or question mark
   studded in the sky?
   (a) Leo   (b) Gemini
   (c) Great Bear   (d) Libra

2. One light year is the distance travelled by the light in
   (a) one day   (b) one week
   (c) one month   (d) one year

3. Time taken by moon to go around the earth is called a lunar
   (a) day   (b) week
   (c) month   (d) year

4. We live near the outer edge of
   (a) elliptical galaxy   (b) spiral galaxy
   (c) circular galaxy   (d) rectangular galaxy
5. Who was the first to land on moon?
   (a) Galileo
   (b) Neil Armstrong & Aldrin
   (c) Einstein
   (d) Newton

6. The Indian name of Great Bear is
   (a) Kanya
   (b) Ursa
   (c) Saptarshi manda
   (d) Virabhadra

7. The speed of light in km(s) is about
   (a) \(3 \times 10^8\)
   (b) \(3 \times 10^9\)
   (c) \(3 \times 10^9\)
   (d) \(4 \times 10^9\)

8. The Sun is a
   (a) planet
   (b) satellite
   (c) comet
   (d) star

9. The first astronomer landed on moon in the year
   (a) 1949
   (b) 1959
   (c) 1939
   (d) 1969

10. Moon has no atmosphere because
    (a) it is very faraway from the earth
    (b) its surface is not smooth
    (c) R.M.S velocity of all gases is more than the escape velocity from the moon’s surface.
    (d) it has no water on its surface

11. The diameter of the moon is about
    (a) 2500 km
    (b) 1500 km
    (c) 2500 km
    (d) 4000 km

12. The day temperature at the moon’s surface is about
    (a) 100°C
    (b) 90°C
    (c) 80°C
    (d) 70°C

13. The distance of earth from the sun is
    (a) 1 astronomical unit
    (b) 0.25 astronomical unit
    (c) 2 astronomical unit
    (d) 1.5 astronomical unit

14. Our galaxy contains about
    (a) 1 lakh suns
    (b) 1 million suns
    (c) 1 thousand suns
    (d) 1 lakh million suns
15. The minimum velocity of a body to go around the earth must be
   (a) 8 km per sec  (b) 7 km per sec
   (c) 6 km per sec  (d) 5 km per sec

16. If the launching velocity of an artificial satellite exceeds ___________, it will get lost in space
   (a) 10.2 km/sec  (b) 11.2 km/sec
   (c) 9.2 km/sec    (d) 12.2 km/sec

17. Root nodules of leguminous plant show
   (a) Mutualism  (b) Commensalism
   (c) Parasitism  (d) Predation

18. Zoochlorella is
   (a) Algae      (b) Fungi
   (c) Bacteria   (d) Virus

19. Which of the following is not a flesh eater?
   (a) Eagle      (b) Vulture
   (c) Crow       (d) Parrot

20. Which of the following is not a plant eater?
   (a) Zebra      (b) Deer
   (c) Giraffe    (d) Lion

21. A grass land once destroyed takes 50 - 100 years to reach the original
   (a) climax community (b) climax state
   (c) stable climax   (d) up to date climax

22. Some powerful animals kill other weak animals in a community for food by the process of
   (a) Parasitism  (b) Predation
   (c) Commensalism (d) Mutualism

23. The process in which some animals extract food from the dead & decaying plant
    or animal bodies is called
   (a) Scavenging (b) Parasitism
   (c) Mutualism  (d) Predation

24. Pandorina is a colony of 16 ______
    (a) organs (b) ribosomes
    (c) cells   (d) tissues
25. Bacteria cells are an example of
   (a). eukaryote  (b). prokaryote
   (c). protoplasm  (d). cytoplasm

26. The protoplasm is surrounded by the membrane called
   (a). mitochondria  (b). golgi bodies
   (c). cytoplasm  (d). ribosomes.

27. Cells of similar nature are grouped together to perform a particular function. Such groups of cells are called
   (a). organs  (b). tissues
   (c). ligaments  (d). bones

28. Living beings are made of protoplasm which contains
   (a). 80 - 90% water  (b). 75 - 85% water
   (c). 70 - 80% water  (d). 60 - 80% water

29. Which element is not organised in the form of carbohydrate, fats, proteins and vitamins?
   (a). C  (b). H  (c). Ca  (d). N

30. Which of the following is not a unicellular organism?
   (a). algal  (b). volvox
   (c). amoeba  (d). bacteria

31. Protoplasm exhibits the expression of life when organised in the form of a
   (a). body  (b). organ
   (c). cell  (d). colony

32. The size of a large amoeba is
   (a). 100 μ  (b). 200 μ
   (c). 300 μ  (d). 400 μ

33. Population is not influenced by
   (a). rate of birth  (b). rate of death
   (c). rate of immigration  (d). rate of respiration

34. Decomposers are
   (a). bacteria and fungus that feed on dead organic matter.
   (b). green plants that prepare their own food.
   (c). flesh eaters who prey upon plant eaters
   (d). plant eaters who feed upon green plants.
35. Which of the following is a biotic component of the environment?
(a). Soil 
(b). Bacteria
(c). Water 
(d). Wind

36. Our environment can be protected from pollution by -
(a). Pruning plants 
(b). Watering plants
(c). Cutting of trees 
(d). growing more and more trees

37. The size of Manas Sanctuary is
(a). 1500 sq. km 
(b). 1400 sq. km
(c). 1300 sq. km 
(d). 1200 sq. km

38. The rate of increase of population is shown by
(a). \( r = \frac{b}{d} \) 
(b). \( r - d - b \)
(c). \( r = b + d \) 
(d). \( r - b - d \)

39. The number of species of plants and animals ranges between
(a). 2 to 6 millions 
(b). 3 to 5 millions
(c). 1 to 3 millions 
(d). 3 to 10 millions

40. The minimum size of population that can live for a long time in an eco-system is called
(a). emigration 
(b). carrying capacity
(c). doubling time 
(d). immigration

41. Both Lithium and Sodium belongs to group I. Each has one electron in the __
(a). atom 
(b). atomic radius
(c). outermost shell 
(d). electronic configuration

42. Valency of elements of group II is two and that of group 'O' is __
(a). Zero 
(b). Two
(c). Four 
(d). Eight

43. The number of protons in the nucleus of an atom of an element is its
(a). atomic energy 
(b). atomic value
(c). atomic radius 
(d). atomic number

44. The gradual change of properties of elements in a period on moving from left to right in the periodic table is known as
(a). valency 
(b). metallic property
(c). velocity 
(d). periodicity.
45. Electronegativity of elements increases in a period from left to right while decreases in a group from
(a). right to left  (b). top to bottom
(c). inner to outer  (d). positive to negative

46. Mendeleef arranged the elements in the periodic table on the basis of
(a). atomic number  (b). atomic weight
(c). electronic configuration  (d). valency

47. In modern periodic table elements are arranged in successive horizontal rows in order of increasing
(a). atomic radius  (b). atomic number
(c). atomic value  (d). atomic energy.

48. Electronic configuration of phosphorus is
(a). 2.8.3  (b). 2.8.4
(c). 2.8.5  (d). 2.8.6

49. Elements of the third period from left to right are
(a). Na, Mg, Al, P, S, Cl, Si, A  (b). Na, Mg, Al, S, Cl, P, A, Si
(c). Na, Mg, Al, Si, P, S, Cl, A  (d). Na, Mg, Al, P, Si, Cl, S, A

50. Metallic property of elements decreases in a period from __________
(a). top to bottom  (b). right to left
(c). left to right  (d). negative to positive

51. Total Number of elements in the 4th period are
(a). 15  (b). 18
(c). 20  (d). 22

52. The most active halogen is
(a). chlorine  (b). fluorine
(c). iodine  (d). bromine

53. Total number of elements discovered to date are
(a). 104  (b). 105
(c). 106  (d). 107

54. NaCl molecule is formed due to
(a). transfer of an electron from Cl to Na atom
(b). transfer of one electron from Cl to Na atom
(c). sharing of a pair of electron between Na and Cl atom
(d). formation of a double covalent bond
55. In a solution of common salt in water
   (a). common salt is the solvent
   (b). water is the solute
   (c). common salt is the solute
   (d). both water and common salt are the solutes

56. Chlorine atom has one electron less than the stable electronic grouping (2,8,8) of the
   (a). neon atom 
   (b). helium atom
   (c). argon atom
   (d). nitrogen atom

57. Which of the following is not an inert gas?
   (a). Helium
   (b). Neon
   (c). Nitrogen
   (d). Argon

58. Common salt (NaCl) dissolves in
   (a). ammonia
   (b). benzene
   (c). alcohol
   (d). water

59. Which of the following element has one valence electron
   (a). Na
   (b). Be
   (c). Mg
   (d). S

60. The number of valence electrons in oxygen atom is
   (a). 4
   (b). 6
   (c). 8
   (d). 10

61. Which of the following compounds has triple bond ?
   (a). CH₃
   (b). C₂H₆
   (c). C₂H₄
   (d). C₂H₃

62. Ionic compound among the following is
   (a). NH₃
   (b). H₂O
   (c). MgO
   (d). CH₄

63. The compound having double bond is
   (a). C₆H₄
   (b). C₄H₆
   (c). C₃H₆
   (d). C₂H₆

64. The molecule having a triple bond is
   (a). O₂
   (b). NH₂
   (c). CH₄
   (d). N₂
65. Covalent bond formed by sharing two pairs of electrons is known as
   (a) single bond  (b) double bond
   (c) triple bond  (d) None of the above

66. The speed of light in kilometres per second is about
   (a) 3x10^4       (b) 3x10^5
   (c) 3x10^6       (d) 3x10^7

67. The shape of the orbit in which planets revolve is
   (a) circular  (b) parabolic
   (c) elliptical  (d) not defined

68. Number of planets in the solar family is
   (a) 10   (b) 9
   (c) 8   (d) 7

69. Which of the following planets lies between the Mercury and Earth?
   (a) Mars   (b) Uranus
   (c) Venus   (d) Pluto

70. What are the gases from which a star is formed?
   (a) hydrogen and helium  (b) helium and oxygen
   (c) hydrogen and oxygen  (d) hydrogen, helium & oxygen

71. Total number of stars in the universe is about
   (a) 10^{22}   (b) 10^{20}
   (c) 10^{15}   (d) 10^{10}

72. Green plants from the primary source of food because they
   (a) decompose food into simpler substance
   (b) get carbon dioxide from the air
   (c) make their own food
   (d) get water from the soil

73. Length of a bacteria cell is
   (a) 1 micron  (b) 1.5 micron
   (c) 2 micron  (d) 2.5 micron

74. In a food chain, the first source of food are:
   (a) primary producers  (b) primary consumers
   (c) secondary consumers  (d) decomposers.
75. Fungus and Bacteria are the
(a) Primary producers (b) Secondary producers
(c) Secondary consumers (d) Decomposers

76. Which of the gases does the plant continuously add to the atmosphere?
(a) Oxygen (b) Nitrogen
(c) Carbon (d) Hydrogen

77. Vascular bundle in plants is plants is formed by
(a) xylem vessels (b) phloem vessels
(c) both xylem and phloem vessels (d) None of the above

78. Which of the following processes enables plants to prepare their own food?
(a) Respiration (b) Circulation
(c) Photosynthesis (d) Cell division

79. In plants, stomata are organs for:
(a) respiration (b) circulation
(c) cell division (d) reproduction

80. Body gets rid of harmful waste matter by means of the
(a) reproductive system (b) digestive system
(c) circulatory system (d) excretory system

--- 9 ---

SECTION - B

State whether the following statements are true or false:

81. The place of living, the organism and the environment together form an ecosystem (True / False).

82. In India, there are planetariums at Bombay, Calcutta & Guwahati (True/False).

83. Our earth is a member of the solar system, which occupies a tiny space in the Milky Way (True/False).

84. Molecules having positive and negative ends are called polar molecules (True / False).

85. In a food chain, one organism forms the source of food for another (True/False).

86. The leaf is the organ for photosynthesis (True/False)
SECTION - C

In the following questions, two sets of choices are given under column A and B. You have to match the two columns by writing the alphabets of Column B in the blanks given against Column A.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i). Proteins (_____ )</td>
<td>(a). Almonds and ghee</td>
</tr>
<tr>
<td>(ii). Fats (_____ )</td>
<td>(b). Rice &amp; Wheat</td>
</tr>
<tr>
<td>(iii). Carbohydrates (_____ )</td>
<td>(c). Eggs &amp; meat</td>
</tr>
<tr>
<td></td>
<td>(d). Sugar &amp; Pulses</td>
</tr>
</tbody>
</table>

88. (i). Ingestion (_____ ) (a). Food is broken into simpler constituents.
     (ii). Digestion (_____ ) (b). Digested food is absorbed by the body.
     (iii). Egestion (_____ ) (c). Intake of food.
     (d). Undigested part of food thrown out of the body

89. Elements
    (i). Na (____ )  
    (ii). Al ( ____ ) 
    (iii). Si (____ ) 
    (iv). Cl (____ )  
    Electronic configuration
    (a). 2.8.5  
    (b). 2.8.7  
    (c). 2.8.1  
    (d). 2.8.3  
    (e). 2.8.4

90. Elements
    (i). Li (____ )  
    (ii). B (____ )  
    (iii). O (____ )  
    (iv). Ne (____ ) 
    Valency
    (a). 0  
    (b). 4  
    (c). 1  
    (d). 3  
    (e). 2

SECTION - D

Complete the following statements:

91. Plants are ______ (abiotic/biotic) components of the environment.

92. The cells with distinct organized nucleus are called ______ (prokaryote / eukaryote) cells.

93. Volvox is considered as a multicellular living ______ (organs / body).

94. In between the ______ and ______ (left, right / upper, lower) epidermis of the leaf lies the mesophyll layer.
95. When organisms of different species interact for food and habitat, it is called (intraspecific interaction / interspecific interaction).

96. The total number of organisms of a species which live as a group in a particular eco-system and which breed among themselves is known as ____ (population / community).

97. The number of electrons in the outermost shell of an atom is ____ (different / same) for different elements.

SECTION - E

98. Label the parts of the Transverse section of a leaf.


100. Label the parts of the Digestive System of Man.