APPENDIX- III
SIX FORMATIVE TESTS

FORMATIVE TEST (4)

Unit: Organisation of the living body at different levels.

Investigator
HOBIBOR ROHMAN MONDAI.

Supervisor
Dr. Vandana Mehra

Name: ____________________________
School: __________________________
Class: ____________________________
Age: ____________
Gender - M/F ________
Date: ______________

Please tick (✓) the correct alternative only.

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

2. Which elements are not organised in the form of carbohydrates, fats, proteins, vitamins etc.?
   a) C b) H c) Ca d) N

3. Water acts mainly as the
   a) Covalent b) Solvent
c) cell d) organ system

4. Water is the base of certain chemical reactions occurring in the
   a) mind b) cell
   c) organ d) body

5. The protoplasm inside the cell membrane is called :-
   a) Eukaryote b) prokaryote
c) cytoplasm d) pandorina

6. How many groups of cells remain together in pandorina?
   a) 15 b) 17
   c) 16 d) 18

7. Cell is regarded as a unit of :-
   a) body b) organs
c) Life d) Protoplasm

8. Volvox is considered as a multicellular living :-
   a) cells b) body
c) organs d) tissue

9. Pandorina is a unicellular:-
   a) bacteria b) algae
c) organ d) tissue
10. The cell with distinct organised nucleus is called -
   a) prokaryote  
   b) Eukaryote  
   c) pandorina  
   d) volvox colony

11. Bacteria cells are example of -
   a) Eukaryote  
   b) prokaryote  
   c) Protoplasm  
   d) Cytoplasm

12. Protoplasm exhibits the expression of life when organised in the form of a -
   a) body  
   b) organ  
   c) cell  
   d) tissue

13. There are few organised bodies like the mitochondria, golgi bodies, ribosomes etc. in the:
   a) protoplasm  
   b) cytoplasm  
   c) prokaryote  
   d) eukaryote

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

15. Average diameter of a red blood corpuscle is:
   a) 25 μ  
   b) 75 μ  
   c) 50 μ  
   d) 100 μ

16. The primary basic unit of living material is called __________ (tissue/organ/cell).

17. The size of a large amoeba is __________ (100μ/200μ/300μ).

18. The main function of the __________ is to maintain blood circulation inside the body (mind/head/heart).

State whether the following statements are true or false:

19. Food enables living things to obtain energy (T/F).

20. The leaf is the organ for photosynthesis (T/F).

21. A micron (denoted by mu, μ) is a very small unit of length (T/F).

22. In the following questions, two sets of choices are given under column A and B, each choice in column B may be used once or more than once. You have to match the two columns by writing the alphabets of column B in the blanks given against column A.

   Column A                          Column B
   i) Ingestion (...)                a) Food broken into simplex contiuenets
   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.

23. Give any two principles of organization of living body.
FORMATIVE TEST (2)
Unit: Organisation at higher level (1) population.

Investigator
HOBIBOR ROHMAN MONDAL

Supervisor
Dr. Vandana Mehra

Name: ____________________________
School: ____________________________
Class: ____________________________
Age: __________
Gender - M/F __________
Date: __________

Please tick (✓) the correct alternative only.

1. Biosphere is
   a) Where dead organisms live.
   b) Where dead and living organisms live.
   c) Where living organisms live.
   d) All of the above.

2. Protozoan is:
   a) Unicellular
   b) Multicellular
   c) Both of them
   d) None of them

3. Population is not influenced by:
   a) Rate of Birth
   b) Rate of Death
   c) Rate of immigration
   d) Rate of respiration

4. 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

5. Rohu takes the plant and insect from_________ of the pond.
   a) mid depth level
   b) surface level
   c) bottom
   d) top level

6. The size of Manas sanctuary is:
   a) 1300 sq. km.
   b) 1500 sq. km.
   c) 1400 sq. km.
   d) 1200 sq. km.

7. Which of the following is a biotic component of the environment:
   a) Soil
   b) Water
   c) Bacteria
   d) Wind

8. 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.
9. Secondary consumers are:
   a) organisms that feed on dead organic matter.
   b) animals that feed on plant eaters.
   c) animals that feed on green plants.
   d) plants that can prepare their own food.

Complete the following statements:

10. Plants are ________ (abiotic/biotic) components of the environment.

11. The maximum size of a population that can live for a ___ (short time/longtime) in a habitat or eco-system, is called the carrying capacity of the eco-system.

12. Population is influenced by interaction among ____ (Environment / organisms).

State whether the following statements are true or false.

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


15. The place of living of an organisation is called environment (True/false).

16. The place of living of the organisms and the environment together form the biosphere (True/False).

Short answers questions.

17. What is doubling time?

18. How can records of population of animals be maintained?

19. Give various factors affecting increase of population.
FORMATIVE TEST  

Unit: Organisation at higher level (2) community

Investigator
HOBIBOR ROHMAN MONDAL

Supervisor
Dr. Vandana Mehra

Name: ________________________
School: _______________________
Class: ________________________

Age: __________
Gender - M/F _________
Date: ________________

Please tick (✓) the correct alternative only.

1. The 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.

2. Root nodules of leguminous plants show:
   a) mutualism
   b) commensalism
   c) parasitism
   d) predation

3. Zoochlorella is
   a) algae
   b) fungus
   c) bacteria
   d) virus

4. Green plants form 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.

5. Which of the following is not herbivorous animal?
   a) Cow
   b) Deer
   c) Goat
   d) Lion

6. Carnivorous animals are those that:
   a) do not kill herbivorous animals for food.
   b) kill herbivorous animals for food.
   c) eat plants
   d) eat decaying matter.

7. The organisms which can produce organic food materials from inorganic raw materials are called:
   a) Primary consumers
   b) Secondary consumers
   c) Producers
   d) Decomposers
Complete the following statements:

8. The organisms which transform organic bodies into simpler substances are called (consumers/decomposers).

9. Bacteria are the decomposers in the (food chain/climax community).

Give very short answers to the questions given below:

10. What is the difference between predation and parasitism?

11. What is scavenging?

12. Give an example of Mutualism?

13. What is the difference between competition and mutualism?

14. Match the following column 'A' with column 'B'.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>i) Primary producers (.....)</td>
<td>a) Saprophytes</td>
</tr>
<tr>
<td>ii) Primary consumers (.....)</td>
<td>b) Green plants</td>
</tr>
<tr>
<td></td>
<td>c) Plant eaters</td>
</tr>
<tr>
<td></td>
<td>d) Flesh eaters</td>
</tr>
</tbody>
</table>
FORMATIVE TEST (½)

Unit: Our Universe

Investigator: HOBIBOR ROHMAN MONDAL
Supervisor: Dr. VANDANA MEHRA

Name: ____________________________ Age: ______
School: ____________________________ Gender - M/F ______
Class: ____________________________ Date: ____________

Please tick (√) the correct alternative only.

1. One light year is the distance travelled by the light in:
   (a). one second     (b). one minute
   (c). one month      (d). one year

2. We live near the outer edge of:
   (a). elliptical galaxy   (b). spiral galaxy
   (c). circular galaxy     (d). triangular galaxy

3. The speed of light in kilometers per second is about
   (a). $3 \times 10^5$     (b). $3 \times 10^6$
   (c). $3 \times 10^7$     (d). $3 \times 10^8$

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

5. The sun is a:
   (a). Planet     (b). Satellite
   (c). Comet      (d). Star

6. Number of planets in the solar family is:
   (a). 11        (b). 10
   (c). 9         (d). 8

7. The shape of the orbit in which planets revolve is:
   (a). Circular   (b). Parabolic
   (c). Elliptical (d). Not defined

8. Which of the following planets has no natural satellite or moon?
   (a). Mercury    (b). Venus
   (c). Pluto      (d). Earth

9. Which of the following gravitated the center of form the core of the earth?
   (a). Aluminium  (b). Lead
   (c). Copper     (d). Iron

10. The temperature at the center of the earth is around:
    (a). 3000°C     (b). 4000°C
     (c). 6000°C     (d). 9000°C

11. Which of the following planets lies between the mercury and earth?
    (a). Mars       (b). Uranus
     (c). Venus     (d). Pluto

--- END ---
12. 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 and Oxygen

13. Which of the following is not a part of the solar system?
   (a). Meteors  (b). Comets
   (c). Quasars  (d). Asteroids

14. Total number of stars in the universe is about:
   (a). $10^{22}$  (b). $10^{11}$
   (c). $10^6$  (d). $10^4$

15. The Indian name of Great Bear is:
   (a). Saptarishi  (b). Tula
   (c). Kanya  (d). Vrishchika

16. The energy in stars is generated due to:
   (a). fission of heavy nuclei  (b). fusion of heavy nuclei
   (c). fission of light nuclei  (d). fusion of light nuclei

17. Moon has no atmosphere because:
   (a). it is very faraway from 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.

18. The inner planets are:
   (a). Mercury, Venus, Mars  (b). Venus, Mars, Earth
   (c). Mercury, Venus, Earth, Mars  (d). Mercury, Earth, Mars

19. The diameter of the moon is about:
   (a). 2500 km  (b). 3000 km
   (c). 3500 km  (d). 4000 km

20. Who was first to land on moon?
   (a). Galileo  (b). Neil Armstrong & Aldrin
   (c). Einstein  (d). Newton

21. The first astronomer landed on moon in the year:

22. _________ is the head of solar family (Earth / Moon / Sun).

23. The most massive planet in solar system is _________ (Earth/Jupiter/Mercury).

24. _________ is the planet nearest to sun (Earth / Venus / Mercury).

25. Jupiter has _________ satellites (9 / 10 / 12).

26. Light year is unit of _________ (light / time / distance).

27. The distance of the earth from the sun is _________ (one light year / one A. V. / 10
    micro meters).

28. The average distance of the moon from the earth is about _________
    (387,000 kms / 487,000 kms / 587,000 kms / 687,000 kms).

29. The latest satellite is _________ (INSAT-2B / INSAT-IC / INSAT-ID).
1. Nucleus of an atom contains -
   a) protons  
   b) neutrons 
   c) protons & neutrons  
   d) protons, neutrons & electron.

2. Maximum number of electrons in the outermost orbit of an atom is
   a) 2  
   b) 8 
   c) 10 
   d) 12

3. The number of electrons in the outermost orbit of neon is
   a) 2  
   b) 8 
   c) 18 
   d) 32

4. The electronic configuration of Na is
   a) 2.8  
   b) 2.8.2 
   c) 2.7 
   d) 2.8.1

5. The formula of magnesium oxide is -
   a) MgO  
   b) MgO 
   c) MgO 
   d) MgO

6. The number of elements in the 2nd period of the periodic table is:-
   a) 2  
   b) 8 
   c) 18 
   d) 32

7. Name of the element having electronic configuration of 2.8.8. is:
   a) Neon  
   b) Krypton 
   c) Helium 
   d) Argon

8. Name of the element having electronic configuration of 2.8.7 is
   a) Sodium  
   b) Magnesium 
   c) Chlorine 
   d) Argon

9. The basis of modern periodic table is:
   a) atomic mass  
   b) atomic number 
   c) nuclear mass  
   d) the mass of neutron

10. In the periodic table oxygen belongs to:-
    a) 5th group  
    b) 6th group 
    c) 7th group 
    d) 4th group.

11. An element is placed in group VI (A) of the periodic table. Its valency will be:-
    a) 1  
    b) 2 
    c) 4 
    d) 6.

12. The number of valence electrons and valency of sulphur are:
    a) 6 & 2  
    b) 5 & 2 
    c) 2 & 2 
    d) None of these
13. Number of electrons present in the outermost shell of a halogen is
a) 1  b) 2  c) 7  d) 8
14. Valency of oxygen is
a) 6  b) 4  c) 2  d) 1
15. The atomic number of an element is equal to the number of
a) neutrons  b) protons  c) protons & neutrons  d) electrons & protons
16. Which of the following elements has the electronic configuration 2.8.5-
a) nitrogen  b) sulphur  c) phosphorus  d) magnesium
17. Which of the following is not an inert gas?
   a) Helium  b) Neon  c) Fluorine  d) Argon
18. Number of electrons in the outermost orbit of helium is
   a) 1  b) 2  c) 3  d) 4
19. The nearest inert gas to chlorine is:-
   a) Helium  b) Neon  c) Argon  d) Krypton
20. The number of elements in the 3rd and the 4th period of the periodic table are respectively.
   a) 2.18  b) 8.1  c) 18.32  d) 12.18
21. Number of valence electrons in chlorine are-
   a) 1  b) 5  c) 7  d) 17

Complete the statements:

22. There are 7 periods and _____ groups in the periodic table (8/9/10).
23. The first period starts with (oxygen/helium/hydrogen)
24. Total number of elements discovered to date are (100/105/115).
25. _____ periodic table was based on the atomic weight of the elements
   (Galileo's/Aristotle's/Mendeleef's).
26. Metallic property of elements decreases across a period from ______ (Right to left/high to low/left to Right).
27. Match the following

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
<td>Number of elements</td>
</tr>
<tr>
<td>i) period 1</td>
<td>a) 18</td>
</tr>
<tr>
<td>ii) period 2</td>
<td>b) 18</td>
</tr>
<tr>
<td>iii) period 3</td>
<td>c) 2</td>
</tr>
<tr>
<td>iv) period 4</td>
<td>d) 32</td>
</tr>
<tr>
<td></td>
<td>e) 8</td>
</tr>
</tbody>
</table>
Please tick (✓) the correct alternative only.

Choose the answer out of the four choices in the following questions :-

1. The molecules having a triple bond is
   a) $O_2$  b) $NH_2$  c) $CH_4$  d) $N_2$

2. Covalency of carbon in methane is
   a) 2  b) 1  c) 4  d) 6

3. Number of valence electrons in N is
   a) 1  b) 2  c) 3  d) 5

4. Number of valence electrons in Al is
   a) 1  b) 2  c) 3  d) 4

5. Number of valance electrons in S is
   a) 2  b) 8  c) 6  d) 18

6. The compound containing double bond is
   a) $C_2H_4$  b) $C_2H_6$  c) $C_2H_6$  d) $C_2H_6$

7. Which of the following compound is not ionic?
   a) $CaO$  b) $CCl_4$  c) $MgCl_2$  d) $KCl$

8. Covalent compound among the following is
   a) $NaCl$  b) $NaF$  c) $HCl$  d) $MgCl_2$

9. Ionic compound among the following is
   a) $NH_3$  b) $H_2O$  c) $MgO$  d) $CH_4$

10. Number of double bond in $O_2$ molecule is
    a) 1  b) 2  c) 3  d) 0

11. The number of valence electrons in oxygen atom is
    a) 2  b) 8  c) 6  d) 18

12. $NaCl$ molecule is formed due to
    a) transfer of an electron from Cl to Na atom.
    b) transfer of one electron from Na to Cl atom.
    c) sharing of a pair of electrons between Na and Cl atom.
    d) formation of a double covalent bond.

13. Ionic bond is formed between two atoms when --
    a) the combining atoms gain electrons.
    b) the combining atoms lose electrons.
    c) one or more electron is transferred from one atom to the other.
    d) one or more pairs of electrons become the part of the combining atoms.
14. A covalent bond is formed between two atoms when-
   a) one or more electron is transferred from one atom to the other.
   b) when the atoms try to acquire the electronic configuration of the nearest inert gas.
   c) when each of the two atoms has one pair of electrons.
   d) one or more pairs of electrons are equally shared by the two atoms.

15. The bond formed due to transfer of electrons is
   a) covalent bond   b) double bond
   c) electrovalent bond d) triple bond

16. Which of the following compounds has triple bond?
   a) CH₄   b) C₂H₄
   c) C₂H₆   d) C₂H₂

17. 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.

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

19. Which of the following elements has one valence electron?
   a) Na
   b) Be
   c) Mg
   d) S.

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

21. Which of the following is not a property of ionic compounds?
   a) They are solids
   b) They have high melting points.
   c) They dissolve in water
   d) They do not conduct electricity

22. Atoms unite to form _________ (molecules/ions)

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

24. What are single, double & triple bonds? Give one example for each type of bond?

25. Present diagrammatically the formation of NaCl molecule.

26. Present diagrammatically the formation of water H₂O molecule.