

## 10 Std SCIENCE

### LESSON WISE

#### BELOW 20

Les.No	Lesson	1 Mark	2 Mark	5 Mark	Total
5	A Representative Study of Mammals		6		6
17	Magnetic Effect of Electric Current and light	2	6	5	13
2	Health and Hygiene	1	2	5	8
9	Solutions	1	4		5
<b>Total</b>					<b>32</b>

#### 20+

Les.No	Lesson	1 Mark	2 Mark	5 Mark	Total
16	Electricity and Energy	2	6		8
7	Conservation of Environment	1	2	5	8
10	Atoms and Molecules		2	5	7
8	Waste Water Management		6		6
3	My Body		6		6
<b>Total</b>					<b>35</b>

#### 40 +

Les.No	Lesson	1 Mark	2 Mark	5 Mark	Total
12	Periodic Classification of Elements	2	4		6
1	Heredity and Evolution	1	2	5	8
4	Reproduction in Plants	1	2	5	8
11	Chemical Reactions	1	4		5
<b>Total</b>					<b>27</b>

#### 60 +

Les.No	Lesson	1 Mark	2 Mark	5 Mark	Total
15	Laws of Motion and Gravitation	1	4	5	10
13	Carbon and its Compounds	1	2	5	8
6	Life Processes	1	2		3
<b>Total</b>					<b>21</b>

## QUESTION WISE

### BELOW 20

Q.No	Title	
22,23,24	5. A Representative Study of Mammals	2 Mark
18,19,20	3. My Body	
27,28,29	8. Waste Water Management	
47	2. Health and Hygiene	5 Mark
49	7. Conservation of Environment	
		28 Marks

### 20+

Q.No	Title	
43,44,45	17. Magnetic Effect of Electric Current and light	2 Mark
40,41,42,	16. Electricity and Energy	
38,39	15. Laws of Motion and Gravitation	
50	10. Atoms and Molecules	5 Mark
53	17. Magnetic Effect of Electric Current and light	
		54 Marks

### 40+

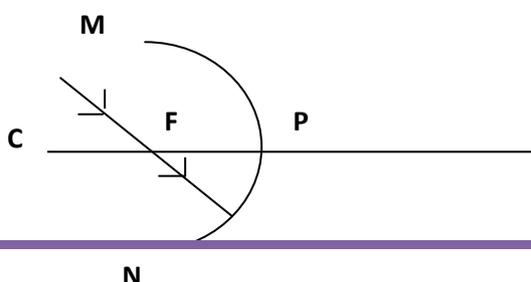
Q.No	Title	
30,31	9. Solutions	2 Mark
33,34	11. Chemical Reactions	
35,36	12. Periodic Classification of Elements	
37	13. Carbon and its Compounds	
46	1. Heredity and Evolution	5 Mark
48	4. Reproduction in Plants	
		78 Marks

60 +

Q.No	Title	
26	7. Conservation of Environment	2 Mark
21	4. Reproduction in Plants	
32	10. Atoms and Molecules	
17	2. Health and Hygiene	
25	6. Life Processes	
16	1. Heredity and Evolution	
52	15. Laws of Motion and Gravitation	5 Mark
51	13. Carbon and its Compounds	
		100 Marks

## QUESTION BANK TWO MARK QUESTIONS

- (5/8) 1. Based on relationship, fill up: Whale: Baleen plates; Bat : \_\_\_\_\_
- (5/9) 2. Fill in the blanks.  
Plasma : Fibrinogen ; \_\_\_\_\_  
RBC: Carriage of oxygen;  
WBC: \_\_\_\_\_
- (5/6) 3. One of the following groups contains a non mammalian animal. Pick up the group.  
a. dolphin, walrus, porcupine, rabbit, bat  
b. elephant, pig, horse, donkey, monkey  
c. antelope, deer, cow, buffalo, black buck  
d. dog, cat, crocodile, lion, tiger
- (5/7) 4. The epidermis of mammals contains  
a. hair, bristle, quills  
b. hair, nail, claw  
c. hair, bristle, horn  
d. hair, nail, scale
- (5/10) 5. Master chemists of our body are kidneys. Justify.  
a. kidneys acquire all chemicals taken in the body  
b. maintain the chemical composition of blood  
c. kidneys send out all chemicals taken in the body  
d. kidneys store the various chemicals taken in the body
- (5/11) 6. Based on modifications make the pairs: incisor: tusk of elephant; \_\_\_\_\_ :  
quills of porcupine.
- (17/2) 7. Fill in the blanks  
a) For a motor : a permanent magnet, then commercial motor : \_\_\_\_\_  
b) Focal length of a lens; metre, then for power of a lens \_\_\_\_\_
- (17/3) 8. Correct the mistakes, if any, in the following statements.  
a) Magnetic field is a quantity that has magnitude only.  
b) The magnetic field lines emerge from the south pole and merge at the north pole.
- (17/5) 9. In traffic signals \_\_\_\_\_ colour light is used to stop vehicles because it is  
having \_\_\_\_\_ wave length.
- (17/6) 10. Considering this write down the names of the parts in human eye.  
a) Dark muscular diaphragm that controls the pupil.  
b) The screen at where the image is formed by eye lens.
- (17/4) 11. The ray diagram shown below is introduced to show how a concave mirror forms  
an image of an object.  
a) Identify the mistake and draw the correct ray diagram.  
b) Write the justifications for your corrections.



(17/ex) 12. Fill up the table.

	Tooth	Large Image
	Rear side Vehicle	Erect Image

(Concave mirror, plane mirror, Convex mirror)

(2/16) 13. Kavitha is suffering from common cold. What are the questions you will put forth to Kavitha to confirm the disease?

a. \_\_\_\_\_ b. \_\_\_\_\_

(2/13) 14. Marasmus and Kwashiorkar are both protein deficiency defects. Marasmus differs from Kwashiorkar in enlarged belly and swelling in the face. Are these symptoms for the above diseases correct? If not, correct it.

(2/11) 15. In order to lead a healthy life a person should enjoy physical, mental and social well being. If a person lacks any one of them, then that person is suffering from \_\_\_\_\_.

(2/12) 16. Tamil selvan has inherited colour blindness from his father. Name the causative factor responsible for this defect \_\_\_\_\_.

(2/14) 17. A list of disorders are given below. Pick out the odd one out and give reasons. (colour blindness, haemophilia, night blindness, albinism, sickle cell anaemia)

(9/12) 18. You have prepared a saturated solution of sugar. Is it possible to dissolve some more grams of sugar to this solution? Justify your stand.

(9/10) 19. From the table given below, furnish your points of inferences.

Substance	Solubility at 25°C
NaCl	36g
NaBr	95g
NaI	184g

(9/13) 20. Find the concentration of solution in terms of weight percent if 20 gram of common salt is dissolved in 50 gram of water.

(16/2) 21. Fill in the blanks

a) Potential difference : voltmeter, then: current \_\_\_\_\_.

b) power plant : conventional source of energy then solar energy \_\_\_\_\_.

(16/3) 22. In the list of sources of energy given below, some of them are wrong. List out the wrong ones.

(Wind energy, solar energy, hydro electric power, nuclear energy, tidal energy, wave energy, geo- thermal energy.)

(16/4) 23. Correct the mistakes, if any, in the following statements.

a) A good source of energy would be one which would do a small amount of work per unit volume of mass.

b) Any source of energy we use to do work is consumed and can be used again.

(16/1) 24. From the following statements write down that which does not represent ohm's law.

- a) current / potential difference = constant
- b) potential difference / current = constant
- c) current = resistance x potential difference

**(16/11)** 25. Complete the table choosing the right terms from within the brackets.  
(zinc, copper, carbon, lead, leadoxide, aluminium.)

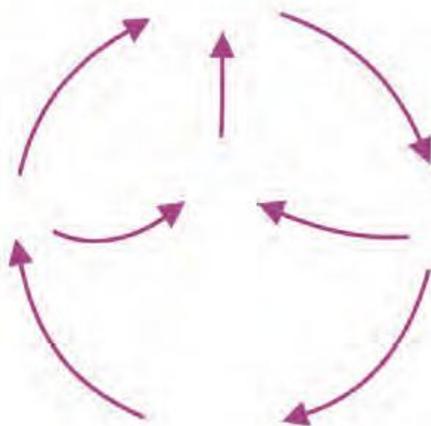
+ve electrode	Lead acid accumulator cell	
-ve electrode	Lechlanche cell	

**(16/9)** 26. Fuse wire is made up of an alloy of \_\_\_\_\_ which has high resistance and \_\_\_\_\_.

**(16/8)** 27. Draw the schematic diagram of an electric circuit consisting of a battery of two cells of 1.5V each, three resistance of 5 ohm, 10 ohm and 15 ohm respectively and a plug key all connected in series.

**(7/11)** 28. Study the food chain below, correct it and convert into a pyramid of energy.  
Mulberry -> Sparrow -> Caterpillar -> Kite

**(7/14)** 29.a. Name the processes noted as no. 1 and 3  
b. Define the process 1



**(10/1)** 30. From the given examples, form the pair of isotopes and the pair of isobars  
 $_{18}\text{Ar}^{40}$ ,  $_{17}\text{Cl}^{35}$ ,  $_{20}\text{Ca}^{40}$ ,  $_{17}\text{Cl}^{37}$

**(10/4)** 31. 'Cl' represents chlorine atom, 'Cl<sub>2</sub>' represents chlorine molecule. List out any two differences between atoms and molecules.

**(10/5)** 32. Calculate the gram molecular mass of water from the values of gram atomic mass of hydrogen and of oxygen. Gram atomic mass of hydrogen = 1g Gram atomic mass of oxygen = 16g

**(8/8)** 33. Odd one out  
a. bio alcohol, green diesel, bio ethers, petroleum  
b. cholera, typhoid, scabies, dysentery

- (8/9)** 34. A non renewable resource is a natural resource if it is replaced by natural process at a rate comparable or faster than its rate of consumption by humans. Read this statement and confirm whether it is correct or incorrect. If it is incorrect give correct statement.
- (8/10)** 35. Pick out the suitable appliances to conserve the electric energy. Florescent bulbs, copper choke, solar water heater, electric water heater, tungsten bulbs, electronic choke.
- (3/14)** 36. Based on relationships fill in the blanks.  
Thyroxine: personality hormone; adrenaline : \_\_\_\_\_.
- (3/15)** 37. Correct the statements if they are wrong.  
a. alpha cells produce insulin and beta cells produce glucagon.  
b. cortisone suppresses the immune response.  
c. thymus gland is a lymphoid mass.  
d. Ovary produces eggs and Androgen.
- (3/19)** 38. The important event of meiosis is the crossing over. It occurs during (Leptotene, Pachytene, Diplotene, Zygotene)
- (3/17)** 39. In Amoeba, the cell division takes place \_\_\_\_\_  
(involving changes in the chromatin reticulum, without involving changes in the chromatin reticulum, leading to reduction in the number of chromosomes, without dividing the nucleus).
- (3/18)** 40. Pick out the item which has sequential arrangements  
a. zygotene -> Leptotene -> Pachytene -> Diplotene -> Diakinesis  
b. Diakinesis -> zygotene -> Leptotene -> Pachytene -> Diplotene  
c. Leptotene -> zygotene -> Pachytene -> Diplotene -> Diakinesis
- (12/10)** 41. Assertion: In thermite welding, aluminium powder and  $\text{Fe}_2\text{O}_3$  are used.  
Reason: Aluminium powder is a strong reducing agent. Does the reason satisfy the assertion?
- (12/1)** 42. Can rusting of iron nail occur in distilled water. Justify your answer.
- (12/4)** 43. To design the body of the aircraft aluminium alloys are used. Give your reason.
- (12/5)** 44. X is a silvery white metal. X reacts with oxygen to form Y. The same compound is obtained from the metal on reaction with steam with the liberation of hydrogen gas. Identify X and Y.
- (1/13)** 45. Identical twins are syngenic with similar chromosomal contents. Natural clones are those who possess identical chromosomes. Fill up with the suitable word given in the bracket.  
a) Identical twins are \_\_\_\_\_ (Natural clones / Induced clones)  
b) Identical twins are \_\_\_\_\_ (dissimilar to each other / similar to each other).
- (1/7)** 46. The heritable characters are varying in different species and within the same species.  
Name the variation in the following cases.  
The eye colour among the human beings are varied as blue, black, brown, green, etc.,

- a) This is called as \_\_\_\_\_ variation.  
The dentition in rabbit and elephant are not the same.
- b) This is called as \_\_\_\_\_ variation.

**(1/9)** 47. Here is a certain important hereditary jargons, fix a suitable one from the list given below.

- a) \_\_\_\_\_ are the factors which form the physical basis of inheritance.  
b) \_\_\_\_\_ is alternate expression of same gene.  
c) \_\_\_\_\_ are contrasting pairs of alleles.  
(alleles, variation, speciation, gene, allelomorph)

**(1/11)** 48. Sequentially arrange the different species of man from primitive to modern man.  
(Neanderthal man, Homo habilis, Homo erectus, Homo sapiens)

**(1/8)** 49. Sexually reproducing organisms produce offsprings with marked, significant and visible variation. Asexually reproducing offsprings show minor variations.  
a) Do you agree with the above statements?  
b) Among the following organisms list out the asexually reproducing organisms  
(Paramecium, Euglena, Earthworm and Bird.)

**(4/14)** 50. Composite fruits is formed by all the flowers of \_\_\_\_\_, \_\_\_\_\_ fruit is developed from a single flower with multicarpellary apocarpous superior ovary.

**(4/12)** 51. The methods of reproduction and the organisms are given below. Match the type of reproduction to the suitable organisms.

Fission	Spirogyra	Yeast
Budding	Protozoans	Flatworms
Fragmentation	Bryophyllum	Bacteria

**(4/13)** 52. In balsam plant the seeds fall off far away from the mother plant.  
a) Is this statement correct or incorrect?  
b) Give reason.

**(11/11)** 53. What type of chemical reaction takes place when  
i) limestone is heated  
ii) a magnesium ribbon is burnt in air

**(11/12)** 54. The pH values of certain familiar substances are given below

Substance	pH value
Blood	7.4
Baking soda	8.2
Vinegar	2.5
Household ammonia	12

analyse the data in the table and answer the following questions  
a) Which substance is acidic in nature?  
b) Which substances are basic in nature?

**(15/2)** 55. Fill in the blanks.

- a) Force = mass x acceleration, then momentum = \_\_\_\_\_?  
b) Liquid hydrogen is for rocket, then \_\_\_\_\_ for MRI.

**(15/6)** 56. As a matter of convention, an anticlockwise moment is taken as \_\_\_\_\_ and a clockwise moment is taken as \_\_\_\_\_.

**(15/3)** 57. The name of some organisations which are associated with Chandrayan-I mission are given below. but some of them are not. List out the wrong ones.  
(ISRO, BARC, NASA, ESA, WHO, ONGC)

**(15/4)** 58. Correct the mistakes, if any, in the following statements.  
a. One newton is the force that produces an acceleration of  $1 \text{ ms}^{-2}$  in an object of 1 gram mass.  
b. Action and reaction is always acting on the same body.

**(15/1)** 59. From the following statements write down that which is not applicable to mass of an object  
a. It is a fundamental quantity  
b. It is measured using physical balance. c. It is measured using spring balance.

**(15/5)** 60. The important use of cryogenics is cryogenic fuels. What do you mean by cryogenic fuels?

**(13/12)** 61. Diamond is the hardest allotrope of Carbon. Give reason for its hardness.

**(6/10)** 62. Sugar is converted into alcohol. From the above statement what kind of process takes place? Which micro organism is involved?

**(6/11)** 63. Pick out the odd one : The parts of the alimentary canal are  
(Pharynx, mouth, buccal cavity, pancreas)

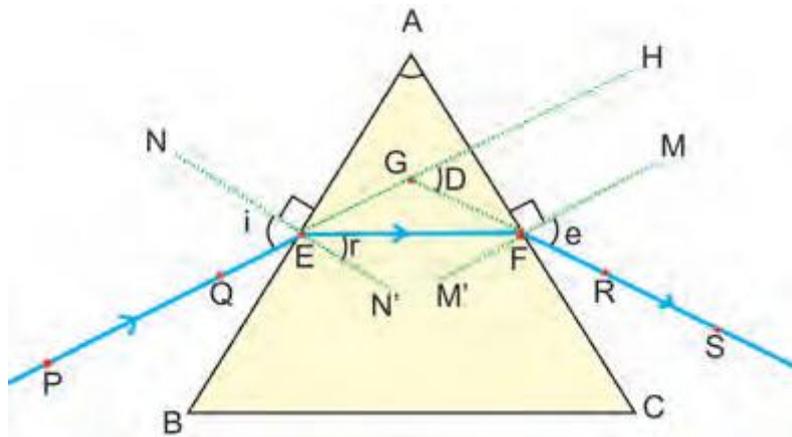
**(6/9)** 64. In the process of respiration \_\_\_\_\_ is carbon compound, the lactic acid is \_\_\_\_\_ carbon compound.

**(6/12)** 65. In human beings air enters into the body through \_\_\_\_\_ and moves into \_\_\_\_\_. In fishes water enters into the body through \_\_\_\_\_ and the dissolved oxygen of water diffuses into \_\_\_\_\_.

**(6/8)** 66. Match the methods of nutrition of special organs with suitable examples.

Autotrophs	Mycorrhiza	Cuscuta
Parasites	Chlorophyll	Monotropa
Saprophytes	Haustoria	Hibiscus

## FIVE MARK QUESTIONS



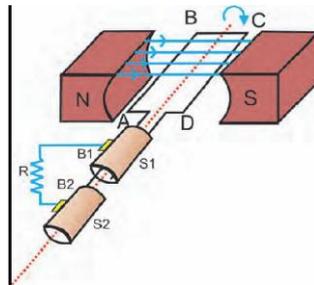
**(17/1)** 1. (a) Label the following in the given diagram given below.

- a) Incident ray
- b) Refracted ray
- c) Emergent ray
- d) Angle of refraction

- e) Angle of deviation
- f) Angle of emergence

1. (b) The refractive index of diamond is 2.42. What is the meaning of this statement in relation to speed of light?

**(17/2)** 2.



- a) Re draw the above diagram.
- b) This diagram represents \_\_\_\_\_
- c) Label the parts of the diagram.
- d) Write the principle of the name of the device denoted by this diagram.

**(2/17)** 3. Kala has delivered a baby,

- a. Suggest the immunization schedule for the baby, in the first six months
- b. What are all the diseases that can be cured as per the schedule?

**(2/18)** 4. There is a widespread outbreak of malaria in your area.

- a. Suggest some controlling measures to the local authorities concerned.
- b. Pick out the right symptom for malaria. (chill and shiver and a rise in temperature / diarrhoea )

**(2/19)** 5. 15th October is observed as 'Handwashing Day'

- a. Tell your friend the effects of hand washing.
- b. In a day what are the occasions in which you wash your hand?

- (7/15)** 6.a) Classify the following substances – wood, paper, plastic and grasses.  
b) Give detailed account on your classification.
- (7/16)** 7. In your area there is scarcity of water due to this the people are affected. So what are the measures to be taken by you to meet out the scarcity of water.
- (7/17)** 8. Smoke, smoke everywhere smoke. Do you agree this situation is good for health. List out the harmful effects of coal burning.
- (10/1)** 9. Modern atomic theory takes up the wave concept, principle of uncertainty and other latest discoveries to give a clear cut picture about an atom. State the findings of modern atomic theory.
- (10/2)** 10. You are given the values of mass of one volume of oxygen gas and the mass of one volume of hydrogen. By applying Avagadro's law how will you establish the relation between vapour density and molecular mass of a gas?
- (10/3)** 11. Calculate the number of moles in
- $12.046 \times 10^{23}$  atoms of copper
  - 27.95g of iron
  - $1.51 \times 10^{23}$  molecules of  $\text{CO}_2$
- (1/15)** 12. Human evolution has a record of changes for the past of 15 million years.
- Name the different species of mankind in chronological order from primitive to modern man.
  - When were the primitive caves developed.?
  - Narrate the life led by early man like hominids.
- (1/ex)** 13. a) Define genetic engineering.  
b) What are the benefits of genetic engineering?
- (1/ex)** 14. What are the types of stem cells? Explain that.?
- (4/16)** 15.a) Name the process by which the fruit is developed.  
b) Give the development process in brief.  
c) Draw a neat diagram of that process and label.
- (4/17)** 16.a) Write the two events involved in the sexual reproduction of flowering plant.  
b) Discuss the first event and write the types  
c) Give advantages and dis-advantages of that event.
- (15/2)** 17.a) Space stations are used to study the effects of long-space flight on the human body. justify.  
b)  $F = G \frac{m_1 m_2}{d^2}$  is the mathematical form of Newton's law of gravitation, G - gravitational constant,  $m_1 m_2$ , are the masses of two bodies separated by a distance d, then give the statement of Newton's law of gravitation.
- (15/ex)** 18. Explain the achievements of Chandrayaan.
- (15/ex)** 19. Differentiate mass and weight.

(13/2)20. Homologous series predict the properties of the members of hydrocarbon. Justify this statement through its characteristics.

## ONE WORD QUESTIONS

### BIOLOGY

#### 1. Heredity and Evolution

1. Mendel observed 7 pairs of contrasting characters in *Pisum sativum*. One of the following is not a part of that. Find out.

• Tall and dwarf, • Yellow and green seed colour, • Terminal and axial Flower, • Smooth and rough stem

2. Primitive man evolved in - (Africa, America, Australia, India)

3. Which of the following is inheritable (an altered gene in sperm, an altered gene in testes, an altered gene in zygote, an altered gene in udder cell)

4. Theory of natural selection was proposed by - (Charles Darwin, Hugo de Vries, Gregor Johann Mendel, Jean Baptise Lamarck)

5. Somatic gene therapy (affects sperm, affects egg, affects progeny, affects body cell)

#### 2. Health and Hygiene

6. Pick out a case of healthy state of an individual. Mr. X is recovering from an infectious disease, Mr. Y is taking insulin injection everyday, Mrs. Z is very much depressed, Mr. K is attending to his duty and spends time joyfully,

7. Which one of the following is a state of a disease in which a person is not socially balanced. He enjoys a birthday party, He behaves rudely even for menial matters, He is adjusting to the surrounding situation, He is attending to his ailing mother at the hospital.

8. Pick out the bacterial disease. (Meningitis, Rabies, Tetanus, Small pox)

9. One of the following is transmitted through air. Find out. (Tuberculosis, Meningitis, Typhoid, Cholera)

10. The most serious form of malaria is caused by *Plasmodium* \_\_\_\_\_. (*P. ovale*, *P. malariae*, *P. falciparum*, *P. vivax*)

11. An example for protozoan infecting our intestine is \_\_\_\_\_. (*Plasmodium vivax*, *Entamoeba histolytica*, *Trypanosoma gambiense*, *Taenia solium*)

12. One of the means of indirect transmission of a disease is \_\_\_\_\_. (Sneezing, Droplet from mouth, Placenta, Utensils of patients)

13. When antibodies, extracted from some other animal is injected into your body, what kind of immunity do you gain? Artificial active acquired immunity, Artificial passive acquired immunity, Natural active acquired immunity, Natural passive acquired immunity.

14. The first vaccine injected into a just born baby is \_\_\_\_\_. Oral polio, DPT, DPT and Oral polio, BCG.

15. Pick out a non-antigen. Entry of \_\_\_\_\_. (Germ, Toxins of germs, New forms of protein, Mother's Milk)

### 3. My Body

16. Unipolar neurons are found in \_\_\_\_\_. (Brain, Spinal Chord, Embryonic nervous tissue, Adult nervous tissue.)

17. The sensory organs contain \_\_\_\_\_. (Unipolar neuron, Bipolar neuron, Multipolar neuron, Medullated neuron.)

18. The part of brain which controls emotional reactions in our body is \_\_\_\_\_. (Cerebellum, Cerebrum, Thalamus, Hypothalamus.)

19. One of the following is the part of the brain stem. Pick out. (Fore brain and mid brain, Mid brain and hind brain) (Fore brain and hind brain, Fore brain and spinal cord.)

20. Spinal nerves are \_\_\_\_\_. (Sensory nerves, Motor nerves, Mixed nerves, Innervating the brain.)

21. An endocrine gland found in neck is \_\_\_\_\_. (Adrenal gland, pituitary gland, thyroid gland, pancreas.)

22. An endocrine gland which is both exocrine and endocrine is \_\_\_\_\_. (Pancreas, pituitary, thyroid, adrenal.)

23. Normal blood glucose level in 100 ml of blood is \_\_\_\_\_.

24. The "T" lymphocytes are differentiated to resist infection in \_\_\_\_\_ (parathyroid gland, lymph gland, thymus gland, adrenal gland.)

25. In Meiosis-I, the pairing of homologous chromosomes take place during \_\_\_\_\_ stage. (leptotene, zygotene, pachytene, diplotene).

### 4. Reproduction in Plants

26. This is the one of the methods of reproduction in unicellular organisms like amoeba and bacteria in which they split into two equal halves and produce new ones is called. (fragmentation, binary fission, budding, spore formation)

27. In sexual reproduction of flowering plants, the first event involved in this is. (fertilization, germination, regeneration, pollination)

28. Which of the following statement is true. a) Thin walled non mobile spores are called zoospores, b) A motile asexual spore produced by some algae bacteria and fungi are called Akinetes, c) Uninucleate, non motile, a sexual spores are produced by the fungus are called conidia.

29. The fertilized ovary is a fruit. The fruit develops from a single flower with multi carpellary, apocarpous superior ovary is (Aggregate fruit, Composite fruit, Simple fruit, Multiple fruit)

30. If a water soaked seed is pressed, a small drop of water comes out through. (stomata, lenticel, micropyle, radicle)

31. The mango fruit is called as stone fruit. because it has.(skinny epicarp, stony mesocarp,fleshy endocarp, hard endocarp)

32. Pick out the wrong statement.(In a dicot seed there is a shortlongitudinal whitish ridge is calledthe raphae.There is a minute opening in dicot seed is known as micropyle.The rudimentary stem portionknown as radicle.The rudimentary root portion iscalled radicle)

33. Consider the following statement regarding the dispersal of fruit by wind and select the correct answer.a) Fruits and seeds dispersed with a sudden jerk by an explosive mechanism. b) Fruits of tridax are carry a persistent calyx modified into pappus.The fruits of xanthium have sharp pointed stiff hooks. c) The mesocarp of coconut is fibres

34. The product of triple fusion which acts as nutritive tissue for the development of embryo is (zygote, placenta, scutellum, endosperm)

35. The disadvantage of self pollination is (There is no wastage of pollen grains,The seeds are less in numberSelf pollination is sure in bisexual flowersFlowers need not depend on agents of pollination)

## 5. A Representative Study of Mammals

36. Sensitive whiskers are found in \_\_\_\_\_. (Bat, Elephant, Deer, Cat)

37. The tusks of elephants are modified \_\_\_\_\_.

38. Pick out an animal which has four chambered stomach \_\_\_\_\_.(Elephant, Dolphin, Deer, Kangaroo)

39. Normal body temperature of man is \_\_\_\_\_. ( 98.4 – 98.6°F, 96.6 – 96.8°F,94.4 – 98.6°F, 98.4 – 99.6°F)

40. Mitral valve is found between \_\_\_\_\_.Right auricle and right ventricle, Left auricle and left ventricle,Right ventricle and pulmonary artery, Left ventricle and aort

## 6. Life Processes

41. In monotropa the special type of root which absorbs nourishment is (Haustoria, Mycorrhizal root, Clinging root, Adventitious root)

42. The product obtained in the Anaerobic respiration of yeast is (Lactic acid, Pyruvic acid, Ethanol, Acetic acid)

43. The roots of coconut tree are seen away from the plant. Such kind of movement of root for want of water is (Phototropism,Geotropism,Chemo-tropism, Hydrotropism)

44. The xylem in the plants are responsible for (transport of water, transport of food, transport of amino acids, transport of oxygen)

45. The autotrophic nutrition requires (CO<sub>2</sub> and water, chlorophyll, sunlight, all the above)Multiple choice questions

## 7. Conservation of Environment

46. Which of the following groups contain only bio degradable items?(Grass, flowers and leather ; Grass, wood and plastic ; Fruit peels, cake and plastic ; Cake, wood and grass)

47. Which of the following constitute a food chain?(Grass, wheat and mango ; Grass, goat and human ; Goat, cow and elephant ; Grass, fish and goat)
48. Which of the following are environmental friendly practices? (carrying cloth bags to carry the purchase items during shopping, switching off light and fans when not in use, use the public transport, all the above)
49. what is called as 'black gold'?(hydrocarbons, coal, petroleum, ether)
50. odd one out.(Plants, grasshopper, frog, tiger, snake)
51. Example for product of green chemistry is (plastic, paper, bio plastics, halogen flame retardants)
52. \_\_\_\_\_ green house gas which causes climate change and global warming. (hydrogen, oxygen, nitrogen carbondioxide)
53. The \_\_\_\_\_ forms decomposers in the pond ecosystem (plants, bacteria, frog, phytoplanktons)
54. \_\_\_\_\_ chemical is used in seeding clouds (potassium iodide, calcium carbonate, sulphurdioxide, ammonium phosphate)
55. Example for fossil fuel is (copper, iron, magnesium, coal)

## 8. Waste Water Management

56. Example for water-borne disease is (scabies, dracunculiasis, trachoma, typhoid)
57. The settled and floating materials are removed by this treatment method. (primary treatment, secondary treatment, tertiary treatment, peripheral treatment)
58. Which is a non-renewable resource? (coal, petroleum, natural gas, all the above)
59. ----- is the chief component of natural gas. (ethane, methane, propane, butane)

## CHEMISTRY

### 9. Solutions

60. A true solution is a homogeneous mixture of solute and solvent. Chalk powder in water is a heterogenous mixture. Is it a true solution?
61. Solution that contains water as the solvent is called aqueous solution. If carbon disulphide is a solvent in a given solution, then the solution is called \_\_\_\_\_.
62. Solubility of common salt in 100g water is 36g. If 20g of salt is dissolved in it how much more is required to attain saturation.
63. If two liquids are mutually soluble, they are called \_\_\_\_\_ liquids. (miscible, immiscible)
64. When sunlight passes through window of the classrooms its path is visible. This is due to \_\_\_\_\_ of light. (refl ection, scattering)
65. The particles in various forms are visible only under ultramicroscope. A solution containing such particles is called \_\_\_\_\_. (True solution, colloidal solution)
66. The mixture of gases used by deep sea divers is \_\_\_\_\_(Helium-oxygen, oxygen-nitrogen)

67. Earth soil cannot store more nitrogen than it can hold. Hence earth soil is referred to be in a state of \_\_\_\_\_. (saturation, unsaturation)

68. In an endothermic process, solubility increases with \_\_\_\_\_ in temperature. (increase, decrease)

## 11. Chemical Reactions

69. The above reaction is an example  $Zn + 2HCl \rightarrow ZnCl_2 + H_2 \uparrow$  of

a) Combination reaction b) Double displacement reaction c) Displacement reaction d) Decomposition reaction.

70. A reddish brown coloured element 'X' on heating in air becomes black coloured compound 'Y'. X and Y are \_\_\_\_\_ and \_\_\_\_\_ (Cu, CuO / Pb, PbO).

71. A student tested the pH of pure water using a pH paper. It showed green colour. If a pH paper is used after adding lemon juice into water, what color will he observe? (Green / Red / Yellow)

72. Chemical volcano is an example of (combination reaction / decomposition reaction)

73. When crystals of lead nitrate on heating strongly produces a \_\_\_\_\_ gas and the colour of the gas is \_\_\_\_\_

74. When aqueous solution of silver nitrate and sodium chloride are mixed \_\_\_\_\_ precipitate is immediately formed (white / yellow / red).

75. Zinc can displace aluminium metal from aqueous solution of aluminium sulphate (zinc is more reactive than aluminium / aluminium is more reactive than zinc).

76. To protect tooth decay, we are advised to brush our teeth regularly. The nature of the tooth paste commonly used is \_\_\_\_\_ in nature.

77. Vinegar is present in acetic acid. Curd contains \_\_\_\_\_ acid (Lactic acid / Tartaric acid).

78.  $pH = -\log_{10} [H^+]$ . The pH of a solution containing hydrogen ion concentration of 0.001M solution

is \_\_\_\_\_ (3 / 11 / 14).

## 12. Periodic Classification of Elements

79. In the modern periodic table periods and groups are given. Periods and groups indicate— \_\_\_\_\_

a) Rows and Columns b) Columns and rows

80. Third period contains 8 elements, out of these elements how many elements are non-metals?.

81. An element which is an essential constituent of all organic compounds belongs to \_\_\_\_\_ group.

(14th group / 15th group)

82. Ore is used for the extraction of metals profitably. Bauxite is used to extract aluminium, it can be termed as \_\_\_\_\_. (ore / mineral)

83. Gold does not occur in the combined form. It does not react with air (or) water. It is in \_\_\_\_\_. (native state / combined state)

84. Assertion: Greenish layer appears on copper vessels if left uncleaned. Reason: It is due to the formation of layer of basic copper carbonate Give your correct option

- a) assertion and reason are correct and relevant to each other  
 b) assertion is true but reason is not relevant to the assertion
85. A process employed for the concentration of sulphide ore is \_\_\_\_\_. (froth flotation / gravity separation)
86. Coating the surface of iron with other metal prevents it from rusting. If it is coated with thin layer of zinc it is called \_\_\_\_\_ (galvanization / painting / cathodic protection)
87. Any metal mixed with mercury is called amalgam. The amalgam used for dental filling is \_\_\_\_\_. (Ag – Sn amalgam / Cu – Sn amalgam)
88. Assertion: In thermite welding, aluminium powder and  $\text{Fe}_2\text{O}_3$  are used. Reason: Aluminium powder is a strong reducing agent. Does the reason satisfy the assertion?

### 13. Carbon and its Compounds

89. Assertion: Chemical bonds in organic compounds are covalent in nature. Reason: Covalent bond is formed by the sharing of electrons in the bonding atoms. Does the reason satisfy the given assertion.
90. Assertion: Diamond is the hardest crystalline form of carbon Reason: Carbon atoms in diamond are tetrahedral in nature (Verify the suitability of reason to the given Assertion mentioned above)
91. Assertion: Due to catenation a large number of carbon compounds are formed. Reason: Carbon compounds show the property of allotropy. (Is the reason holding good for the given Assertion)
92. Buckminster fullerene is the allotropic form of (Nitrogen / Carbon / Sulphur)
93. Even though it is a non metal, graphite conducts electricity. It is due to the presence of ..... (free electrons / bonded electrons)
94. Formula of methane is  $\text{CH}_4$  and its succeeding member ethane is expressed in  $\text{C}_2\text{H}_6$ . The common difference of succession between them is ( $\text{CH}_2$  /  $\text{C}_2\text{H}_2$ )
95. IUPAC name of first member of alkyne is ..... (ethene / ethyne)
96. Out of ketonic and aldehydic group which is the terminal functional group?
97. Acetic acid is heated with a solid 'X' kept in a test tube. A colourless and odourless gas (Y) is evolved. The gas turns lime water milky when passed through it. Identify X and Y.
98. Assertion: Denaturation of ethyl alcohol makes it unfit for drinking purposes. Reason: Denaturation of ethyl alcohol is carried out by methyl alcohol. Check whether the reason is correct for assertion.

## PHYSICS

### 15. Laws of Motion and Gravitation

99. The acceleration in a body is due to \_\_\_\_\_. (balanced force, un-balanced force, electro static force)
100. The physical quantity which is equal to rate of change of momentum is (displacement, acceleration, force, impulse)
101. The momentum of a massive object at rest is \_\_\_\_\_. (very large, very small, zero, infinity)

102. The weight of 50 kg person at the surface of earth is \_\_\_\_\_. (50 N, 35 N, 380 N, 490 N)

103. The freezing of biotechnology products like vaccines require \_\_\_\_\_ freezing systems. (Helium, Nitrogen, Ammonia, Chlorine)

## 16. Electricity and Energy

104. The potential difference required to pass a current 0.2 A in a wire of resistance 20 ohm is \_\_\_\_\_. (100 V, 4 V, 0.01 V, 40 V)

105. Two electric bulbs have resistances in the ratio 1 : 2. If they are joined in series, the energy consumed in these are in the ratio \_\_\_\_\_. (1 : 2, 2 : 1, 4 : 1, 1 : 1)

106. Kilowatt-hour is the unit of \_\_\_\_\_. (potential difference, electric power, electric energy, charge)

107. \_\_\_\_\_ surface absorbs more heat than any other surface under identical conditions. (White, rough, black, yellow)

108. The atomic number of natural radioactive element is \_\_\_\_\_. (greater than 82, less than 82, not defined, at least 92).

## 17. Magnetic Effect of Electric Current and light

109. The magnification produced by a mirror is  $\frac{1}{3}$ , then the type of mirror is (concave, convex, plane)

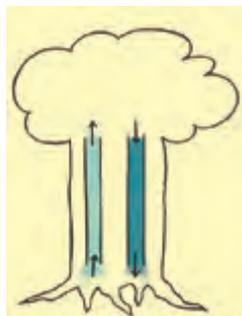
110. An electric current through a metallic conductor produces \_\_\_\_\_ around it. (heat, light, magnetic field, mechanical force)

111. The field of view is maximum for (plane mirror, concave mirror, convex mirror)

112. An object is placed 25 cm from a convex lens whose focal length is 10 cm. The image distance is \_\_\_\_\_. (50 cm, 16.66 cm, 6.66 cm, 10 cm)

## DIAGRAMS

6. Name the types of vascular tissues in the plant stem which are labelled as A and B



a) Name A and B

b) What are the materials transported through A?

c) What are the materials transported through B?

d) How do the materials in A move upwards to leaves?

7. Observe the diagram

a) Mention the type of movements shown in fig, A and B.

b) How does the movement differ from the movement of mimosa

