

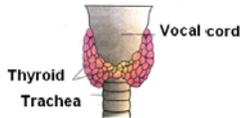
**Key Answers**

**SECTION – A**

- 1.(a)Africa
- 2.(a) P.falciparam
- 3.(d) Pollination
- 4.(c) Ethanol
- 5.(c) Bio-plastic
- 6.(b) Scattering
- 7.(a) Lactic acid
- 8.(a) Froth flotation
- 9.(a) 14<sup>th</sup> group
- 10.(b) Carbon
- 11.(c) Zero
- 12.(b) 4v
- 13.(c) Black
- 14. Concave / Convex
- 15.( a) Convex lens

**SECTION – II**

- 16. Homo habilis →Homo erectus → Neandarthalman → Homo sapiens
- 17. Not correct. ----- 1 mark  
In **Kwashiorkar** the child has enlarged belly and swelling in the face and feet. -----½ mark  
In **Marasmus** the child loss weight ,suffers severe diarrrohea and appear as though bones are covered by the skin.----- ½ mark
- 18. Statement b and c are correct.
- 19. © Leptotene →Zygotene →Pacshytesne→Diplotene → Diakinesis
- 20. Any two parts 2 marks



21.

Fission	Potozovans	Bacteria
Budding	Bryophyllum	Yeast
Fragmentation	Spirogyra	Flatworms

22.Match:

- |             |              |
|-------------|--------------|
| A           | B            |
| a)RBC       | Erythrocytes |
| b)WBC       | Leucocytes   |
| c)Platelets | Thrombocytes |

23. © dog,cat,crocodile,lion,tiger - Crocodile is not a mammal.

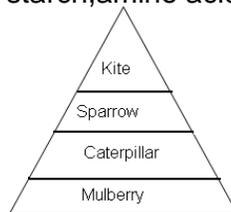
24. Wings

25. a) A – xylem B - Phloem -----1 mark

b) A) Water and mineral elements

B) Food materials starch,amino acids.—1 mark

26.



27. **Non-renewable resource:** Coal, petroleum and natural gas. ----- 1mark Methane.  
----- 1 mark

28.

Sources	A	B	C
Renewable	Hydrogen	Wind	Solar energy
Non-Renewable	Coal	Natural gas	Petroleum

29. Liquid bio-fuels: 1) Bio alcohol (2) Green diesel (3) Bio-diesel  
4) Bio-gas (5) Bio-ethers (6) Vegetable oil.  
(any four  $4 \times \frac{1}{2} = 2$ )

30.

True solutions	Colloidal solutions
1) It is a homogeneous mixture.	1) It is a heterogeneous mixture.
2) It contains small solute particles. These are dissolved throughout the solvent. Ex. Sugar in water	2) It is made up to two phases namely, dispersed phase, dispersion medium.

31. **Solution:**

$$\text{Weight percentage} = \frac{\text{weight of solute}}{\text{weight of solute} + \text{weight of solvent}} \times 100$$

$$\frac{20}{20+50} \times 100 = \frac{2000}{70} = 28.57$$

32. Atomicity =  $\frac{\text{molecular mass}}{\text{atomic mass}} = \frac{28}{14} = 2$

33. a) **Acidic:**-Vinegar b) **Basic:** Blood, Baking soda, Household ammonia

34.  $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$

Iron is more reactive than copper. Iron displaces copper from  $\text{CuSO}_4$  solution.

35. 1) It is used in household utensils. 2) It is used in electrical cable industry.  
3) It is used in aeroplanes and other industrial parts.  
4) It is used in thermite welding.

36. Yes. The reason satisfies the assertion.

37. 1) In diamond each carbon atom is bound to four other carbon atoms.  
2) This forms a rigid three dimensional structure.

38. a) One newton is the force that produces an acceleration of **1m.s<sup>-2</sup>** in an object of **1 kg.mass.**

b) Action and reaction is always acting on the **two different** bodies.

39. a) Positive b) Negative

40. Current = resistance x potential difference

41. a) Ammeter b) Non-conventional source of energy  
(or) Renewable source of energy.

42. lead and tin, low

43. a) Electro magnet b) diopter

44. a) Magnetic field is a quantity that has **both** magnitude and **direction.**  
b) The magnetic field lines emerge from the **north pole and** merge at the **south pole.**

45. Red, larger.

### SECTION – III

46.a. 1) Hominids 2) Homo habilis 3) Homo erectus  
4) Neanderthal man 5) Archaic homosapiens 6) Modern homosapiens.  
(order not to be changed) ----- 2 marks

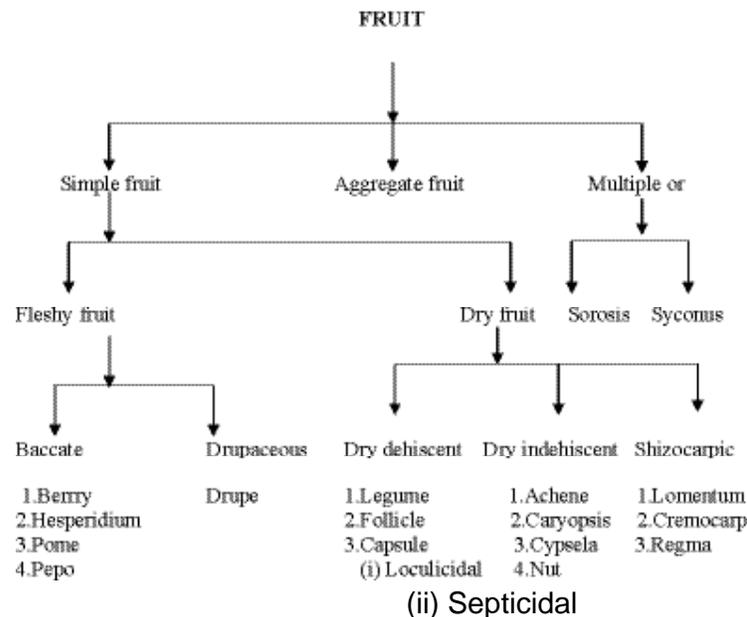
- b. The primitive caves were developed about **18,000 years ago.** ---- 1 mark
- c. a) Hominids are hairy bodied Gorilla.  
 b) They hunted with stone weapons.  
 c) They were mostly fruit eaters.  
 d) They were not taller than four feet.  
 e) They walked upright in the grass lands of East Africa.  
 (Any two points ----- 2 marks)

**47. a. Immunization schedule: 3 marks**

Age	Vaccine	Dosage
New born	BCG	1st dose
1 5 days	Oral Polio	1 <sup>st</sup> dose
6 <sup>th</sup> week	DPT and Polio	I dose
10 <sup>th</sup> week	DPT and Polio	II dose
14 <sup>th</sup> week	DPT and Polio	III dose

- b. **BCG** - Tuberculosis  
**DPT** - Diptheria, Pertussis, Tetanus, -----2 marks  
**Polio Vaccine** - Polio.

48. a). **Yes. Parthenocarpic fruit.** -----1 mark  
 b) diagrammatic sketch. ----- 4 marks



**49. To meet out the water scarcity we need several ways to increase the water supply.**

**i) Seeding clouds:** Seeding clouds with dry ice or potassium iodide particles sometimes can initiate rain .

**ii) Desalination:** Desalination of ocean water is a technology that has great potential for increasing fresh water. Desalination is more expensive than most other sources of fresh water. In desalination, the common methods of evaporation and re-condensation are involved.

**iii) Dams, reservoirs and canals:** Dams and storage reservoirs tap run-off water in them and tranfer the water from of excess to areas of deficit using canals and underground pipes.

**iv) Water shed management:** The management of rainfall and resultant run-off is called water shed management. Water shed is an area characterized by construction of small dams to hold back water which will provide useful wildlife habitat and stock watering facilities.

**v) Rain water harvesting :** Rain water harvesting collecting rain water from the roof of building or courtyards and storing it under ground for later use. The process of rain water harvesting is not only simple but also economically beneficial. It helps in meeting the increased demand for water, particularly in urban areas and prevent flooding of living areas.

**vi) Wetland conservation:** It preserves natural water storage and acts as aquifer recharge zones.

**vii) Domestic conservation :** As an individual, every one can

1. reduce the water loss by taking shower,
2. using low-flow taps,
3. using recycled water for lawns, home gardens,
4. vehicle washing and using water conserving appliances.

**viii) Industrial conservation :** Cooling water can be recharged and waste water reused.  
( any 5 measures ----- 5 marks)

50. The findings of modern atomic theory are given as follows.

- 1) Atom is considered to be a divisible particle.
- 2) Atoms of the same element may not be similar in all respects.  
eg: Isotopes ( $^{35}_{17}\text{Cl}$ ,  $^{37}_{17}\text{Cl}$ , )
- 3) Atoms of different elements may be similar in some respects  
eg. Isobars ( $^{40}_{18}\text{Ar}$ ,  $^{40}_{20}\text{Ca}$ , )
- 4) Atom is the smallest particle which takes part in chemical reactions.
- 5) The ratio of atoms in a molecule may be fixed and integral but may not be simple eg.  $\text{C}_{12}\text{H}_{22}\text{O}_{11}$  is not a simple ratio (Sucrose)
- 6) Atoms of one element can be changed into atoms of other element by transmutation.
- 7) The mass of an atom can be converted in to energy. This is in accordance with Einstein's equation  $E = mc^2$

( any 5 points ----- 5 marks)

51.	Common name	IUPAC name	
(i) $\text{CH}_3\text{CH}_2\text{CHO}$	Propionldehyde	Propanal	---- 1mark
(ii) $\text{CH}_3\text{COCH}_3$	D i m e t h y l k e t o n (Acetone)	Propanone	--- 1mark
(iii) $\text{CH}_3\text{-CH-CH}_3$   OH	Isopropyl alcohol (or) secondary propyl alcohol	2-Propanol	--- 1mark
(iv) $\text{CH}_3\text{COOH}$	Acetic acid	Ethanoic acid	--- 1mark
(v) $\text{HCHO}$	-Formaldehyde	Methanal	--- 1mark

