

# ANSWERS

1. c) Chlorophyll a
2. Mother cells and daughter cells have same chromosome number
3. Pulmonary vein, Vein
4. Ball and socket joint
5. b) The light phase takes place in grana
6. Skull : 29, Ribs : 24
7. a) The plasma membrane invaginates at the centre of the cell.
8. a) Glomerular filtrate flows through the renal tubule. The glucose and amino acids are completely reabsorbed from the glomerular filtrate into the peritubular capillary.  
b) Difference in diameter influence flow of blood through glomerulus and forms high pressure

9. Inspiration	Expiration
Volume of the thoracic cavity increases	intercostal muscles relax
Diaphragm contracts	pressure in the thoracic cavity increases

10. a) A: Rheumatic Arthritis B: Osteoporosis  
b) Deficiency of calcium / Defects in metabolic activities / Deficiency of vitamin D
11. a) X= Dentine, Y= Pulp  
b) Dentine: Living tissue which forms the tooth  
Pulp: Soft connective tissue seen in the pulp cavity.  
Blood vessels, lymph ducts and nerve fibres are also seen.

13. i) Light Phase      ii) Water

15. a) Fat      b) Sucrose      d) Fructos

16. A	B
Dark coloured inner part of kidney	Medulla
Reabsorption and secretion take place	Renal tubule
The blood vessel that comes out of the f the Bowmann's capsule	Efferent vessel

17. i) Cytoplasm  
ii) Mitochondria  
iii) No need of Oxygen  
iv) Oxygen required  
v) Glucose  
vi) Carbon dioxide, water 28 TP

18. Heart	<ul style="list-style-type: none"> <li>• Exercise increases blood circulation all over the body.</li> <li>• Cardiac muscles become strong.</li> </ul>
Lungs	<ul style="list-style-type: none"> <li>• Exchange of respiratory gases becomes more effective.</li> <li>• Vital capacity increases.</li> </ul>
Muscles	<ul style="list-style-type: none"> <li>• More capillaries are formed in muscles.</li> <li>• Increases the efficiency of muscles.</li> </ul>

19. a) Villus  
b) X = Lacteal  
c) Fatty acid and glycerol are absorbed into the lymph of lacteal.
20. a) Meiosis  
b) (i) Ovum      (ii) Polar bodies  
c) Stage I (Meiosis I) the number of chromosomes in the daughter cells is half the number of chromosomes in the mother cell.  
Stage II (Meiosis II) The chromosome number is not reduced in the daughter cells
21. a) The rate of life activities are less in plants when compared to animals. Hence, the quantity of waste materials in plants are also less  
b) Stomata, Lenticel Expel photosynthetic byproduct oxygen and respiratory by products carbon dioxide and water. Hydathodes:- In certain grasses and shrubs, excess water is eliminated through small pores present at the tip of leaves called hydathodes. Formation of heartwood: Some waste materials get accumulated in the older xylem vessels present

at the centre of the tree trunk and play a major role in the formation of heart wood. Abscission of leaves: When leaves are about to fall, plants absorb all useful materials from them. Falling leaves contain mostly waste materials. (Any three)

22. a) X: Prophase

Y: Metaphase

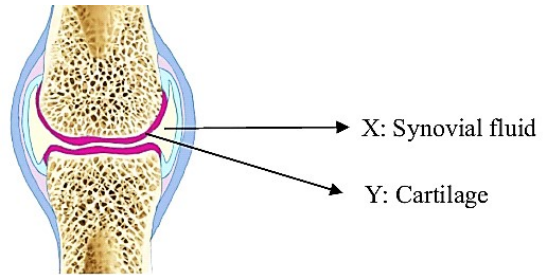
b) X: Prophase: The chromatin reticulum condenses to form chromosomes. / The nucleolus and nuclear membrane disappear. / Spindle fibres are formed from centrioles.

Y: Metaphase: Chromosomes get arranged linearly at the centre of the cell / Spindle fibres get attached to the centromeres of the chromosomes.



c) Anaphase and Telophase

23. a)



a) X: Synovial fluid Y: Cartilage

b) X: Synovial fluid Act as a lubricant into the space between the bones and reduce friction

Y: Cartilage: Reduces friction between the bones.