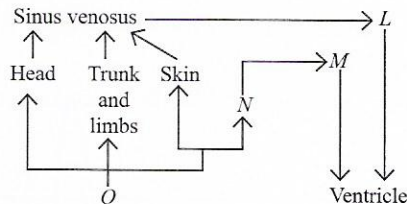


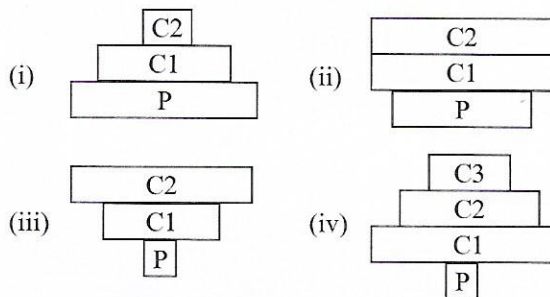
37. The given flow chart depicts blood circulation in a frog. Select the option that correctly identifies *L*, *M*, *N* and *O*.



- |    | <i>L</i>      | <i>M</i>      | <i>N</i>           | <i>O</i>           |
|----|---------------|---------------|--------------------|--------------------|
| A. | Lungs         | Left auricle  | Right auricle      | Truncus arteriosus |
| B. | Left auricle  | Right auricle | Lungs              | Truncus arteriosus |
| C. | Right auricle | Left auricle  | Lungs              | Truncus arteriosus |
| D. | Right auricle | Left auricle  | Truncus arteriosus | Lungs              |

38. Refer to the given ecological pyramids.

Key : P - Producers  
C1 - Primary consumers  
C2 - Secondary consumers  
C3 - Tertiary consumers



Which of the following represents pyramid in number of a grassland (*X*) and pyramid of biomass in a pond (*Y*)?

- |    | <i>X</i> | <i>Y</i> |
|----|----------|----------|
| A. | (ii)     | (iv)     |
| B. | (iv)     | (ii)     |
| C. | (iii)    | (ii)     |
| D. | (i)      | (iii)    |

39. Identify organelles (*W-Z*) from the given statements and select the incorrect statement regarding them.

*W* : It is found in leucocytes and is mostly made up of tubules and vesicles.

*X* : It mediates production of hormones through endocrine gland.

*Y* : It provides intermediates for synthesis of pyrimidines.

*Z* : It contains oxidative enzymes.

- A. *W* could be SER that helps in formation of sphaerosomes.
- B. *X* could be Golgi body that helps in synthesis of hemicellulose and chondroitin sulphate.
- C. *Y* could be mitochondrion that helps in release of energy in aerobic respiration.
- D. *Z* could be chloroplast that also contains enzymes for glyoxylate pathways.
40. Shweta decided to track the number of chromosomes in a cell undergoing meiosis. If the cell started with 8 chromosomes during prophase I, what would be the number of chromosomes in each daughter nucleus at the end of meiosis I and meiosis II?
- |    | End of meiosis I | End of meiosis II |
|----|------------------|-------------------|
| A. | 8                | 8                 |
| B. | 4                | 8                 |
| C. | 8                | 4                 |
| D. | 4                | 4                 |

41. Study the given metabolic actions of a hormone on different target sites and select the correct option regarding it.

Target Sites:	Liver	Adipose cell	Muscle
Metabolic actions	↑ Glucokinase ↑ Glycogen synthetase	↑ Glucose transport ↑ Glycerol synthesis	↑ Glucose transport ↑ Glycolysis ↑ Glycogen synthesis
Carbohydrate	↓ Phosphorylase ↓ Gluconeogenesis		
Fat	↑ Lipogenesis	↑ Triglycerides ↑ Fatty acid synthesis ↓ Lipolysis	
Protein	↓ Proteolysis		↑ Amino acid uptake ↑ Protein synthesis

- A. It is the anabolic hormone secreted by the beta cells of heterocrine gland.
- B. It is the hormone secreted by alpha cells of pancreas.
- C. It is the hormone secreted by the anterior pituitary gland.
- D. It is the hormone secreted by the parafollicular (C) cells.

42. Refer to the given figure *X* and *Y* and select the correct option.

