

- Q.2. Answer **any two** from the following: (20)
- Describe the structure of a typical plant cell.
 - What is plasma membrane? Give its chemical composition and describe Fluid Mosaic Model of plasma membrane.
 - Describe ultra-structure of endoplasmic reticulum.
 - What is photosynthesis? Describe the structure of the cell organelle responsible for photosynthesis.
- Q.3. Answer **any two** from the following: (20)
- What is ecosystem? Describe pond ecosystem.
 - What are ecological pyramids? Describe pyramid of energy.
 - Enlist different types of ecosystems. Describe grassland ecosystem.
 - Describe different zones of an ocean. Add a note on its biotic components.
- Q.4. Answer **any two** from the following: (20)
- What is dihybrid cross? Explain any suitable example of Mendel's dihybrid cross. Which law was postulated by Mendel based on dihybrid cross?
 - With suitable example explain partial dominance and codominance.
 - Explain non epistatic gene interaction with suitable example.
 - In summer squashes, fruit colours are white, yellow and green. Yellow colour is dominant over green colour. But, white colour is epistatic over yellow colour.
Show the result of cross between pure white (WWYY) fruited plant and pure green (wwyy) fruited plant to find out phenotypic ratio in F₂ generation.
- Q.5. Write short notes on **any four** of the following: (20)
- Functions of plant cell wall
 - Phagocytosis
 - Upright energy flow model
 - Food web
 - Test cross
 - Coat colour in rabbits