

**Model Question -4**  
**Biology XII**

**Time: 3 hrs**

**F.M. :75**

**Part I (Botany)**  
**Group A**

**Circle the correct one from given alternatives**

**[5·1=5]**

1. Fiber , the plant cell, belongs to the  
a. Parenchyma    b. Sclerenchyma    c. collenchyma    d. all of above
2. The movement of pollen tube towards embryo sac is  
a. Thigmotropism    b. Chemotropism    c. Geotropism    d. Phototropism
3. The first phase in the breakdown of Glucose in the cell is  
a. fermentation    b. glycolysis    c. ETS    d. kreb's cycle
4. Heterosis is  
a. hybrid vigor    b. hybrid incompatibility  
c. hybrid sterility    d. none of above
5. Drosophila has four homologous chromosomes .What is the number of linkage groups in it ?  
a. Four    b. Eight    c. Two    d. Sixteen

**Group B**

**Give short answers to the following questions.**

**[4·4=16]**

1. What do you mean by vernalization? Give its significance .

**[1+3=4]**

OR

Differentiate complete, incomplete and co-dominance .

2. What is anemophily? Give the adaptive features of anemophilous plants with suitable examples. **[1+3=4]**
3. How is wheat variety produced ?
4. What is tissue ? Describe the one which can divide for life long . **[1+3=4]**

### Group C

Give long answers to the following questions:

[8×2=16]

5. Describe linkage .

Or

What is sex linked gene ? Discuss sex linked inheritance with reference to the one you have studied in mammal. [1+7=8]

6. Name the process by which autotrophs manufacture food for them . Discuss the mechanism of that process that takes place in the grana portion of the chloroplast. [1+7=8]

### Part – II (Zoology)

#### Group A

Circle the correct answer from the given alternatives. (6×1=6)

- Ovary and seminiferous tubules are internally lined by
  - sensory epithelium
  - germinal epithelium
  - glandular epithelium
  - ciliated epithelium
- Middle piece of frog sperm possess
  - mitochondria and centriole
  - mitochondria only
  - centriole only
  - nucleus and mitochondria
- The number of spinal nerves in man is
  - 27 pairs
  - 31 pairs
  - 16 pairs
  - 37 pairs
- Adrenaline increases
  - heart beat
  - blood pressure
  - a and b both
  - none of the above
- Which one is an IUCD?
  - condom
  - vasectomy
  - copper T
  - oral pills
- Cornea transplantation is quite common because;
  - it is easily transplanted
  - it does not invite immune response
  - it is easily available
  - doctors are expert

#### Group B

Give short answers to the following question.

(4×4 = 16)

- Differentiate between cartilage and bones.
- Describe the gastrulation process in frog.

Or

Explain the 'S' shaped and 'J' shaped growth curve.

- Explain the menstrual cycle in women.
- Discuss the advantages and drawbacks of test tube baby.

#### Group C

Give long answers to the following questions.

(8×2 = 16)

- Describe the causative agents, mode of transmission and control measures of Typhoid. 2+2+4
- Describe the structure and function of the human Ear. 2+3+3

Or

Give an account of the male reproductive organ of human. 3+5