

Model Question -5
(Biology XII)

Time: 3 hrs

F.M. :75

Part I (Botany)

Group A

Circle the correct one from the given alternatives.

[5·1=5]

1. is responsible for photolysis of water .
a. Heat b. Light c. Temperature d. None of above
2. An asexually reproducing organism inheriting all the characters of its parent is called
a. off springs b. clone c. hybrid d. variety
3. Water conducting elements of xylem are
a. parenchyma and collenchyma b. vessels and tracheids
c. sieve tubes and companion cell d. all of above
4. Which one of the following is not a method of vegetative propagation?
a. Sowing b. Grafting c. Layering d. Cutting
5. Virus free plants can be obtained from
a. meristem culture b. anther culture c. protoplast culture d. all of above

Group B

Give short answers to the following.

[4·4=16]

1. Which hormone controls tropic movement? Discuss other activities also of that hormone .
2. How does vegetative propagation take place in plants like litchi, pomegranate? Describe the process.
3. Define complex permanent tissues. Describe any one of it of your choice. [1+3=4]
4. Describe gene mutation.

Or

Explain different types of vascular bundles giving examples of each.

Group C

Give long answers to the following questions:

[2·8=16]

5. Define transpiration. Explain types of transpiration .What are the factors affecting rate of transpiration. [1+3+ 4=8]
6. Explain the process of DNA replication as suggested by Watson and Crick. [1+3+4=8]

OR

Give an account on Mendelism.

[8]

Part II (Zoology)

Group A

Circle the correct answer from the given alternatives.

(6·1=6)

1. Cartilage is produced by
a. osteoblasts b. fibroblasts c. epithelium d. chondroblast
2. How many sperms are formed in microsporogenesis?
a. 2 b. 1 c. 3 d. 4
3. Oxytocin hormone is secreted by:
a. adrenal gland b. ovaries c. thyroid gland d. pituitary gland
4. Clitoris in mammals is

- a. homologous to penis.
 - b. analogous to penis.
 - c. functional penis in female.
 - d. non functional penis in male.
5. Cause of global population explosion is
- a. better health care
 - b. increased agricultural products
 - c. more jobs
 - d. fewer wars
6. Vaccines are meant to
- a. prevent the disease.
 - b. cure the disease.
 - c. provide energy.
 - d. all of the above.

Group B

Give short answer to the following questions: **(4×4 = 16)**

1. Give an account of neuron.
2. Write short notes on neurulation.

Or

Give an account for population explosion with its various reasons.

3. What is portal system? Describe the hepatic portal system in human.
4. Describe the measures of family planning.

Group C

Give long answer to the following questions. **(2×8 = 16)**

5. Discuss causative agent, incubation period, affected organs, mode of transmission, symptoms, prevention and control measures of AIDS. 2+2+4 = 8
6. Give an account of the structure of the kidney. 3+5 = 8

Or

Give an account on the structure and working of the human heart. 3+5 = 8