



BIOLOGY

BOOKS - ARIHANT PUBLICATION

SAMPLE PAPER 2

Section A Botany Group I

1. In which pair both the plants can be vegetatively propagated by leaf pieces ?

A. Bryophyllum and Begonia

B. Chrysanthemum and Agave

C. Agave and Kalanchoe

D. Asparagus and Bryophyllum

Answer:



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2. The narrow pore at one end of the ovule is called

A. funiculus

B. chalaza

C. micropyle

D. hilum

Answer:



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3. The F_2 -ratio resulting from a cross of TT and tt parents will be,

A. 15: 1

B. 9: 7

C. 3: 1

D. 1: 2

Answer:



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4. BOD of waste water is estimated by measuring the amount of :

A. total organic matter

B. biodegradable organic matter

C. oxygen

D. oxygen consumption

Answer:



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5. The development of a bare area without any form of life due to topographic, climatic and biotic factors is

A. nudation

B. invasion

C. migration

D. ecesis

Answer:



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6. AUG is a termination codon.



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7. Back cross is used to determine the genotype of a plant.



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8. Pure line selection is used in ____ pollined crop.



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9. Acid rains are formed by CO_2 and NH_3 present in the atmosphere.



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10. In false polyembryony, embryos are developed inside a single embryo sac.



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Section A Botany Group Ii Short Note

1. Ovule



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2. What is Budding ??



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3. Write notes on :Law of independent assortment



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4. RNA as genetic material



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5. Organic acids are produced by microbes.

True or False



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6. Emasculation (In plant breeding)





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Section A Botany Group Ii

1. DISTINGUISH BETWEEN : Biofertilizer and biocontrol agent



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2. DISTINGUISH BETWEEN : Hydrophyte and Xerophyte





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3. Seral community and Climax community



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Section A Botany Group Iii

1. Describe the structure of DNA studied by Watson and Crick.



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2. Give an account of the monohybrid cross explained by Mendel. Also explain the conclusion drawn by him from the experiment



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3. Describe initiation step of translation in prokaryotes.



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4. Answer any two questions, each within 200 words.

Give an account of primary air pollutants.



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Section B Zoology Group I

1. Relaxin, a protein hormone is secreted from

A. seminiferous tubule

B. Graafian follicle

C. corpus luteum

D. corpus albicans

Answer:



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2. Ringworm in humans is caused by

A. viruses

B. bacteria

C. fungi

D. nematodes

Answer:



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3. In honey bees , drones are produced from :

A. unfertilised eggs

B. fertilised eggs

C. larvae fed by royal jelly

D. fasting larvae

Answer:



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4. What is the correct sequence of human evolution?



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5. Name the most abundant antibody present in serum.



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6. Before fertilisation, sperm undergoes.....and acrosomal reaction



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7. In Bonellia,.....type of sex-determination is found.



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8. Destruction of mosquito larvae is achieved by introducing fishes like.....in water bodies.



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9. GIFT is a method of barrier birth control



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10. Bacteriophages are small, double-stranded extra chromosomal DNA molecules used as vector in RDT.



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Section B Zoology Group Ii

1. What are indigenous poultry breeds?

Mention any two bacterial and viral diseases each of poultry.



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2. Explain the types of immune responses occurring in our body.



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3. What are gynandromorphs?



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4. Why are human females rarely haemophilic?



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5. What is stabilising natural selection?



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6. Explain the structure of male reproductive, cell.



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7. First maturation division and Second maturation division.



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8. Distinguish between humoral immunity and cell-mediated immunity.



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9. Convergent evolution and Divergent evolution



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1. What do you understand by sex-determination? Describe sex-determination in insects like grasshoppers and butterflies.



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2. Discuss embryological evidences of evolution.



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3. Explain the development of a secondary oocyte (ovum) in a human female from the embryonic stage upto its ovulation. Name the hormones involved in this process.



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Section B Zoology Group Iii Short Note

1. Proliferative phase of menstrual cycle



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2. Infertility in males



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3. Restriction endonuclease



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4. Correct the underlined portion

Production of recombinant human insulin is

possible due to *Pseudomonas putida*.



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