



BIOLOGY

BOOKS - SUPER COMPANION 5 IN 1

ANNUAL EXAMINATION PAPER MARCH 2018

Part A

1. Define Menarche?



Watch Video Solution

2. Name the disease caused by *Haemophilus influenzae*.



[Watch Video Solution](#)

3. What is the significance of selectable marker in cloning vector ?



[Watch Video Solution](#)

4. Which is the fish caught in South Africa in 1938, which was thought to be extinct?



Watch Video Solution

5. Name the hormone released by the ovary in the later phase of pregnancy.



Watch Video Solution

6. Why meristems are preferred in tissue culture?



Watch Video Solution

7. Mention the type of antibody present in the colostrum.



Watch Video Solution

8. Why mammals of colder climate generally have shorter ears and limbs?



Watch Video Solution

9. Name the unit used for measurement of thickness of Ozone in a column of air.



Watch Video Solution

10. Mention the commercial importance of *Monascus Purpureus*.



Watch Video Solution

11. Briefly explain implantation.



Watch Video Solution

12. Write the restriction site of EcoRI enzyme.



Watch Video Solution

13. What is totipotency?



Watch Video Solution

14. Mention the role of Methanobacterium in rumen of cattle.



Watch Video Solution

15. What is foetal-ejection reflex?



[Watch Video Solution](#)

16. What is saltation?



[Watch Video Solution](#)

17. Name the type of antibodies produced during allergy.



[Watch Video Solution](#)

18. What are eurythermal organisms?



Watch Video Solution

19. What is Biomagnification?



Watch Video Solution

20. Write the name of toxic substance responsible for fever and chill in Malaria.



Watch Video Solution

Part B

1. Differentiate between menstrual cycle and estrous cycle.



[Watch Video Solution](#)

2. Define test cross. What is its significance?



[Watch Video Solution](#)

3. What are analogous organs? Give an example.



Watch Video Solution

4. Mention the objectives of biofortification.



Watch Video Solution

5. Draw a neat labelled diagram of structure of an antibody.





[Watch Video Solution](#)

6. What are palindromic nucleotide sequences? Write the restriction site for Eco-RI enzyme.



[Watch Video Solution](#)

7. Name any two species which have become extinct due to over exploitation.



[Watch Video Solution](#)

8. What are sacred grooves? Give an example.



[Watch Video Solution](#)

9. Distinguish between homogametes and heterogametes.



[Watch Video Solution](#)

10. Mention any two examples of evolution by anthropogenic action.



[Watch Video Solution](#)

11. Differentiate between the following:

(a) Dominance and Recessive genes

(b) Homozygous and Heterozygous

(c) Monohybrid and Dihybrid.



[Watch Video Solution](#)

12. What is innate immunity? Mention the four

types of barriers of innate immunity.





[Watch Video Solution](#)

13. Which are the important components of Poultry Farm Management?



[Watch Video Solution](#)

14. Write the methods to introduce alien DNA into Host cells.



[Watch Video Solution](#)

15. Define Endemism. Name any two regions of accelerated habitat loss in India.



Watch Video Solution

16. 'Alien species invasion leads to extinction of indigenous species' - Justify this statement by considering two animals as examples.



Watch Video Solution

1. Define asexual reproduction. Mention asexual reproductive structures in penicillium and sponge.



Watch Video Solution

2. Draw a neat labelled diagram of a typical Anatropous ovule of angiosperms.



Watch Video Solution

3. Write a note on colour blindness.



[Watch Video Solution](#)

4. What is adaptive radiation? Give example.



[Watch Video Solution](#)

5. draw an ideal pyramid of energy and mention the units.

(b) What is an ecological succession?



[Watch Video Solution](#)

6. What is biopsy test? Mention any two techniques of cancer detection and diagnosis.



[Watch Video Solution](#)

7. Write the important use of the following in r-DNA technology.

(a) P.C.R. (b) Ethidium bromide (c) Bioreactor (r + 1 + 1)





[Watch Video Solution](#)

8. Describe the process of primary succession on bare rocks.



[Watch Video Solution](#)

9. Mention the vegetative propagules of the following plants.

(a) Water Hyacinth (b) Agave (c) Banana



[Watch Video Solution](#)

10. Draw a neat labelled diagram of T.S of young Anther.



Watch Video Solution

11. Describe Haplodiploid sex determination system in Honey Bees.



Watch Video Solution

12. State Hardy-Weinberg equilibrium and mention the factors affecting the equilibrium of a population.



Watch Video Solution

13. Write a short note on ecosystem services.



Watch Video Solution

14. Sketch the diagrammatic representation of the Replication of Retrovirus inside an animal cell.



Watch Video Solution

15. What is ecological succession? Distinguish primary succession from secondary succession.



Watch Video Solution

16. Draw a neat labelled diagram of plasmid pBR322.



Watch Video Solution

Part D Section I

1. (a) What are false fruits? Give an example.

(b) Write the characteristic features of insect pollinated flowers.



Watch Video Solution

2. Draw a neat labelled diagrammatic view of human male reproductive system.



Watch Video Solution

3. (a) Explain the following assisted reproductive technologies :

(i) IVF-ET (ii) ZIFT (iii) ICSI

(b) Name any two hormone producing IUD's.



Watch Video Solution

4. Explain the law of independent assortment with reference to seed shape and seed colour in garden pea plant.



[Watch Video Solution](#)

5. Briefly describe the various steps involved in plant breeding.



[Watch Video Solution](#)

6. (a) Mention the chemical linkages between the components of DNA.

(b) Differentiate Euchromatin from Heterochromatin.



[Watch Video Solution](#)

7. Draw and describe the structure of a matured embryosaac of angiosperms.



[Watch Video Solution](#)

8. Draw a neat labelled diagrammatic sectional view of female reproductive system.



Watch Video Solution

9. Explain the inheritance of one gene with reference to stem height of Garden Pea plant.



Watch Video Solution

10. (a) What are the features of an ideal contraceptive?

Mention the natural methods of contraception.



Watch Video Solution

11. Explain the following terms :

(a) Inbreeding depression

(b) Interspecific hybridisation

(c) Biofortification

(d) Micropropagation

(e) Somaclones.



[Watch Video Solution](#)

12. Describe the regulation of lac-operon in E.coli.



[Watch Video Solution](#)

1. What are VNTR's? Mention the steps to detect VNTR's in identifying criminals in forensic investigations.



[Watch Video Solution](#)

2. (a) Draw a neat labelled diagram of typical biogas plant.

(b) Mention the beneficial role of anaerobic bacteria in secondary sewage treatment.



[Watch Video Solution](#)

3. List the benefits of transgenic animals.



Watch Video Solution

4. (a) Write any four factors that influence population density.

(b) Draw a graph showing exponential growth curve.

What is sexual deceit?



Watch Video Solution

5. Write a short note on the following :

(a) Green house gases (b) Catalytic converter

(c) Ultra-violet B (d) Ozone layer

(e) Electrostatic precipitator.



[Watch Video Solution](#)

6. Oswald Avery and others have continued Griffith's transforming principle to prove DNA as genetic material . Substantiate.



[Watch Video Solution](#)

7. Describe the role of Microbes in sewage treatment plant.



[Watch Video Solution](#)

8. One of the applications of biotechnology is to get pest resistant plants. Justify the statement with reference to Bt. cotton.



[Watch Video Solution](#)

9. (a) What are Ectoparasites and Endoparasites?

(b) List any three parasitic adaptations in animals.



[Watch Video Solution](#)

10. Write a note on the following :

(a) Radio active wastes

(b) Jooit forest management.



[Watch Video Solution](#)

