

India's Number 1 Education App

## BIOLOGY

# **BOOKS - SUPER COMPANION 5 IN 1**

# ANNUAL EXAMINATION PAPER MARCH 2018



1. Define Menarche?

2. Name the disease caused by Haemophilus

influenzae.



3. What is the signficance of selectable marker

in cloning vector ?

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.

6. Why meristems are preferred in tissue culture?

7. Mention the type of antibody present in the

colostrum.

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.

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.

#### **13.** What is totipotency?

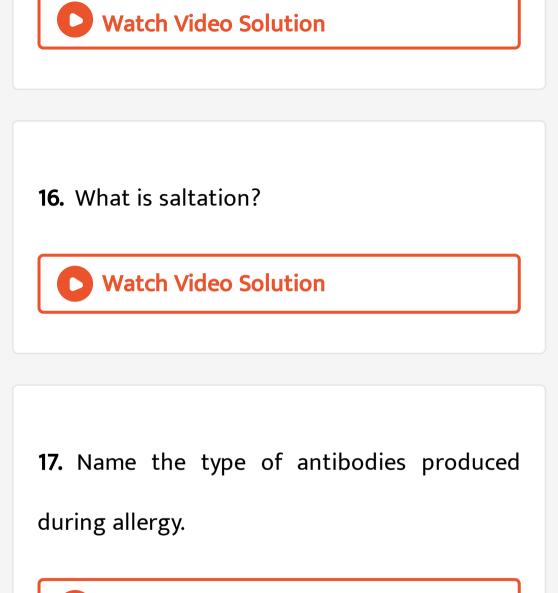
Watch Video Solution

14. Mention the role of Methanobacterium in

rumen of cattle.

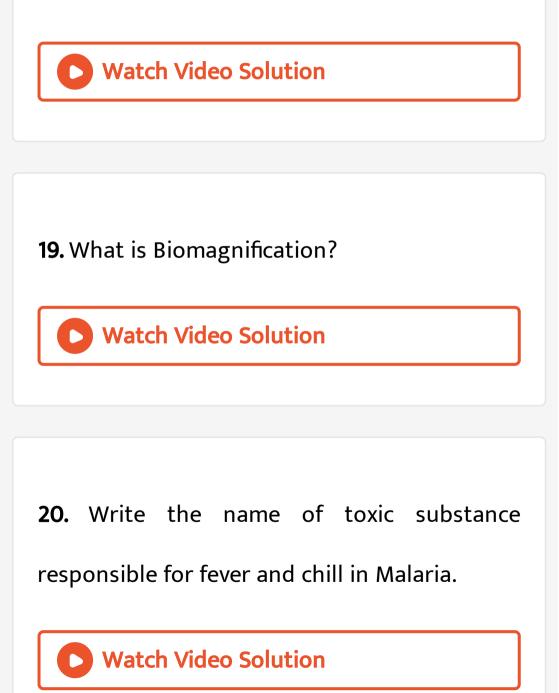


15. What is foetal-ejection reflex?





18. What are eurythermal organisms?



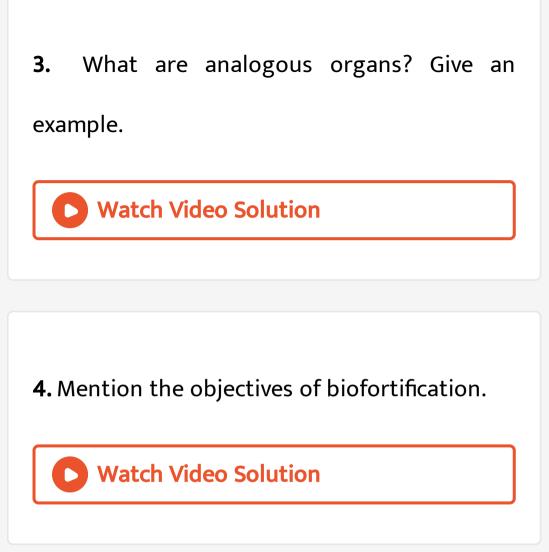


#### 1. Differentiate between menstrual cycle and

estrous cycle.



**2.** Define test cross. What is its significance?



5. Draw a neat labelled diagram of structure of

an antibody.





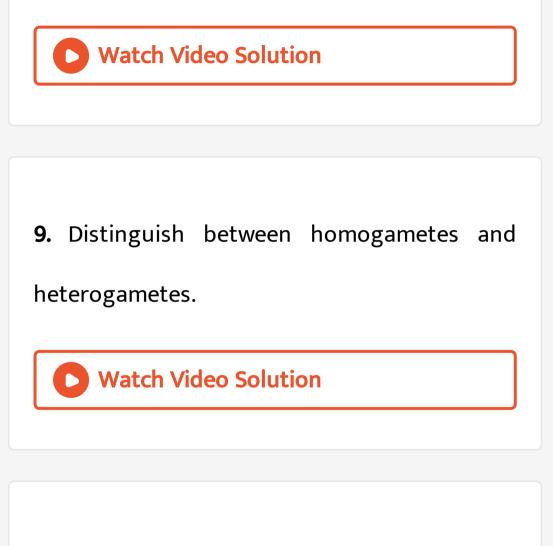
6. What are palindromic nucleotide sequences? Write the restriction site for Eco-RI enzyme.

**Watch Video Solution** 

7. Name any two species which have become

extinct due to over exploitation.

8. What are sacred grooves? Give an example.



10. Mention any two examples of evolution by

anthropogenic action.

Γ



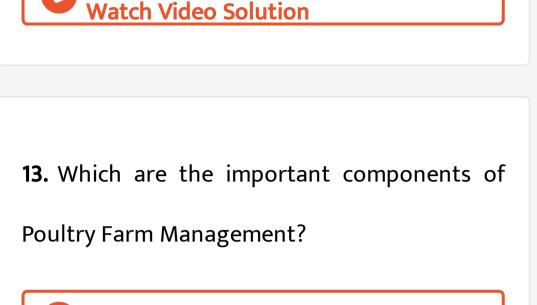
- **11.** Differentiate between the following:
- (a) Dominance and Recessive genes
- (b) Homozygous and Heterozygous
- (c) Monohybrid and Dihybrid.



12. What is innate immunity? Mention the four

types of barriers of innate immunity.





Watch Video Solution

14. Write the methods to introduce alien DNA

into Host cells.

15. Define Endemism. Name any two regions of

accelerated habitat loss in India.



16. 'Alien species invasion leads to extinction of

indigenous species' - Justify this statement by

considering two animals as examples.





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

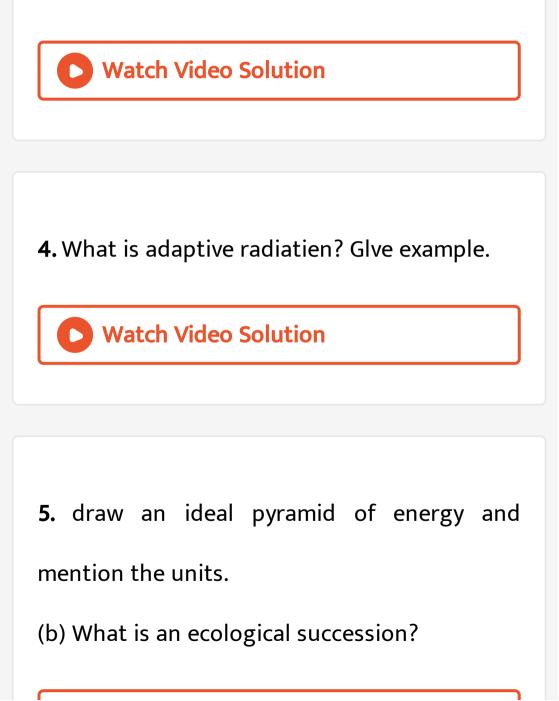


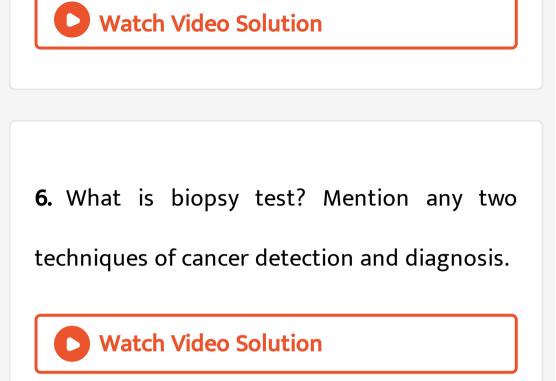
2. Draw a neat labelled diagram of a typical

Anatropous ovule of angiosperms.



**3.** Write a note on colour blindness.





7. Write the important use of the following in

r-DNA technology.

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

+ 1 + 1)





8. Describe the process of primary succession

on bare rocks.



9. Mention the vegetative propagules of the

following plants.

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

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

 Vatch Video Solution

11. Describe Haplodiploid sex determination

system in Honey Bees.



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



### **13.** Write a short note on ecosystem services.



14. Sketch the diagrammatic representation of

the Replication of Retrovirus inside an animal cell.



#### 15. What is ecological succession? Distinguish

primary succession from secondary

succession.

16. Draw a neat labelled diagram of plasmid

pBR322.





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

(b)Write the characteristic features of insect

pollinated flowers.



2. Draw a neat labelled diagrammatic view of

human male reproductive system.



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

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

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

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



5. Briefly describe the various steps involved in

plant breeding.



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 embryosac of angiosperms.

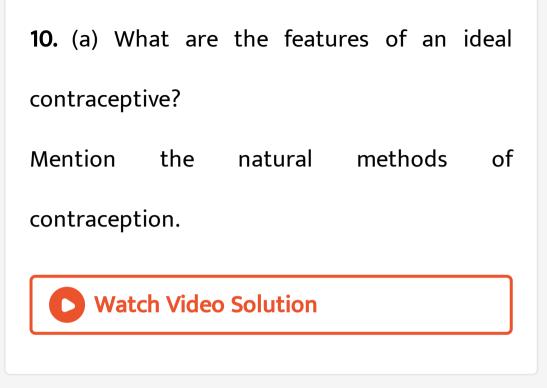
8. Draw a neat labelled diagrammatic sectional

view of female reproductive system.



9. Explain the inheritance of one gene with

reference to stem height of Garden Pea plant.



- **11.** Explain the following terms :
- (a) Inbreeding depression
- (b) Interspecific hybridisation
- (c) Biofortification

(d) Micropropagation

(e) Somaclones.



12. Describe the regulation of lac-operon in

E.coli.

Watch Video Solution

Part D Section li

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



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

(b) Mention the beneficial role of anaerobic

bacteria in secondary sewage treatment.



**3.** List the benefits of transgenic animals.



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

(b) Draw a graph showing exponential growth

curve.

What is sexual deceit?

5. Write a short note on the following :

(a) Green bouse gases (b) Catalytic converter

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

(e) Electrostatic precipitator.



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

**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.

9. (a) What are Ectoparasites and Endoparasites?
(b) List any three parasitic adaptations in animals.



**10.** Write a note on the following :

(a) Radio active wastes

(b) Joii.t forest management.