



# BIOLOGY

## BOOKS - GURUKUL BOOKS & PACKAGING BIOLOGY (HINGLISH)

JULY 2010

### Section I Botany

1. Genotype of human blood group 'O' will be

.....

A.  $I^A I^A$

B.  $I^A I^B$

C. ii

D.  $I^A i$

**Answer: C**



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2. Cry' genes are present in .....

A. *Agrobacterium tumefaciens*

B. *Bacillus thuringiensis*

C. *Rhizobium* species

D. *Escherichia coli*

**Answer: A**



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**3.** Tropine is obtained from .....

A. *Daucus carota*

B. *Catharanthus roseus*

C. *Datura stramonium*

D. *Mentha piperata*

**Answer: A**



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4. Which of the following vitamins is not fat soluble ?

A. Vitamin A

B. Vitamin B

C. Vitamin D

D. Vitamin K

**Answer: B**



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**5. How many meiotic divisions are required to produce 200 seeds ?**

A. 50

B. 100

C. 200

D. 250

**Answer: A**



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**6. Energy flow in ecosystem is .....**

A. reverse

B. unidirectional

C. bidirectional

D. multidirectional

**Answer: B**



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7. Endosperm of angiosperm is

A. haploid

B. diploid

C. triploid

D. tetraploid

**Answer: C**



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**8. BACTERIOPHAGE**



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**9. What is emasculation?**



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**10. What is VAM ?**



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**11. What is the role of decomposers in the ecosystem?**



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**12. Name any two edible mushrooms.**



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**13.** What is ecological succession ?



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**14.** Sketch and label the 'Ultrastructure of Mitochondrion'.



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**15.** Give the floral adaptations for anemophily.



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**16.** Name any two antibiotics with their microbial source.



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**17.** Describe the formation of helobial endosperm.



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**18.** Give the hazardous effects of agrochemicals.



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**19.** Explain incomplete dominance with suitable example.



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**20.** What are transgenic plants ? Explain with any two examples.



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**21.** Explain micropropagation and somatic hybridization.



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**22.** Sketch and label stages in development of angiospermic female gametophyte from functional megaspore.



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**23.** Give the central dogma of protein synthesis. Explain the process of translation.



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24. What is dark reaction in photosynthesis ?

Describe  $C_3$  Pathway.



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## Section Ii Zoology

1. Vermiform appendix is an example of ..... organ.

A. vestigeal

B. homologous

C. sense

D. analogous

**Answer: A**



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2. In which of the following disorders number of chromosomes present is 47 ?

A. Turner's syndrome



B. Cushing's syndrome

C. Acquired Immuno-Deficiency Syndrome

D. Down's syndrome

**Answer: D**



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**3. Human blood clotting factor VIII is used to treat .....**

A. pituitary dwarfism

B. diabetes mellitus

C. haemophiliacs

D. cystic fibrosis

**Answer: C**



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4. A person suffering from diabetes insipidus shows .....

A. hyperglycemia

B. hypoglycemia

C. polyuria

D. hypertension

**Answer: C**



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5. Photoreceptor cells are present in

.....

A. blind spot

B. retina

C. cochlea

D. cornea

**Answer: B**



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6. HAART' is suggested for the treatment of

.....

A. malaria

B. cancer

C. AIDS

D. high cholesterol level

**Answer: C**



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7. For DNA fingerprinting radioactive probe obtained from ..... Is used in India.

A. Banded Krait

B. King Cobra

C. Viper

D. Rat snake

**Answer: A**



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**8. Give any two examples of commensalism.**



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9. What is the common name of *Apis mellifera* ?



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10. Which growth hormone is used to enhance dairy productivity ?



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11. Define linkage.



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**12.** Name of two classes to which Archaeopteryx acts as connecting link.



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**13.** Define the term natality.



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**14.** Sketch and label Malpighian body.





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**15.** Enlist any four sequential evolutionary names of human ancestors.



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**16.** Give the significance of transgenic animals for betterment of life.



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**17.** Give the economic importance of lac.



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**18.** Give the fate of mesoderm.



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**19.** Explain the mechanism of Sex-determination in birds.



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## 20. ACQUIRED IMMUNITY



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21. With the help of pyramid, describe the growing population.



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**22.** What is reflex arc? Draw a labelled diagram to show reflex arc on touching a very hot object.



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**23.** Explain the process of early cleavage till the formation of morula.



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**24.** Describe five types of leucocytes, with the help of diagrams. Add a note on their functions.



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