



# BIOLOGY

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

JULY 2018

### Section I

1. In an octamer of the nucleosome core DNA consists of \_\_\_\_\_ base pairs.

A. 46

B. 146

C. 246

D. 346

**Answer: B**



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2. A versatile anther is an adaptation for \_\_\_\_\_  
type of pollination.

A. anemophilous

B. enthomophilous

C. hydrophilous

D. ornithophilous

**Answer: A**



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3. \_\_\_\_\_ is an example of G.M. crop developed for its nutritional value by using soil bacterium Erwinia.

A. IR 8

B. Taichang Native -I

C. Vijaya

D. Golden rice

**Answer: D**



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**4. The energy enters the ecosystem through**

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A. consumers

B. decomposers

C. omnivores

D. producers

**Answer: D**



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5. Identify free-living bacterial bio-fertilizer\_\_\_\_\_

A. Rhizobium

B. Azotobacter

C. Nostoc

D. Bacillus thuringiensis

**Answer: B**



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6. \_\_\_\_ is a soil bacterium which causes crown gall tumours in dicotyledonous plants.

A. *Agrobacterium tumifaciens*

B. *Bacillus thuringiensis*

C. *Haemophilus influenzae*

D. *Escherichia coli*.

**Answer: A**



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7. Which of the following harmful radiation is absorbed by ozone layer of the stratosphere ?

A. X-ray

B. Visible light

C. Ultraviolet rays

D. Gamma rays

**Answer: C**



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**8. Answer in 'one' sentence only :**

(i) Define 'mutation breeding "





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**9.** Enlist the histones which form an octamer of nucleosome.



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**10.** Name any one ' therapeutic product of blood proteins made by using r-DNA technology .



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11. Name the strain of yeast used in industrial production of wine.



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12. Identify which one of the following is a test cross.

(i)  $Tt \times Tt$  (ii)  $T \times$  (iii)  $Tt \times$



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**13.** Define 'stock and scion'.



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**14.** Sketch and label 'structure of a pea flower'.



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**15.** The gene for sickle-cell anaemia in homizygous condition is lethal and produces sickle cell trait in heterozygous carrier. Explain.



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**16.** Enlist the applications of tissue culture.



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**17.** Describe any two factors affecting the rate of photosynthesis.



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**18.** Define the terms codon and anticodon.



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**19.** Explain in brief biogas production process with the help of a labelled figure.

OR

What is biogas? Write in brief about the production process.



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**20.** Define 'deforestation'. Comment on its effects.



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**21.** With the help of a suitable example illustrate palindrome.



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**22.** Sketch and label diagrammatic semi-conservative replication of DNA.



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**23.** What is 'vegetative reproduction' ? Explain 'any three' natural methods of vegetative reproduction with the help of suitable diagrams.



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24. What is 'glycolysis ? Describe various steps involved in glycolysis using schematic representation.



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## Section II

1. The origin of life on the earth is known as \_\_\_\_\_



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2. Down's syndrome is represented by \_\_\_\_

A.  $n+1$

B.  $2n+1$

C.  $3n+1$

D.  $n-1$

**Answer: B**



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3. \_\_\_\_\_ is a hormone that regulates amount of glucose (sugar) in the blood .

A. angiotensin

B. insulin

C. adrenalin

D. erythropoietin

**Answer: B**



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4. VNTR is \_\_\_\_\_

- A. variable number of tandem repeats
- B. various number of tander repeats
- C. vulnerable number of tandem repeats
- D. variable number of tandem reports

**Answer: D**



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5. Cocaine alkaloid is obtained from \_\_\_\_\_ plant.

A. Marijuana

B. Papaver somniferum

C. Cannabis sativa

D. Coca

**Answer: D**



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**6.** The transparent anterior portion of sclera of eye is called \_\_\_\_

A. iris

B. lens

C. ciliary body

D. cornea

**Answer: D**



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7. Mutualism is \_\_\_\_\_

A. Two organisms are benefitted from each other

B. one organism is benefitted and other is harmed

C. both are harmed from each other

D. an association in which one is parasite and other is host .

**Answer: A**



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**8.** Give the example of connecting link between reptiles and birds.



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**9.** On the basis of origin write the various poultry breeds used in poultry .



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**10.** Define linkage.





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**11.** Write benefits of transgenic animals.



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**12.** Give names of cranial nerve numbers VI and VII



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**13.** State the formula to calculate natality.



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**14.** Draw a labelled diagram of human heart.



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**15.** Describe the ultrastructure of human sperm with the help of a well-labelled figure .



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**16.** Explain the concept of struggle for existence.



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**17.** Give economic importance of fishery.



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**18.** Name the two types of maps generated by HGP.



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**19.** A carrier haemophilic female marries a normal male. What will be the phenotype of progeny?

Explain with suitable chart.



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**20.** Describe various causes of water pollution.



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**21.** Explain in brief the mechanism of antibody antigen complexed formation with a neat labelled diagram.



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**22.** Sketch and label the lateral view of human brain.



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**23.** Draw a neat labelled diagram of T.S. of ovary and describe various phases of menstrual cycle.



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**24.** Describe the structure of human excretory system with suitable diagram. Add a note on the process of urine formation.



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