



# BIOLOGY

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

**MARCH 2019**

### Section A

1. As the base sequence present on one strand of DNA decides the base sequence of other

strand , this strand is considered as .....

- A. Descending strand
- B. Leading strand
- C. Lagging strand
- D. Complimentary strand

**Answer: D**



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2. ....shows haplo-dialoid type of sex-determination.

A. Pigeon

B. Honey bee

C. Parrot

D. Snake

**Answer: B**



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3. Membrane bound receptors and hormones produce second messengers like .....

A. Renin

B.  $IP_3$

C. ANF

D. GHRF

**Answer: B**



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4. During double fertilization second male gamete fuses with....

- A. antipodal cell
- B. egg cell
- C. secondary nucleus
- D. synergids

**Answer: C**



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5. What is Sinus arrhythmias ?



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6. By which process ammonia is converted into urea in liver ?



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7. Give the role of plasmids in bacterial cell.



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8. A person is showing symptoms like increased BMR, heart rate, blood pressure and deposition of fats in eyes sockets . Name the disease he is suffering from .



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## Section B

1. Define apiculture . Name the products obtained from it .



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2. Define biofertilizer. Give two types of fungal biofertilizers.



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3. Give the types of blood proteins and human hormones produced by recombinant DNA - technique.



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4. Write any two scientific and commercial values of transgenic animals in favour of human beings .



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5. Define Respiratory Quotient (RQ) and calculate the respiratory quotient of carbohydrate.



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6. Light and dark reactions are interdependent. Explain



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7. Classify the chromosomes on the basis of position of centromere.



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8. Sketch and label structure of male gametophyte in angiosperm . What is Siphonogamy ?



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9. Match the following and rewrite :

*Group ' A '*

*Group ' B '*

(a) Diethyle Carbanmacine

(1) AIDS

(b) Widal test

(2) Pneumonia

(c) Albendazole

(3) Filariasis

(d) HAART

(4) Typhoid

(5) Ascariasis



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10. Complete the following chart and rewrite :

<i>Sr. No.</i>	<i>Agencies</i>	<i>Type of Pollination</i>
1.	Water	.....
2.	.....	Entomophily
3.	Bat	.....
4.	.....	Ornithophily

OR Explain outbreeding devices in angiospermic plants .



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Section C

1. What is Biofortification ? Explain selective breeding with suitable example .



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2. In the light of Griffith's experiment , explain the action of two strains of Diplococcus pneumoniae and give his conclusion .



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**3. Give scientific reasons :**

(a) The pyramid of energy is always upright .

(b) In an ecosystem the energy flow is always unidirectional .

(c) Ozone present in the startosphere is called as " good ozone " .



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**4. Define 'reproduction isolation ' and explain two types of reproductive isolation .**





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5. Connecting link between glycolysis and TCA cycle is



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6. Describe the structure of a human kidney with the help of a labelled diagram.



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7. Describe the reflex action with the help of labelled diagram.



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8. Define pollution . " Industries are pouring poison in water" - Explain.



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9. With the help of a suitable diagram , describe ultra structure of the cell organelle ,



which is essential for photosynthesis.

OR

During photosynthesis  $O_2$  is evolved from water molecule and not from  $CO_2$ ". Give the experimental proof given by Robert Hill.



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10. Describe the conducting system of human heart.



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**11.** Lymphatic vessels are milky in appearance.



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**12.** Monocytes are called scavengers.



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**13.** The wall of left ventricle is thicker than right ventricle.



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**14.** Valves are present in the veins.



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**15.** Pulmonary veins carry oxygenated blood.



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**16.** Which phenomena gives 2 : 1 ratio instead of 3 : 1 ratio ? Describe with graphical

representation .



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17. A pea plant homozygous for yellow round seed is crossed with its recessive parents . Calculate the phenotypic and genotypic ratio with the help of checker board .



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**18.** After puberty human female shows cyclic changes in her reproductive system . Explain structural and hormonal changes in the uterus .



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**19.** Scrotal sac serves as thermo regulator.



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**20.** Corpus luteum gets converted into corpus albicans in absence of fertilization.



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**21.** Missing of menses is the first indication of pregnancy.



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**22.** Give reasons : Surgical sterilization is a permanent method of birth control .



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**23.** Human egg is microlecithal.



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