



# BIOLOGY

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

MARCH 2015

### Section I

1. A Cross used to verify the unknown genotype of  $F_1$  hybrid is a ..... Cross .

A. test

B. back

C. dihybrid

D. monohybrid

**Answer: a**



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2. Appearance of new combinations in  $F_2$  generation in a dihybrid cross proves the law of .....

A. dominance

B. segregation

C. independent assortment

D. purity of gametes

**Answer: c**



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**3.** A fine powder of recycled modified plastic is known as

A. polyblend

B. polythene

C. polyester

D. polymer

**Answer: d**



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4. The process of formation of partially decomposed organic matter is called \_\_\_\_\_

A. fragmentation

B. humification

C. catabolism

D. leaching

**Answer: b**



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**5. Transfer of genetic material into a bacterial cell through a viral vector is known as ....**

A. transformation

B. transduction

C. transfection

D. translation

**Answer: b**



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6. If the number of chromosomes in an endosperm cell is 27 , what will be the

chromosome number in the definitive nucleus

?

A. 9

B. 18

C. 27

D. 36

**Answer: b**



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7. Lever mechanism of pollination is observed in.....

A. Salvia

B. Jasmine

C. Bougainvillea

D. Butea

**Answer: a**



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8. A pea plant pure for yellow seed colour is crossed with a pea plant pure for green seed colour. In  $F_1$  generation all pea plants were with yellow seeds. Which law of Mendel is applicable?



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9. Name the enzyme responsible for delay for ripening of tomato fruit .



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**10.** Which are the bacteria responsible for converting organic acids into methane?



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**11.** Name the high yielding semi-dwarf varieties of wheat selected and introduced in India in 1963.



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**12.** Formation of primary endosperm nucleus is called triple fusion . Give reason .



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**13.** Mention any 'two' ecological services for the benefit of mankind.



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**14.** Sketch and label tubular tower fermenter .



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**15.** Global warming is caused by ' greenhouse effect'. Justify.



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**16.** With the help of a neat and labelled diagram explain VAM ( vesicular arbuscular mycorrhizae).



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17. Distinguish between light and dark reactions .



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18. Mendel selected the garden pea plants for his experiments. Explain OR

What are the reasons for Mendel's success?



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**19.** With the help of a neat and labelled diagram describe steps in recombinant DNA technology.



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**20.** What is 'tissue culture ' ? Describe the methodology of tissue culture .



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21. Define vegetative propagation .  
Differentiate between 'stem tuber ' and  
'tuberous root' .



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22. Sketch and label T.S. Of angiospermic  
anther .



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**23.** With the help of a neat and labeled diagram describe Watson and Crick's model of DNA.



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**24.** Give the schematic representation of an overall view of Krebs cycle.



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1. In gene therapy , DNAase is used to treat.....

A. cystic fibrosis

B. haemophilia

C. pituitary dwarfism

D. insulin dependent diabetes

**Answer: a**



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2. If only one 'X' chromosome is found in a female person , which of the following symptoms she will show ?

A. epicanthal skin fold

B. webbing of neck

C. small testis and absence of spermatogenesis

D. presence of simian crease on the palm

**Answer: b**





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3. In which of the following haploid cells a whole genome in human being is present ?

A. sperm

B. somatic cell

C. mature RBC

D. primary spermatocyte

**Answer: a**



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4. which of the following is not an example of connecting link ?

A. Archaeopteryx

B. Ichthyostegia

C. Seymouria

D. Biston betularia

**Answer: d**



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5. In ..... Superior males of the breed are mated with superior females of another breed.

A. out crossing

B. cross breeding

C. out breeding

D. in breeding

**Answer: b**



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6. Normal activities of the heart are regulated by.....

A. brain

B. spinal cord

C. modified cardiac muscles

D. hormones

**Answer: c**



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7. During ..... Type of interaction , both organisms are benefited .

A. mutualism

B. competition

C. commensalism

D. parasitism

**Answer: a**



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**8.** What is gene pool ?



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**9.** Give any 'two' names of X - linked diseases.



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**10.** What does abbreviation HGP stand for ?



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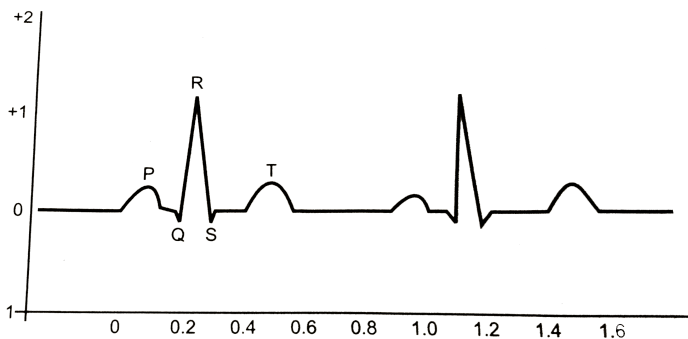


11. Give 'two' varieties of silk which are considered as inferior quality .



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12. In the electrocardiogram shown below, which wave represents ventricular diastole ?



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**13.** Which method of conservation of biodiversity includes 'hot spot' method ?



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**14.** Sketch and label ventral view of human heart .



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**15.** Distinguish between ape and man .



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**16.** Give the applications of DNA fingerprinting technique .



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**17.** Enlist the various types of cancer .



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**18.** Give the significance of fertilization .



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



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20. with the help of a chart explain the compatibility of human blood groups .



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21. Justify the following sentences :

(a) The conservation of endangered species of plants and animals is necessary .

(b) Pollution Under Control (PUC) certificate is mandatory for all vehicles and industries .



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## 22. STRUCTURE OF NEPHRON



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23. Draw a labeled diagram of male reproductive system.



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