



# BIOLOGY

## BOOKS - NAVBODH BIOLOGY (HINGLISH)

### MODEL QUESTION PAPER

#### Section A Select And Write The Correct Answer

1. The removal of introns from the RNA is called .....

A. elongation

B. splicing

C. capping

D. tailing

**Answer: B**



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2. The better yielding semi-dwarf rice varieties developed in India are .....

A. Jaya and Ratna

B. Kalyansona and Sonalika

C. Sharbati sonora and Sonalika

D. Pusa and Lerma

**Answer: A**



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3. .... Protect the essential pigment chlorophyll-a from photooxidation.

A. Xanthophylls

B. Carotenoids

C. Phycobillins

D. Anthocyanins

**Answer: B**



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4. Electron carriers of oxidative phosphorylation are present on .....

- A. outer membrane of mitochondria
- B. inner membrane of mitochondria
- C. thylakoid membrane of chloroplast
- D. matrix of mitochondria

**Answer: B**



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5. Struggle between cow and deer for getting grass is called ..... .

A. inter-specific struggle

B. environmental struggle

C. struggle against natural calamities

D. intra-specific struggle

**Answer: A**



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**6.** Who put forward the chromosomal theory of inheritance? Discuss its salient features.

A. Morgan and Miller

B. Urey and Miller

C. Sutton and Boveri

D. Darwin and Mendel

**Answer: C**



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7. Which is the proper sequence in the developmental stages of Plasmodium?

A. Merozoites → Sporozoite →

Trophozoites → Schizonts

B. Trophozoites → Merozoites →

Sporozoite → Schizonts

C. Sporozoite → Merozoites →

Trophozoites → Schizonts

D. Schizonts → Merozoites → Sporozoite

→ Trophozoites

**Answer: C**



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8. Which of the following organs are involved in renin-angiotensin mechanism ?

A. Kidney, adrenals, heart, lungs, hypothalamus

B. Kidney, testis, adrenals, brain

C. Stomach, liver, kidneys, hypothalamus

D. Brain, pituitary, kidneys, lungs

**Answer: A**





9. What is the role of hormone relaxin during parturition ?

- A. Dialation of cervix and vagina and relaxation of pelvic girdle.
- B. Expulsion of after birth structures.
- C. Relaxing the mother after parturition.
- D. Rupturing chorion and amnion.

**Answer: A**



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10. *Bonellia viridis* shows .....

- A. epiparasitism
- B. hyperparasitism
- C. kleptoparasitism
- D. adelphoparasitism

**Answer: D**



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## Answer The Following

1. Name the gene that produced Bt toxin.  
What does it produce?



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2. Why are living plant cells said to be totipotent ?



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3. What are the products of cleavage in glycolysis ?



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4. Deforestation is



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5. Give the examples of post-mating isolating mechanisms.



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6. What is the cause of Thalassemia ?



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7. Enlist exotic breeds used for dairy farms.



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8. What is gemmule ? How is gemmule formed ?



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## Section B Questions Of The Following

1. Give names and functions of any two enzymes involved in lactose metabolism in *E. coli*.



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2. Give the names of any four insect resistant varieties of crop.



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3. Distinguish between  $C_3$  pathway and  $C_4$  pathway.



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4. Give reason : Mitochondria are called the power houses of cells.



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5. Write short note on plasma.



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6. Human female is referred to as carrier of colour blindness.



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7. What are the measures of prevention and control of the drugs ?



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8. Match the pairs :

Scientific Name	Common Name
1. <i>Apis dorsata</i>	a. Little bee
2. <i>Apis florea</i>	b. Indian bee
3. <i>Apis mellifera</i>	c. Rock bee
4. <i>Apis Indica</i>	d. European bee



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**9.** Write a brief account about Lemur.



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**10.** Distinguish between pulmonary circulation and systemic circulation.



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**11.** Mention the number of cells in following stages and time after fertilization :

No.	Embryonic state	No. of cells	Time after fertilization
(i)	1st cleavage		
(ii)	3rd cleavage		
(iii)	Morula		
(iv)	Blastocyst		



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**12.** What is the significance of juxtaglomerular apparatus (JGA) in kidney function?



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## Section C Questions Of The Following

1. Define test cross and back cross. Give the significance of each of these.



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2. Describe the experiment of Hershey and Chase to prove that DNA is the genetic material.



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3. Explain the replication of bacteriophage with the help of suitable diagram.



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4. Microbes in Sewage Treatment



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5. Differentiate between aerobic and anaerobic respiration



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6. Define scion and stock. Add a note on advantages of grafting.



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7. Describe the pathway followed by phosphorus in an ecosystem.



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8. What are vaccines ? Describe the process of vaccine production.



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9. The special structure of urinary bladder helps to store about one litre of urine at a time. Describe this structure of urinary bladder and mention the difference in the length of urethra in man and woman.



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**10.** Give the functions of diencephalon.



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**11.** Give reason : Progesterone is called pregnancy hormone.



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**12.** With the help of suitable diagrams, explain how the age structures determine the trend of

population ?



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## Section D Questions Of The Following

1. Explain dihybrid cross with suitable example.



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2. Describe the photoexcitation of chlorophyll-a in photosynthesis.



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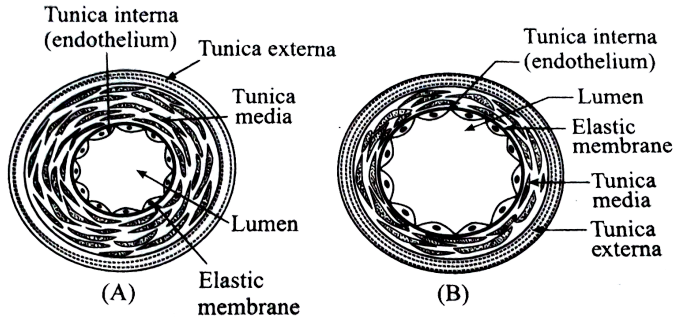
3. Give the functions of any four parts of the angiospermic ovule.



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4. Distinguish between arteries and veins giving suitable well labelled diagrams of T.S of

artery and T. S of vein.

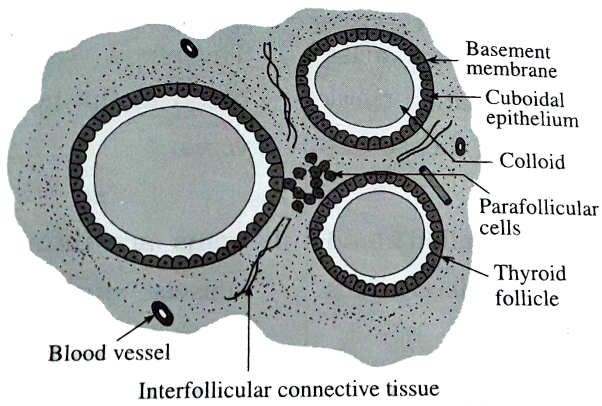


(A) T.S. of Artery and (B) T.S. of Vein



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5. Sketch and label T.S of thyroid gland. Add a note on any two disorders of thyroid gland.



**T.S. of thyroid gland**



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