



BIOLOGY

BOOKS - GURUKUL BOOKS & PACKAGING BIOLOGY (HINGLISH)

OCTOBER 2015

**Section I Botany Select And Write The Most
Apporopriate Answer From The Given
Alternatives For Each Sub Questions**

1. How many meiotic divisions will be needed to produce 44 female gametophytes in angiosperms?

A. 11

B. 22

C. 44

D. 66

Answer: B



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2. If the codon of a m-RNA is AUG what should be its anticodon on t-RNA ?

A. UAG

B. UAC

C. GUA

D. AUC

Answer: B



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3. Enzymes are used as biological scissors in r-DNA technology.

A. Restriction endonucleases

B. DNA ligases

C. DNA polymerases

D. Reverse transcriptases

Answer: A::C::D



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4. Vegetative propagation takes place with the help of leaves in Plant

A. Klanchoe

B. Oxalis

C. Cynoden

D. Dahlia

Answer: A::C



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5. *Trichoderma konigi* is a source of enzyme.

A. invertase

B. lipase

C. pectinase

D. cellulase

Answer: A::C::D



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6. What is the correct sequence of the stages in bacteriophage lytic cycle?

A. Attachement, Penetration, Lysis,

Multiplication

B. Attachement, Penetration, Multiplication

, attachement

C. Lysis, Penetration, Multiplication,

Attachement

D. Attachement, Lysis, Multiplication,
Penetration

Answer: A::B::C



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7. Edible fruiting bodies are produced by

.....

A. Yeast

B. Rhizopus

C. Nostoc

D. Agaricus

Answer: A::D



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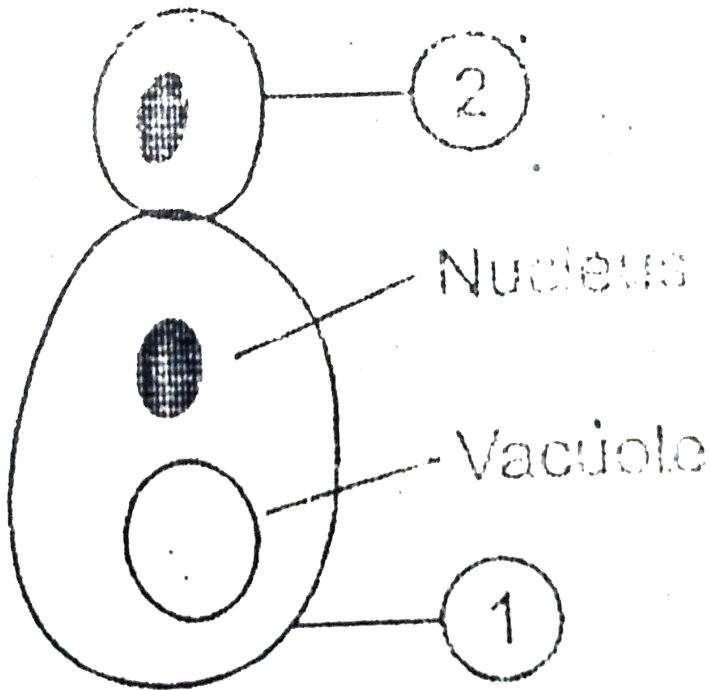
Section I Botany Answer Each Questions In One Sentence Each

1. Give reason: Emasculation is done in a flower which is selected as female parent.



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2. Label the parts (1) and (2) in budding of yeast cell.



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3. Enlist types of DNA library.



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4. Define parthenocarpy.



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5. What is meant by ecological succession?



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6. Give the role of VAM related to soil fertility.



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Section I Botany Attemp Any Two Of The Following

1. Give diagrammatic representation of pyramid of numbers.



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2. With the help of a suitable example, explain protandry.



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3. How depletion of ozone layer affects living organisms?



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4. Give graphic representation of cyclic photophosphorylation.



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5. What is the role of microbes in sewage treatment plant?



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6. Describe the steps of PCR technique.



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7. Write a short note on multiple alleles considering the example of human blood group.



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8. What is 'biofortification'? Which steps would you follow to develop a new variety of crop plant by selective breeding?





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9. Draw the T.S. of mature anther and explain briefly.



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10. Give the schematic representation of glycolysis.



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11. Explain semiconservative mode of DNA replication.



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Section II Zoology

1. Elephantiasis is caused by.....

A. *Wuchereria bancrofti*

B. *Plasmodium vivax*

C. Bedbug

D. Elephant

Answer: (a) Wuchereria bancrofti



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2. Genetically engineered human insulin is obtained by inserting the gene in.....

A. Pancreatic cells

B. E. coli

C. Agrobacterium tumefaciens

D. *Drosophila melanogaster*

Answer: (b) E.coli



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3. Urea splitting bacteria are responsible fortypes of stones.

A. calcium oxalate

B. calcium phosphate

C. calcium carbonate

D. struvite

Answer: (d) struvite



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4. Which of the following is the connecting link between apes and man?

A. Dryopithecus

B. Australopithecus

C. Homo erectus

D. Homo neanderthalensis

Answer: (b) Australopithecus



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5. Crippling disease is caused due to poisoning of

A. Arsenic

B. Lead

C. Mercury

D. Selenium

Answer: A



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6. The genetic marker used as key factor in DNA fingerprinting is

A. VNTRs

B. Exons

C. Introns

D. DNA probes

Answer: (a) VNTRs



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7. Cells of trophoblasts which remains in contact with inner cell mass are called

A. Inner mass cells

B. Blastomere

C. Amniogenic cells

D. Cells of Rauber

Answer: (d) Cells of Rauber



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Section II Zoology Answer The Following In One Sentence Each

1. Mention any 'two' methods used to prevent spoilage of fish.



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2. Genome



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3. Organic evolution.



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4. What is criss-cross inheritance ?



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5. Mention any 'two' functions of uterus?



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6. What is Red Data Book ?



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7. Sketch and label the structure of chromosome.





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Section II Zoology Attempt Any Two Of The Following Questions

1. Describe the concept of Survival of the fittest.



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2. Give economic importance of apiculture.



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3. Give the importance of transgenic animals.



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4. Explain the mechanism of sex determination in human being.



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Section II Zoology Attempts Any Two Of The Following

1. Describe T.S. of the spinal cord.



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2. Explain the structure of antibody.



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3. What are the effects of air pollution on human beings?



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4. Sketch and label L.S. of human kidney.



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5. With the help of a labelled diagram describe the internal structure of human heart.



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6. Describe the stages during three trimesters of pregnancy. Explain the process of parturition. Add a note on lactation.



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