

Standard - 11

Reg. No.

PART - III - BIOLOGY

Time Allowed: 2.30 Hours

Maximum Marks: 70

- Instructions:** 1. Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
 2. Use Blue or Black ink to write and underline and pencil to draw diagrams.

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Note: Candidate should answer Part-I (Bio-Botany) & Part-II (Bio-Zoology) in separate answer-books.

PART - I [BIO-BOTANY]

Marks: 35

Section - I

Note: i) Answer all the questions.

8×1=8

ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- Match the following and choose the correct answer.

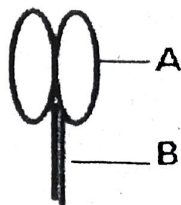
A) Athlete's foot	-	i) Viral disease
B) Diphtheria	-	ii) Protozoic disease
C) Rabies	-	iii) Bacterial disease
D) Amoebic dysentery	-	iv) Fungal disease

a) A(iii) B(iv) C(ii) D(i) b) A(iv) B(iii) C(i) D(ii)
 c) A(iv) B(iii) C(ii) D(i) d) A(ii) B(i) C(iv) D(iii)
- Number of chromosome in the endosperm of an angiosperm is 54. What would be the Number of chromosome in it's haploid condition?

a) 18 b) 27 c) 54 d) 108
- Which one of the following is wrong statement?

a) Glycogen is storage substance in fungus
 b) Glycogen is seen in liver-cell
 c) Glycogen is seen in brain
 d) Glycogen is storage substance in animals
- Which is the wrong pair from the following?

a) Rhizome - Potato
 b) Offset - Eichhornia
 c) Sucker - Chrysanthemum
 d) Leaf Bud (Foliar bud) - Bryophyllum
- Identify the parts marked as A, B from the below diagram and select the answer from the given list.



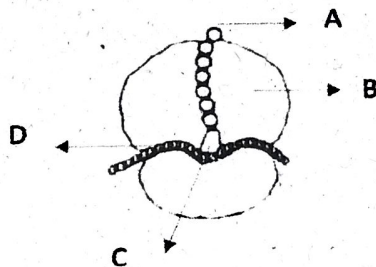
- | | |
|-----------|---------------------|
| A | B |
| a) Stigma | - Style |
| b) Anther | - Filament |
| c) Anther | - Connective tissue |
| d) Stigma | - Filament |
- 6) Arrange the stages of meiotic prophase - I in order.
- | | | | | |
|---------------|------------|-------------|-------------|------------|
| a) Zygotene, | Diplotene, | Diakinesis, | Pachytene, | Leptotene |
| b) Leptotene, | Zygotene, | Pachytene, | Diplotene, | Diakinesis |
| c) Leptotene, | Pachytene, | Zygotene, | Diplotene, | Diakinesis |
| d) Leptotene, | Zygotene, | Pachytene | Diakinesis, | Diplotene |
- 7) In 'S' Phase of the cell cycle.
- | | |
|--|----------------------------|
| a) Amount of DNA doubles in each cell | www.kalviexpress.in |
| b) Amount of DNA remains the same in each cell | |
| c) Chromosome number increases | |
| d) Amount of DNA will reduce into half | |
- 8) _____ is known as 'Father of Botany'.
- | | | | |
|-------------|-------------|-----------|-----------------|
| a) John Ray | b) Linnaeus | c) Bauhin | d) Theophrastus |
|-------------|-------------|-----------|-----------------|

Section - II

Answer any four questions:

4 × 2 = 8

- 9) Find out the floral formula for a unisexual female flower with bract and without bracteolate trimerous with indistinct calyx and corolla with Trilocular superior ovary.
- 10) A few hours after taking food, a person feels hungry. Name the metabolic activity that is responsible for this. Justify your answer.
- 11) Fibrous roots are adventitious roots. Explain, if it is true?
- 12) Identify the labelled the parts marked in the following diagram.



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- 13) Write the names of special types of inflorescence.
- 14) Draw a neat diagram of regions of a typical root and label the parts.

Section - III

Answer any three of the following questions.

3 × 3 = 9

Question No. 19 is compulsory.

- 15) What is plectostele? Give an example. Draw the diagram.
- 16) Starch is not a single material, but is regarded as a polysaccharide.
- Prove the statement.
 - Name the bond formed between the monomers of them.
- 17) i) Do you agree with the statement 'Bryophytes need water for fertilization'? If yes, Explain.
- What is peat?
- 18) Write the similarities and difference between Avicennia and Trapa.
- 19) Write three uses of Herbarium?

Section - IV

2×5=10

Answer all the questions:20) a) Give the floral characters of *Clitoria ternatea*.

(OR)

- b) i) Why is Meiosis essential in sexually reproducing organisms?
 ii) Differentiate between S Phase and G₂ Phase of cell division.

21) a) Write the steps involved during the phage multiplication in which the disintegration of host bacterial cell occurs. Draw a diagram.

(OR)

- b) Describe the structure of DNA with diagram.

Marks: 35

PART - II [BIO-ZOOLOGY]

Section - I

Note: i) Answer all the questions. www.kalviexpress.com *1=8
 ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1) The cross between male lion and female tiger results in the production of
 a) Hinny b) Mule c) Tigon d) Liger
- 2) Match the following and choose the correct answer.
 A) Ctenophora - i) Trochophore larva
 B) Mollusca - ii) Planula larva
 C) Cnidaria - iii) Cydippid larva
 D) Annelida - iv) Veliger larva
 a) A(iii) B(iv) C(ii) D(i) b) A(iv) B(iii) C(i) D(ii)
 c) A(i) B(iii) C(iv) D(ii) d) A(ii) B(iv) C(iii) D(i)
- 3) Choose the correct pair.
 A) Compound epithelium - Respiratory tract
 B) Ciliated epithelium - Kidney
 C) Columnar epithelium - Digestive tract
 D) Pseudo stratified epithelium - Heart
- 4) Choose the incorrect pair. www.kalviexpress.in
 Earth worm reproductive system
 A) Prostate gland - 18 and 19
 B) Spermathecae - 7, 8 and 9
 C) Oviducts - 13 and 14
 D) Vasa deferentia - upto 10
- 5) **Assertion (A)** : Maximum Absorption takes place in the small intestine.
Reason (R) : Absorption of simple sugars, alcohol and medicine etc. take place in small intestine.
 a) Both (A) and (R) are true, (R) is the correct explanation of (A).
 b) Both (A) and (R) are true, (R) is the incorrect explanation of (A).
 c) (A) is true statement but (R) is false. d) (A) and (R) both are false.

- 6) Total lung capacity (TLC)
 a) TV+IRV b) VC+RV c) ERV+TV+IRV d) TV+ERV
- 7) Which one is the correct route through which impulses travel in the heart?
 a) SA node - AV node - Bundle of His - Purkinje fibers - Heart muscle
 b) AV node - Bundle of His - SA node - Heart muscle - Purkinje fibers
 c) SA node - AV node - Purkinje fibers - Bundle of His - Heart muscle
 d) AV node - SA node - Bundle of His - Purkinje fibers - Heart muscle
- 8) Angiotensinogen is secreted by
 a) Kidney b) Liver c) Vasa Recta d) Glomerulus

Section - II

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Answer any four of the following questions:

4×2=8

- 9) What is Trinomen classification?
- 10) Why did we call Ascaris as Pseudocoelomate?
- 11) What are the components present in tissue fluid?
- 12) State the reasons why a cockroach lives for a few days after its head is removed from its body.
- 13) What are the ducts present in the salivary glands?
- 14) Define the term "Dead Space".

Section - III

Answer any three of the following questions.

3×3=9

Question No. 19 is compulsory.

- 15) What is Cladogram? Draw a model Cladogram.
- 16) Describe the types of respiration seen in frog.
- 17) Explain how the earthworm uses its hydrostatic skeleton to crawl?
- 18) If your friend is addicted to cigarette smoking, as a biology student how would you explain the ill-effects of smoking?
- 19) What is the role of Vasarecta in the concentration of urine?

Section - IV

Answer all the questions:

2×5=10

- 20) a) While a biology student goes to the beach, he happens to see crabs and starfishes on the sea shore. Write about the phylum and special characters of those animals. (OR)
- b) Classify connective tissue and mention their functions.
- 21) a) A person got his finger cut, after sometime, the bleeding is stopped. Find out the reasons and explain its process.

(OR)

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- b) Explain the digestion in the small intestine.
