

Total No. of Printed Pages—4

HS/XII/SC/Bio-Zoo/OC/21

2 0 2 1

BIO-ZOOLOGY

(Old Course)

(**Theory**)

Full Marks : 35

Time : 1½ hours

The figures in the margin indicate full marks for the questions

General Instructions :

- (i) Write all the answers in the Answer Script.
- (ii) Attempt all parts of a Group serially in one place.
- (iii) All questions are compulsory.
- (iv) This question paper consists of 5 (five) Groups—A, B, C, D and E.

Group—A consists of 4 questions (multiple-choice type). Each question (Q. Nos. **1-4**) carries 1 mark.

Group—B consists of 4 questions (very short-answer type). Each question (Q. Nos. **5-8**) carries 1 mark and to be answered in *one* sentence.

Group—C consists of 4 questions (short-answer type—I). Each question (Q. Nos. **9-12**) carries 2 marks and to be answered in 20-30 words.

Group—D consists of 3 questions (short-answer type—II). Each question (Q. Nos. **13-15**) carries 3 marks and to be answered in 30-40 words.

Group—E consists of 2 questions (long-answer type). Each question (Q. Nos. **16** and **17**) carries 5 marks with alternatives to be answered in 60-80 words.

(2)

GROUP—A

Choose and write the correct answer of the following :

1. Which one of the following is released from the ovary during ovulation? 1
 - (a) Primary oocyte
 - (b) Secondary oocyte
 - (c) Oogonium
 - (d) Embryo

2. Malaria is caused by 1
 - (a) *Entamoeba* sp.
 - (b) *Ascaris* sp.
 - (c) *Plasmodium* sp.
 - (d) *Wuchereria* sp.

3. Molecular scissor which cuts DNA at specific site is 1
 - (a) pectinase
 - (b) polymerase
 - (c) restriction endonuclease
 - (d) ligase

(3)

4. Kaziranga National Park is located in 1
- (a) West Bengal
- (b) Assam
- (c) Meghalaya
- (d) Odisha

GROUP—B

5. Name the hormone produced by corpus luteum. 1
6. Define vaccine. 1
7. Give the full form of VNTR. 1
8. Name the gas that contributes mainly to global warming. 1

GROUP—C

9. Draw a labelled diagram of a mammalian sperm. 2
10. Why did Mendel select garden pea for his experiment? 2
11. What is the full form of AIDS? Name its causative agent. 1+1
12. What is a biosphere reserve? Name one biosphere reserve in India. 1+1

(4)

GROUP—D

13. What are the different characteristics of cancer cells? 3
14. Give the salient features of human genome project. 3
15. State Mendel's law of segregation. Explain it with the help of a monohybrid cross. 1+2

GROUP—E

16. With suitable diagrams, describe the process of oogenesis in human female. 2+3

Or

What is menstrual cycle? Briefly describe the various phases of this cycle. 1+4

17. List the four postulates of Lamarckism. Give one example given by Lamarck in support of his theory. 4+1

Or

What is haemophilia? With the help of a cross, explain why this genetic disorder occurs more in male individuals than females. 1+4

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