

167 3

BSR/73/15

2016

0004

ZOOLOGY

FIRST PAPER

Full Marks : 200

Time : 3 hours

The figures in the margin indicate full marks  
for the questions

GROUP—A

( Marks : 100 )

Answer Question No. 1 and any **three** from the rest

1. Answer the following questions in brief  
(any five) :  $8 \times 5 = 40$
- (a) Explain the process of conjugation in  
paramecium with its significance.  $6 + 2 = 8$
  - (b) What is polymorphism? Describe  
polymorphism in siphonophora.  $2 + 6 = 8$
  - (c) What do you understand by alteration  
of generations or digenetic life-cycle?  
Explain the same giving the life history  
of *Fasciola hepatica*.  $2 + 6 = 8$
  - (d) What is heteronereis phase? Explain  
how do the individuals of this phase  
differ from *Nereis*.  $3 + 5 = 8$

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( 2 )

(e) Write an account on the coxal glands of scorpion with a neat diagram.  $6+2=8$

(f) Write about the structural peculiarities of Marsupials and Prototherians.  $4+4=8$

(g) Write four striking features of chordates. "All vertebrates are chordates but all chordates are not vertebrates." Explain the meaning of this statement.  $4+4=8$

(h) What is volant adaptation? Write a note on primary volant adaptation of birds.  $2+6=8$

2. What is pearl? Describe the process of pearl formation adding a note on its commercial importance.  $5+12+3=20$

3. Give an account of different modes of respiration in toad. 20

4. Write the characteristic features acquired by bird for their aerial mode of life. 20

5. Describe the structure and working of the mammalian heart. Add a note on its automatic working.  $8+8+4=20$

6. Describe the cranial nerves of *Scoliodon* with special reference to their distribution. 20



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GROUP—B

( Marks : 100 )

Answer *any five* questions

7. What is ecosystem? How an ecosystem is able to maintain a relatively stable state of equilibrium? Explain the biotic components of an ecosystem.  $2+6+12=20$
8. Define water pollution. What types of pollutants are present in community waste waters and in industrial effluents? Write about the control of water pollution.  $2+12+6=20$
9. With the help of diagrammatic presentation, describe succession of kidney in vertebrates.  $6+14=20$
10. Describe the requirements and major steps of the sericulture industry. Specify the culture method of eri worm.  $10+10=20$
11. Give an account of the morphology and life history of lac insect. Write about the economical importance of lac culture.  $8+8+4=20$

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( 4 )

12. Write short notes on the following (any four) :

5×4=20

- (a) Ecological pyramids
- (b) Kaziranga National Park
- (c) Induced breeding
- (d) Muga culture
- (e) Desert adaptation
- (f) Pelvic girdle in tetrapods

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