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(February)

ZOOLOGY

(Honours)

(**Functional Anatomy, Zoogeography and Adaptations**)

Marks : 56

Time : 3 hours

The figures in the margin indicate full marks for the questions

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

1. Write in brief on any *three* of the following :

4×3=12

(a) Holozoic nutrition in Protozoa

(b) Scales in fishes

(c) Differences between protective and aggressive mimicry

(d) Piercing and sucking mouthparts of insects

(e) Oriental region

2. Define polymorphism. Give an account of polymorphism in *Siphonophora* with the help of suitable diagrams. Add a note on the importance of polymorphism. 2+7+2=11

3. Describe the general organization and affinities of Onychophora. Why is it often referred to as a 'connecting link' between Annelida and Arthropoda? 4+5+2=11

4. Write critical notes on any *two* of the following : 5½×2=11

(a) Affinities of marsupials

(b) Affinities of amphioxus

(c) Affinities of Dipnoi

5. Define accessory respiratory organs in fishes. Describe and illustrate the accessory respiratory organs in fishes. 2+7+2=11

6. Describe the following : 5½+5½=11

(a) Aquatic adaptation in vertebrates

(b) Dentition in mammals

7. Describe the following : 5½+5½=11

(a) Morphological adaptations in helminths

(b) Poison apparatus in snakes

(3)

8. Write short notes on any *two* of the
   following :   5½×2=11

   (a) Structural features of a compound eye
        of insects

   (b) Retrogressive metamorphosis in *Ascidia*

   (c) Torsion in Gastropoda

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