Zoology

Paper-II

Time Allowed: Three hours  Maximum Marks: 300

Candidates should answer question Nos. 1 and 5 which are compulsory and other three of the remaining, questions, selecting at least one from each section.
Illustrate your answers with suitable diagrams wherever necessary.

SECTION-A

1. Write brief accounts on any three of the following in about 200 words each.  \[20 \times 3 = 60\]
   (a) Golgi apparatus and Exocytosis of the materials.
   (b) Multiple Alleles and ABO blood types.
   (c) Distribution of animals and continental drift.
   (d) Cladistics and phylogeny.

2. Write an essay on Chemical composition of Plasma membrane', mode of transport across it with special reference to 'Pumps'. \[20 + 20 + 20 = 60\]

3. (a) Pedigree Analysis (200 words)- Discuss \[20\]
   (b) Congenital diseases in man - Elucidate \[40\]

4. Write Explanatory notes on any three of the following: \[20 \times 3 = 60\]
   (a) Evolution of man
   (b) Isolation and Speciation
   (c) Change in gene frequency & Micro evolution
   (d) Basic types of mimicry.
SECTION-B

5. Write brief accounts on any three of the following in about 200 words each. \[20 \times 3 = 60\]
   (a) Structure and function of proteins.
   (b) Transport of Oxygen and Carbon dioxide.
   (c) Law of Development and Evo-devo concept.
   (d) Anatomy and functions of the Liver.

6. (a) Discuss the thermoeusticity of the Hypothalamus and Thermo regulation in mammals. \[10 + 20 = 30\]
   (b) Discuss Antidiuretic Hormones and Osmo-regulation. \[10 + 20 = 30\]

7. (a) Write a note on placentation in mammals. \[30\]
   (b) Write a note on fate maps of Gastrula in frog. \[30\]

8. Write explanatory notes on any three of the following. \[20 \times 3 = 60\]
   (a) Energy flow through living systems.
   (b) Basic classification of Hormones.
   (c) Adult and Fetal Haemoglobin
   (d) Formation of urine by the nephrous of kidneys.
Zoology
(Main Examination)

Paper-I

Time Allowed: Three hours
Maximum Marks: 300

Candidates should answer question Nos. 1 and 5 which are compulsory and other three of the remaining questions, selecting at least one from each section.
Illustrate your answer with suitable diagrams wherever necessary.

SECTION-A

1. Write brief accounts on any three of the following in about 200 words each. 20 x 3 = 60
   (a) Life history of Plasmodium.
   (b) Tube feet and water vascular system in Echinoderms.
   (c) Dentition in mammals.
   (d) Life history of 'Herdmania'.

2. (a) Write a brief note on salient features and affinities of onychophora and Hemichordata. 30
   (b) Explain Symmetry in biology. 30

3. (a) Describe urino-genital system of vertebrates. 30
   (b) Give brief accounts of general features of egg-laying mammals and pouched mammals. 15 + 15 = 30

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4. Write account on:
   (a) Modes of life in polychaetes  
   (b) Life history of lamellidens.  

SECTION-B

5. Write brief accounts on any **three** of the following in about 200 words each:  
   20×3=60
   (a) Different types of learning.  
   (b) Project Tiger.  
   (c) Working principles of Spectrophotometer.  
   (d) Cholera—Its pathogenesis and Epidemiology.  

6. (a) What are the characteristics of Populations and Population Dynamics.  
   (b) Write a note on 'use and conservation of Mineral resources.'  

7. (a) Write a note on distribution and measure of Central Tendency.  
   (b) Write a note on 'Carp-culture' and better management practices for carp culture.  

8. (a) Write a note on social system of Primates and their behaviour.  
   (b) Describe process of pearl culture, and give a brief account of 'Pearl Industry'.  
   20 + 10=30