

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
 2. Figures to the right indicate marks.
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Que. 1 A) Attempt any one of the following (07)

1. State the general characters of class Amphibia and Reptile with suitable examples.
2. State the general characters of class cyclostomata and pisces with suitable examples.

B) Attempt any one of the following (04)

1. Write a short note on Archaeopteryx.
2. Write general characters of Ratite.

C) Attempt any three of the following (03)

1. Hyla belongs to _____ phylum and _____ class.
2. Platypus is a connecting link between _____ and _____.
3. Which nitrogenous waste substance found in class Aves?
4. Doliolum belongs to _____ phylum and _____ subphylum and _____ class.
5. Seven cervical vertebrae is character of _____ class.

Que. 2 A) Attempt any one of the following (07)

1. Arterial system of Calotes.
2. Explain identification characteristics of snakes with schematic diagram.

B) Attempt any one of the following (04)

1. Write a note on fish migration.
2. Describe female urinogenital system in calotes.

C) Attempt any three of the following (03)

1. In calotes, connection between carotid artery and systemic artery is known as _____.
2. How antivenom is made?
3. What are the peculiar identification characters of Krait?
4. Give name of any two snakes having haemotoxic venom.
5. Make a list of non venomous snakes of Gujarat (any four).

Que. 3 A) Attempt any one of the following (07)

1. Hormones of ovary and testis.
2. Give detail account of structure of nephron and ultra filtration.

B) Attempt any one of the following (04)

1. Explain various types of eggs.
2. Write a short note on menopause.

C) Attempt any three of the following (03)

1. In which type of egg discoidal cleavage is found?
2. Write full form of DCT and PCT.
3. Which hormones are associated with excretion?
4. What are the symptoms of hot flushes?
5. What is the filtration rate of both kidneys?

Que. 4 A) Attempt any one of the following (07)

1. Describe the DNA fingerprinting technique.
2. Define in born error of metabolism. Explain with suitable example.

B) Attempt any one of the following (04)

1. Explain cytoplasmic inheritance.
2. Distinguish Polytene and Lampbrush chromosomes.

C) Attempt any three of the following (03)

1. How sex is determined in *Bonellia viridis*?
2. What is the function of telomere?
3. Mutation of which gene causes Phenylketonuria?
4. What is albinism?
5. Give names of types of chromosomes according to centromere.

Que. 5 A) Attempt any one of the following (07)

1. Explain isolation and its mechanism.
2. Explain origin of Aortic arch and give comparative account of aortic arches of reptiles and mammals.

B) Attempt any one of the following (04)

1. Bombay Duck fisheries.
2. Write a short note on homologous and analogous organs.

C) Attempt any three of the following (03)

1. Make a list of vestigial organs in human.
2. What is the cranial capacity of modern man.
3. Write name of different varieties of pomfret.
4. What is sympatric speciation?
5. Which net and boat are used in prawn fishery?
