

2021

ZOOLOGY (Honours)

Paper Code : XIII - A & B

[New Syllabus]

Important Instructions for Multiple Choice Question (MCQ)

- Write Subject Name and Code, Registration number, Session and Roll number in the space provided on the Answer Script.

Example : Such as for Paper III-A (MCQ) and III-B (Descriptive).

Subject Code :

III	A	&	B
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Subject Name :

- Candidates are required to attempt all questions (MCQ). Below each question, four alternatives are given [i.e. (A), (B), (C), (D)]. Only one of these alternatives is 'CORRECT' answer. The candidate has to write the Correct Alternative [i.e. (A)/(B)/(C)/(D)] against each Question No. in the Answer Script.

Example — If alternative A of 1 is correct, then write :

1. — A

- There is no negative marking for wrong answer.

মাল্টিপল চয়েস প্রশ্নের (MCQ) জন্য জরুরী নির্দেশাবলী

- উত্তরপত্রে নির্দেশিত স্থানে বিষয়ের (Subject) নাম এবং কোড, রেজিস্ট্রেশন নম্বর, সেশন এবং রোল নম্বর লিখতে হবে।

উদাহরণ — যেমন Paper III-A (MCQ) এবং III-B (Descriptive)।

Subject Code :

III	A	&	B
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Subject Name :

- পরীক্ষার্থীদের সবগুলি প্রশ্নের (MCQ) উত্তর দিতে হবে। প্রতিটি প্রশ্নে চারটি করে সম্ভাব্য উত্তর, যথাক্রমে (A), (B), (C) এবং (D) করে দেওয়া আছে। পরীক্ষার্থীকে তার উত্তরের স্বপক্ষে (A)/(B)/(C)/(D) সঠিক বিকল্পটিকে প্রশ্ন নম্বর উল্লেখসহ উত্তরপত্রে লিখতে হবে।

উদাহরণ — যদি 1 নম্বর প্রশ্নের সঠিক উত্তর A হয় তবে লিখতে হবে :

1. – A

- ভুল উত্তরের জন্য কোন নেগেটিভ মার্কিং নেই।

Paper Code : XIII - A

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.

Each question carries 1 mark.

1. The acrosome of sperm is derived from —
 - (A) Nucleus
 - (B) Golgi apparatus
 - (C) Mitochondria
 - (D) Centriole

2. The dorsal lip of amphibian blastopore is functionally equivalent to _____ in chick.
 - (A) Primitive streak
 - (B) Koller's sickle
 - (C) Hensen's node
 - (D) Hypoblast

3. Archenteron is lined with
 - (A) Mesoderm
 - (B) Ectoderm
 - (C) Endoderm
 - (D) Ectoderm and Endoderm

4. Children born to pregnant mothers consuming thalidomide have —
 - (A) Harelip
 - (B) Limb malformation
 - (C) Asplenia
 - (D) Extra digits

5. Which morphogenetic movement is responsible for splitting and separation of one layer of cell from original layer?
- (A) Intercalation
 - (B) Involution
 - (C) Epiboly
 - (D) Delamination
6. Function of ADH is —
- (A) Reabsorption of water
 - (B) Reabsorption of sodium
 - (C) Dilution of urine
 - (D) Glucosuria
7. The active ingredient of contraceptive pills is —
- (A) Growth hormone
 - (B) Progesterone
 - (C) Thyroxine
 - (D) Luteinizing hormone
8. Plasma membrane is impermeable to —
- (A) Estrogen
 - (B) Progesterone
 - (C) Thyroxine
 - (D) Insulin

9. Juvenile Hormone (JH) in insects is secreted by —
- (A) Prothoracic gland
 - (B) Corpora cardiaca
 - (C) Corpora allata
 - (D) None of the above
10. Which stage in estrous cycle is regarded as 'heat period'?
- (A) Proestrus
 - (B) Estrus
 - (C) Metestrus
 - (D) Diestrus
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P - III (1+1+1) H / 21 (N)

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Paper Code : XIII - B

[New Syllabus]

Full Marks : 40

Time : One Hour Thirty Minutes

The figures in the margin indicate full marks.

Write your answer maximum within one page for the questions carrying 4 marks each and maximum within three pages for the questions carrying 12 marks each.

Unit - 1

(Developmental Biology and Teratology)

1. Answer any *two* questions : 4×2=8
 - (a) Classify the eggs on the basis of distribution of yolk.
 - (b) What are Endotheliochorial and Haemochorial types of placenta?
 - (c) Briefly discuss the role of organizer during gastrulation.
 - (d) Briefly explain the process of spermiogenesis.

2. Answer any *one* question : 12×1=12
 - (a) What is capacitation? How cortical granule reaction leads to permanent block to polyspermy? Add a note on parthenogenesis. 2+6+4=12
 - (b) What is fate map? Describe the fate map of chick with a proper diagram. Write the function of amnion and allantois. 2+(4+2)+4=12
 - (c) Define gametogenesis. Describe the process of oogenesis with a suitable diagram. Differentiate between spermatogenesis and oogenesis. 1+8+3=12

Unit - 2
(Endocrinology and Reproductive Biology)

3. Answer any *two* questions : 4×2=8
- (a) Differentiate between estrous cycle and menstrual cycle.
 - (b) Give an account on hypothyroidism.
 - (c) State the locations and functions of Sertoli cells and Leydig's cells.
 - (d) Write a short note on physiological changes during pregnancy.
4. Answer any *one* question : 12×1=12
- (a) Briefly discuss the feedback mechanism of hormonal action with proper example. Write about the steps involved in the synthesis of sex steroids. State the role of glucagon during carbohydrate metabolism. 4+5+3=12
 - (b) Discuss the role of estrogen and progesterone in uterine cycle. Describe the process of thyroid hormone secretion after their synthesis. State the function of calcitonin. 5+5+2=12
 - (c) Write notes on : 6+6=12
 - (i) Pregnancy and parturition.
 - (ii) Mechanism of action of peptide hormone.
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