

P - II (1+1+1) H / 20 (N)

2020

ZOOLOGY (Honours)

Paper Code : ZHT - VII - 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 : ZHT - VII - A

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.

Answer *all* the following questions,
each question carries 1 mark.

1. The volume of air which can be inspired or expired normally is called —
 - (A) Vital capacity
 - (B) Residual volume
 - (C) Tidal volume
 - (D) Lung's volume

2. Hematopoiesis take place in —
 - (A) Bone marrow
 - (B) Liver
 - (C) Spleen
 - (D) All of the above

3. If Henle's loop is absent from mammalian nephron, which of the following is to be expected?
 - (A) Does not change in quality and quantity of urine formed
 - (B) Urine will be more concentrated
 - (C) Urine will be more dilute
 - (D) Urine will be highly acidic

4. Which one is not an example of neurotransmitter?
- (A) GABA
 - (B) DOPA
 - (C) Acetylcholine
 - (D) Dopamine
5. The action potential is generated due to —
- (A) Rapid influx of sodium ions
 - (B) Rapid influx of potassium ions
 - (C) Rapid efflux of sodium ions
 - (D) Rapid efflux of potassium ions
6. Which of the following is ketogenic amino acid?
- (A) Valine
 - (B) Threonine
 - (C) Leucine
 - (D) Aspartic acid
7. Maltose is made up of two glucose molecules, the linkage is —
- (A) α 1, 6 linkage
 - (B) α 1, 4 linkage
 - (C) β 1, 6 linkage
 - (D) β 1, 4 linkage

8. How many ATP molecules are synthesized by substrate level phosphorylation per glucose molecule by glycolysis?
- (A) 4
 - (B) 2
 - (C) 8
 - (D) 6
9. What is the advantage of storing glucose as glycogen in animals instead of as monomeric glucose?
- (A) Energy obtained from glycogen is more than that from the corresponding glucose monomers.
 - (B) Glucose present as monomers within the cell exerts more osmotic pressure than a single glycogen molecule, resulting in loss of water from the cells.
 - (C) Glucose present as monomers within the cell exerts more osmotic pressure than a single glycogen molecule, resulting in excess water within the cells.
 - (D) Glycogen gives more rigidity to the cells.
10. Enzyme which promote the removal of a group from the substrate to leave a double bond reaction is —
- (A) Lyase
 - (B) Hydrolase
 - (C) Transferase
 - (D) Isomerase
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ZOOLOGY (Honours)

Paper Code : ZHT - VII- B

[New Syllabus]

Full Marks : 40

Time : One Hour Thirty Minutes

The figures in the margin indicate full marks.

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

Unit - 1

(Animal Physiology)

1. Answer any *two* questions : 4×2=8
 - (a) Write short note on chloride shift.
 - (b) Briefly describe the process of Erythropoiesis.
 - (c) Describe the process of transmission of nerve impulse through a synapse.
 - (d) Write short note on ECG.

2. Answer any *one* question : 12×1=12
 - (a) Draw a labeled diagram of mammalian nephron. Describe the physiology of urine formation. 4+8=12
 - (b) What are orthodromic & antidromic nerve impulse? Write a note on different types of sleep disorder. 6+6=12
 - (c) Describe the structure of haemoglobin. Describe the mechanism of transport of Oxygen. Write a note on the factors affecting dissociation of Oxygen from haemoglobin. 4+4+4=12

Unit - 2
(Biochemistry)

3. Answer any *two* questions : 4×2=8
- (a) Amino acids can act as acid and base — justify it.
 - (b) Write a note on α -keratin.
 - (c) Describe the process of deamination.
 - (d) Briefly write on the irreversible steps of glycolysis.
4. Answer any *one* question : 12×1=12
- (a) How does an enzyme increase the reaction rate? Describe the Michaelis-Menten rate equation. 4+8=12
 - (b) Why does maltose act as a reducing sugar but sucrose does not? Describe the structure of one homo polysaccharide and one hetero polysaccharide. 2+5+5=12
 - (c) Differentiate oxidative phosphorylation and substrate level phosphorylation. Describe the process of transport of electron through the electron transport chain. 4+8=12
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