

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

2020

## ZOOLOGY (Honours)

Paper Code : IX - A & B

[New Syllabus]

Full Marks : 50

Time : Two Hours

### 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.



*Turn Over*

**Paper Code : IX-A**

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.

Each question carries 1 mark.

1. The ability to taste phenylthiocarbamide (PTC) is a trait controlled by 2 alleles (PTC taster and PTC non-taster). Suppose 36% of a remote mountain village cannot taste PTC and must, therefore, be homozygous recessive (aa) for the PTC non-taster allele. If this population conforms to Hardy-Weinberg expectations for this gene, what percentage of the population must be homozygous (AA) for the PTC taster allele ?
  - (A) 48%
  - (B) 40%
  - (C) 16%
  - (D) 32%
2. Which of the following does NOT tend to promote speciation ?
  - (A) founder effect
  - (B) reproductive isolation
  - (C) natural selection
  - (D) gene flow
3. Which of the following are the postulates of Darwin's theory of evolution?
  - (A) Within any population, there is natural variation.
  - (B) Even though all species produce a large number of off springs, populations remain fairly constant naturally.
  - (C) The struggle for survival within populations eliminates the unfit individuals.
  - (D) All of the above.

*Turn Over*

4. The wings of insects and the wings of bats represent a case of —
- (A) Divergent evolution
  - (B) Convergent evolution
  - (C) Parallel evolution
  - (D) Neutral evolution
5. Which of the following basic processes affect the Hardy Weinberg equilibrium ?
- (A) Mutation and recombination
  - (B) Gene migration and genetic drift
  - (C) Natural selection
  - (D) All of these
6. Which one of the following is NOT covered under Taxonomy ?
- (A) Alpha taxonomy
  - (B) Beta taxonomy
  - (C) Delta taxonomy
  - (D) Gamma taxonomy
7. Example of a branch-runner :
- (A) Squirrel
  - (B) Sloth
  - (C) Gibbon
  - (D) Orangutan

*Turn Over*

8. The interaction in which an individual gives up or sacrifices some of its own reproductive potential to benefit another individual is called —
- (A) Territory
  - (B) Altruism
  - (C) Cooperation
  - (D) Fixed Action Pattern
9. Learning is a durable change in behaviour as a result of —
- (A) Instinct
  - (B) Experience
  - (C) Imprinting
  - (D) Altruism
10. Synonym is —
- (A) Two organisms with one name
  - (B) One organism with two names
  - (C) Same genus and species name
  - (D) None of these
- 

*Turn Over*

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

2020

## ZOOLOGY (Honours)

Paper Code : IX-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

#### (Taxonomy and Animal Behaviour)

1. Answer any *two* questions : 4×2=8
  - (a) Write a short note on molecular taxonomy.
  - (b) Comment on sign stimulus and how such stimulus can elicit a fixed action pattern.
  - (c) Define kinesis and its types.
  - (d) Write a short note on 'law of priority'.
  
2. Answer any *one* question : 12×1=12
  - (a) What do you mean by parental investment? Discuss with examples the phenomenon of parental investment as seen in fishes. Comment on the cost and benefit of such kind of animal behaviour. 2+7+3=12
  - (b) Define the concept of uniqueness, universality and stability of Zoological nomenclature. Elaborate on the salient features of the International Code of Zoological Nomenclature. 2+2+2+6=12

*Turn Over*

- (c) Define Eusociality. Write two important characteristics of Eusocial insects. State the significance of sterile caste in a termite colony. Add a note on Waggle dance of honey bee.  $2+2+4+4=12$

## Unit - 2

### (Adaptation and Evolution)

3. Answer any *two* questions :  $4 \times 2 = 8$
- (a) Write short note on adaptive radiation.
  - (b) State briefly the modern synthetic theory of evolution.
  - (c) Isolation leads to speciation. Justify the statement.
  - (d) Write short note on natural selection.
4. Answer any *one* question :  $12 \times 1 = 12$
- (a) Define fossil. Describe briefly the different types of fossils. Write the significance of fossils.  $2+6+4=12$
  - (b) Define with example protective and aggressive colouration. Write down the structural modifications for volant adaptations in birds. What do you mean by hybrid infertility or hybrid breakdown?  $4+4+4=12$
  - (c) Describe the geographic boundary, climatic features and common vertebrate fauna of the Oriental realm. Comment on filter routes and sweep stake routes.  $(3+2+3)+2+2=12$
-

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

2020

## ZOOLOGY (Honours)

Paper Code : X - A & B

[New Syllabus]

Full Marks : 50

Time : Two Hours

### 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.





*Turn Over*

**Paper Code : X-A**

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.

Each question carries 1 mark.

1. No adaptive immune response without \_\_\_\_\_.
  - (A) T lymphocytes
  - (B) B lymphocytes
  - (C) Plasma cells
  - (D) NK Cells
  
2. *Schistosoma haematobium* mostly occurs
  - (A) Australia and Middle East Asia
  - (B) Africa, North America, Australia
  - (C) Middle East Asia, South East Asia and Africa
  - (D) Africa, Middle East and Indian Oceans
  
3. What is common among these three SARS-CoV-2, SARS-CoV and MERS-CoV
  - (A) All are Corona Virus
  - (B) All are zoonotic virus
  - (C) Only A is correct
  - (D) Both A & B is correct

*Turn Over*

4. Which immunoglobulin has pentameric symmetry ?
- (A) IgD
  - (B) IgG
  - (C) IgM
  - (D) IgE
5. In the medium other than nutrients, if any substance is used in excess, that medium is
- (A) Enriched medium
  - (B) Special medium
  - (C) Enrichment medium
  - (D) None of these
6. Bacteria which need oxygen for growth are called
- (A) Thermophilic bacteria
  - (B) Microaerophilic bacteria
  - (C) Facultative anaerobic bacteria
  - (D) Mycobacteria
7. Food poisoning is caused by
- (A) *Clostridium tetani*
  - (B) *Clostridium Welchi*
  - (C) Diphtheria
  - (D) *Clostridium botulinum*

*Turn Over*

8. Lyme disease is caused by
- (A) Bacteria
  - (B) Fungi
  - (C) Spirochaete
  - (D) Virus
9. Which of the following is not a characteristic of biofilms ?
- (A) antibiotic resistance
  - (B) hydrogel
  - (C) iron deficiency
  - (D) quorum sensing
10. Which of the following types of media would not be used to culture aerobes ?
- (A) selective media
  - (B) reducing media
  - (C) enrichment media
  - (D) differential media
- 

*Turn Over*

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

2020

## ZOOLOGY (Honours)

Paper Code : X-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

#### (Microbiology and Immunology)

1. Answer any *two* questions : 4×2=8
  - (a) Describe briefly the agglutination reaction.
  - (b) What is stab culture ?
  - (c) What are apoptosis and necrosis?
  - (d) Write short note on bacterial endospores.
  
2. Answer any *one* question. 12×1=12
  - (a) Explain food pathogen and food spoilage bacteria with example. What is the causative agent of leptospirosis? Describe briefly on treatment of Leptospirosis. Mention the difference between epizootic and enzootic; give one example of each. 4+1+2+5=12
  - (b) Write a short note on Antibody Dependent Cell mediated Cytotoxicity. Add a note on NK cell. What are B-lymphocytes and T-lymphocytes ? 4+4+(2+2)=12

*Turn Over*

- (c) Write a short note on glycocalyx. Define synergism. What do you mean by R-plasmid? Add a note on bacterial cell wall.  $4+2+2+4=12$

**Unit-2**  
**(Parasitology and Medical Zoology)**

3. Answer any *two* questions :  $4 \times 2 = 8$
- (a) Define zoonosis and biological vector.
  - (b) What is phoresis ? What is hyperparasitism?
  - (c) Write the role of *Culex* mosquito in disease transmission.
  - (d) Mention some serological tests used to diagnose Malaria.
4. Answer any *one* question :  $12 \times 1 = 12$
- (a) Name the infective stage of *Entamoeba histolytica* in man. Explain its life cycle, pathogenicity and treatment.  $1+(5+3+3)=12$
  - (b) Define parasitoidism. Write a short note on host-parasite interaction. Name the causative agent and vector of the yellow fever. What is paratenic host ?  $2+6+2+2=12$
  - (c) Differentiate hard tick and soft tick. State the role of ticks in disease transmission. Describe briefly the control measure of ticks. Name the causative agent and vector of Japanese encephalitis.  $3+4+3+2=12$
-

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

2020

## ZOOLOGY (Honours)

Paper Code : XI - A & B

[New Syllabus]

Full Marks : 50

Time : Two Hours

### 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.



*Turn Over*



**Paper Code : XI-A**

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.  
Each question carries 1 mark.



*Turn Over*



5. Which one of the following is the correct sequence of the process of succession ?

- (A) Migration-Nudation-Competition-Reaction-Stabilization
- (B) Nudation-Migration-Ecesis-Competition-Reaction-Stabilization
- (C) Ecesis-Migration-Competition-Stabilization-Reaction
- (D) Nudation-Ecesis-Migration-Competition-Reaction-Stabilization

6. A group of individuals of the same age within a population is called —



*Turn Over*

Q. No.	Answer
1	1. The first step in the process of the cell cycle is the G <sub>1</sub> phase, during which the cell grows and prepares for DNA replication.
2	2. The second step is the S phase, where DNA replication occurs, resulting in two identical copies of each chromosome.
3	3. The third step is the G <sub>2</sub> phase, where the cell continues to grow and prepares for mitosis.
4	4. The final step is mitosis, where the cell divides into two daughter cells.
5	5. The cell cycle is a continuous process that repeats itself, allowing for the growth and repair of tissues.
6	6. The cell cycle is regulated by a complex system of proteins and signaling molecules, ensuring that the process occurs in a controlled and orderly manner.
7	7. The cell cycle is essential for the development and maintenance of all multicellular organisms.
8	8. The cell cycle is also involved in the repair of damaged tissues and the replacement of old cells.
9	9. The cell cycle is a highly coordinated process that involves the precise timing and regulation of various cellular events.
10	10. The cell cycle is a fundamental process that underlies the growth and development of all life forms.

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*Turn Over*

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

2020

## ZOOLOGY (Honours)

Paper Code : XI-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

#### (Ecology)

*[Faint, illegible text, likely bleed-through from the reverse side of the page]*

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*Turn Over*

1. Define the following terms: (a) Environment, (b) Ecology, (c) Environmental Biology, (d) Environmental Toxicology.	(10)
2. Explain the following: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)

**Unit-2**  
**(Environmental Biology and Toxicology)**

1. Define the following terms: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)
2. Explain the following: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)

1. Define the following terms: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)
2. Explain the following: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)

1. Define the following terms: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)
2. Explain the following: (a) Environmental Biology, (b) Environmental Toxicology, (c) Environmental Health, (d) Environmental Quality.	(10)

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

2020

## ZOOLOGY (Honours)

Paper Code : XII - A & B

[New Syllabus]

Full Marks : 50

Time : Two Hours

### 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
-----	---	---	---

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.



*Turn Over*

**Paper Code : XII-A**

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.

Each question carries 1 mark.

- 1. The value of  $\sin^{-1}(\sin \frac{5\pi}{6})$  is  
A)  $\frac{5\pi}{6}$   
B)  $\frac{\pi}{6}$   
C)  $\frac{2\pi}{3}$   
D)  $\frac{7\pi}{6}$
- 2. The value of  $\cos^{-1}(\cos \frac{7\pi}{6})$  is  
A)  $\frac{7\pi}{6}$   
B)  $\frac{5\pi}{6}$   
C)  $\frac{2\pi}{3}$   
D)  $\frac{\pi}{6}$
- 3. The value of  $\tan^{-1}(\tan \frac{7\pi}{6})$  is  
A)  $\frac{7\pi}{6}$   
B)  $\frac{5\pi}{6}$   
C)  $\frac{2\pi}{3}$   
D)  $\frac{\pi}{6}$

*Turn Over*



1. The first step in the process of identifying a problem is to define the problem. This involves identifying the symptoms and the underlying causes of the problem. Once the problem has been defined, the next step is to gather information about the problem. This involves researching the problem and identifying the resources that are available to solve it. The third step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed to carry out the plan. The fourth step is to implement the plan. This involves carrying out the steps of the plan and monitoring the progress of the solution. The final step is to evaluate the solution. This involves assessing the effectiveness of the solution and identifying any areas for improvement.

2. The second step in the process of identifying a problem is to gather information about the problem. This involves researching the problem and identifying the resources that are available to solve it. The third step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed to carry out the plan. The fourth step is to implement the plan. This involves carrying out the steps of the plan and monitoring the progress of the solution. The final step is to evaluate the solution. This involves assessing the effectiveness of the solution and identifying any areas for improvement.

3. The third step in the process of identifying a problem is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and the resources that will be needed to carry out the plan. The fourth step is to implement the plan. This involves carrying out the steps of the plan and monitoring the progress of the solution. The final step is to evaluate the solution. This involves assessing the effectiveness of the solution and identifying any areas for improvement.

*Turn Over*

**QUESTION 1**  
The following information relates to the operations of a company for the year ended 31 December 2019:

Revenue	1000
Cost of sales	(400)
Operating expenses	(200)
Finance income	50
Finance expense	(30)
Income tax expense	(50)

Required: Calculate the profit for the year.

**QUESTION 2**  
The following information relates to the operations of a company for the year ended 31 December 2019:

Revenue	1000
Cost of sales	(400)
Operating expenses	(200)
Finance income	50
Finance expense	(30)
Income tax expense	(50)

Required: Calculate the profit for the year.

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*Turn Over*

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

2020

## ZOOLOGY (Honours)

Paper Code : XII-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

(Molecular Biology)



*Turn Over*

1. **Answer the following questions:**
2. **Explain the following terms:**
  - (a) **Biotechnology**
  - (b) **Genetic Engineering**
  - (c) **Recombinant DNA Technology**
  - (d) **Gene Cloning**
  - (e) **Gene Expression**
  - (f) **Gene Therapy**
  - (g) **Gene Editing**
  - (h) **Gene Silencing**
  - (i) **Gene Mapping**
  - (j) **Gene Sequencing**
  - (k) **Gene Transfer**
  - (l) **Gene Therapy**
  - (m) **Gene Therapy**
  - (n) **Gene Therapy**
  - (o) **Gene Therapy**
  - (p) **Gene Therapy**
  - (q) **Gene Therapy**
  - (r) **Gene Therapy**
  - (s) **Gene Therapy**
  - (t) **Gene Therapy**
  - (u) **Gene Therapy**
  - (v) **Gene Therapy**
  - (w) **Gene Therapy**
  - (x) **Gene Therapy**
  - (y) **Gene Therapy**
  - (z) **Gene Therapy**

**Unit-2**  
**(Biotechnology)**

1. **Answer the following questions:**
2. **Explain the following terms:**
  - (a) **Biotechnology**
  - (b) **Genetic Engineering**
  - (c) **Recombinant DNA Technology**
  - (d) **Gene Cloning**
  - (e) **Gene Expression**
  - (f) **Gene Therapy**
  - (g) **Gene Editing**
  - (h) **Gene Silencing**
  - (i) **Gene Mapping**
  - (j) **Gene Sequencing**
  - (k) **Gene Transfer**
  - (l) **Gene Therapy**
  - (m) **Gene Therapy**
  - (n) **Gene Therapy**
  - (o) **Gene Therapy**
  - (p) **Gene Therapy**
  - (q) **Gene Therapy**
  - (r) **Gene Therapy**
  - (s) **Gene Therapy**
  - (t) **Gene Therapy**
  - (u) **Gene Therapy**
  - (v) **Gene Therapy**
  - (w) **Gene Therapy**
  - (x) **Gene Therapy**
  - (y) **Gene Therapy**
  - (z) **Gene Therapy**

*Turn Over*

- (1) **Generalization:** (10/10/10)
- (2) **Generalization:** (10/10/10)
- (3) **Generalization:** (10/10/10)
- (4) **Generalization:** (10/10/10)

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

2020

## ZOOLOGY (Honours)

Paper Code : XIII - A & B  
[New Syllabus]

Full Marks : 50

Time : Two Hours

### 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
-----	---	---	---

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.

**QUESTIONNAIRE ON THE STATE OF THE ART OF THE ARTS**

1. Name of the organization: \_\_\_\_\_

2. Address: \_\_\_\_\_

3. Telephone: \_\_\_\_\_

4. E-mail: \_\_\_\_\_

5. Name of the person who completed the questionnaire: \_\_\_\_\_

6. Date: \_\_\_\_\_

7. Signature: \_\_\_\_\_

8. Stamp: \_\_\_\_\_

**Paper Code : XIII-A**

Full Marks : 10

Time : Thirty Minutes

Choose the correct answer.  
Each question carries 1 mark.

- 1. [Faint question text]
- 2. [Faint question text]
- 3. [Faint question text]
- 4. [Faint question text]
- 5. [Faint question text]
- 6. [Faint question text]
- 7. [Faint question text]
- 8. [Faint question text]
- 9. [Faint question text]
- 10. [Faint question text]



Q. No.	Question	Answer
1.	What is the difference between a function and a procedure?	A function returns a value, while a procedure does not.
2.	What is a parameter?	A parameter is a variable that is used to pass data into a function or procedure.
3.	What is a return statement?	A return statement is used to exit a function and return a value to the caller.
4.	What is a loop?	A loop is a statement or group of statements that are executed repeatedly.
5.	What is a conditional statement?	A conditional statement is a statement that executes only if a certain condition is true.
6.	What is a variable?	A variable is a container for storing data values.
7.	What is a constant?	A constant is a value that does not change during the execution of a program.
8.	What is an array?	An array is a collection of elements of the same data type stored in memory.
9.	What is a string?	A string is a sequence of characters.
10.	What is a file?	A file is a collection of related information.
11.	What is a directory?	A directory is a file that contains a list of files and sub-directories.
12.	What is a path?	A path is a sequence of directories leading to a file.
13.	What is a file extension?	A file extension is the part of a filename that indicates the file's format.
14.	What is a file mode?	A file mode is a set of characters that specifies the type of access to be granted to the file.
15.	What is a file pointer?	A file pointer is a variable that points to a file.
16.	What is a file handle?	A file handle is a unique identifier for a file.
17.	What is a file descriptor?	A file descriptor is a small integer that identifies an open file.
18.	What is a file stream?	A file stream is a sequence of characters that are read from or written to a file.
19.	What is a file buffer?	A file buffer is a small area of memory that is used to store data that is being read from or written to a file.
20.	What is a file operation?	A file operation is an action performed on a file, such as opening, reading, writing, or deleting.
21.	What is a file error?	A file error is a problem that occurs when a file operation fails.
22.	What is a file exception?	A file exception is an error that is thrown when a file operation fails.
23.	What is a file exception handler?	A file exception handler is a function that is called when a file exception is thrown.
24.	What is a file exception message?	A file exception message is a string of text that describes the error that occurred.
25.	What is a file exception code?	A file exception code is a number that identifies the type of error that occurred.

Year	2017	2018	2019	2020
1. Total number of students	1000	1000	1000	1000
2. Total number of students who passed	800	800	800	800
3. Total number of students who failed	200	200	200	200
4. Total number of students who were absent	0	0	0	0
5. Total number of students who were expelled	0	0	0	0
6. Total number of students who were transferred	0	0	0	0
7. Total number of students who were suspended	0	0	0	0
8. Total number of students who were dropped out	0	0	0	0
9. Total number of students who were re-enrolled	0	0	0	0
10. Total number of students who were graduated	0	0	0	0

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

2020

## ZOOLOGY (Honours)

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. Introduction to Endocrinology	1
2. The Hypothalamic-Pituitary-Gonadal Axis	2
3. The Hypothalamic-Pituitary-Adrenal Axis	3
4. The Thyroid and Parathyroid Glands	4
5. The Pancreas and Insulin	5
6. The Adrenal Glands	6
7. The Reproductive System	7
8. Summary	8

**Unit-2**  
**(Endocrinology and Reproductive Biology)**

1. Introduction to Endocrinology	1
2. The Hypothalamic-Pituitary-Gonadal Axis	2
3. The Hypothalamic-Pituitary-Adrenal Axis	3
4. The Thyroid and Parathyroid Glands	4
5. The Pancreas and Insulin	5
6. The Adrenal Glands	6
7. The Reproductive System	7
8. Summary	8

Description of work	Quantity
[Illegible text]	[Illegible text]
[Illegible text]	[Illegible text]
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