

GUJARAT UNIVERSITY
Semester-3 Zoology

(SKELETON QUESTION PAPER FOR PRACTICAL EXAMINATION)

PAPER-203 (A)
(*Based on Theory Paper 201*)

Date :

Marks : 35

Time :.....

- Q.1** Dissect / Sketch a labeled diagram of the given Earthworm so as to expose the _____ system and show it to the examiner. **10**
- Q.2** Make a temporary mounting/ Sketch a labeled diagram of _____ from the Earthworm, stain if necessary and show it to the examiner. **03**
- Q.3** Identify specimens 1 to 7 as per instructions : **14**
Sp. 1 Identify and classify upto Class, giving reasons.
Sp. 2 Identify and classify upto Class, giving reasons.
Sp. 3 Identify and describe.
Sp. 4 Identify, sketch and label.
Sp. 5 Identify and describe.
Sp. 6 Identify and comment.
Sp. 7 Identify and state its uses.
- Q.4** Viva voce. **04**
- Q.5** Journal. **04**
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GUJARAT UNIVERSITY
Semester-3 Zoology

(SKELETON QUESTION PAPER FOR PRACTICAL EXAMINATION)

PAPER-203 (B)
(*Based on Theory Paper 202*)

Date :

Marks : 35

Time :

- Q.1** Dissect/ Sketch a labeled diagram of the given shark so as to expose the _____ system and show it to the examiner. **10**
- Q.2** Make a temporary mounting /Sketch a labeled diagram of _____ from the shark, stain if necessary and show it to the examiner. **03**
- Q.3** Demonstrate the action of your own salivary Amylase on the given Starch solution. **04**
- Q.4** Identify specimens 1 to 5 as per instructions : **10**
Sp. 1 Identify and classify upto Class, giving reasons.
Sp. 2 Identify and classify upto Class, giving reasons.
Sp. 3 Identify and comment.
Sp. 4 Identify and describe.
Sp. 5 Identify, sketch and label.
- Q.5** Viva voce. **04**
- Q.6** Journal. **04**
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GUJARAT UNIVERSITY

4th Semester B.Sc.

ZOOLOGY

(effective from June 2012)

The syllabus is to be completed by assigning FOUR hours for each Theory Paper and a total of SIX hours for the Practicals, per week.

Pattern of Examination:

Theory (Ext. 140 marks & Int. 60 marks)

Practicals (Ext. 70 marks & Int. 30 marks)

Examination	Duration	External Marks	Internal Marks	Total Marks
Theory-Paper 204 (Animal diversity (non-chordates & chordates), Human histology and Physiology)	3 hours	70	30	100
Theory-Paper 205 (Animal diversity (chordates), Fishery biology, Human parasitology, Wildlife of India)	3 hours	70	30	100
Theory (Total)		140	60	200
Practical-Paper 206 (A) (Based on Theory Paper – 204)	3 hours	35	15	50
Practical-Paper 206 (B) (Based on Theory Paper – 205)	3 hours	35	15	50
Practicals (Total)		70	30	100

INSTRUCTIONS

1. Each theory paper comprises of FIVE UNITS. Each UNIT carries equal marks, i.e. 14 marks (14 x 5 = 70) in the university examinations.
2. The question papers will have to be set according to the paper-style and the pattern of marks-distribution provided on page no. 15 & 18 of this syllabus.
3. The paper-style & distribution of marks for each Practical is also provided on page no. 20 & 23 of this syllabus.
4. In order to be qualified to appear in the University Practical Examination, the student must submit his/her duly certified journals during the examination.

ZOOLOGY SYLLABUS

SEMESTER – 4

PAPER – 204 (Theory)

(ANIMAL DIVERSITY (nonchordates & chordates), HUMAN HISTOLOGY AND PHYSIOLOGY)

Unit I ANIMAL DIVERSITY (NonChordates) – Systematic:

Salient features and Classification of Invertebrates, starting from Kingdom upto Classes, giving suitable examples (as per practical syllabus) :

Phylum :

1. Annelida
2. Arthropoda
3. Mollusca
4. Echinodermata
5. Hemichordata

(Classification, as per adapted in the book – TEXTBOOK OF INVERTEBRATES by R.L.Kotpal, Rastogi Publication, Meerut).

Unit II ANIMAL DIVERSITY (Nonchordates) – Type Study & General Topics :

A. General structure & morphology with functional anatomy of the following animal :

Arthropoda : Type – **Cockroach** (*Periplaneta americana*) – Classification, Habits & Habitat, Ext. characters, Digestive system, Excretory system, Reproductive systems, Nervous system, and Sense organ (only compound eyes).

B. General topics :

1. Metamorphosis (complete & incomplete)
2. Mouth parts of: Honey bee, Housefly, Mosquito (*Anopheles* & *Culex*-male & female) and Cockroach.

Reference Books for Units I & II:

1. **Textbook of Invertebrates**, R. L. Kotpal, Rastogi Publishers, Meerut.
2. **Manual of Zoology**, E. K. Ayer, Vol. I & II.
3. **Invertebrate Zoology**, Jordan and Verma, S. Chand & Company, Delhi.

Unit III (A) HUMAN HISTOLOGY:

Histology of lung, bone & cartilage.

(B) HUMAN PHYSIOLOGY:

Body fluids

- 1) Introduction
- 2) Significance
- 3) Compartments
- 4) Compositions
- 5) Composition of Cerebrospinal fluid (CSF)
- 6) Composition of Milk
- 7) Dehydration
- 8) Water In-toxication or Over Hydration

Reference Books for Unit III :

1. **Principles of Anatomy and Physiology**, Tortora and Grabowski, Harper Collins College Publications.
2. **Essentials of Medical Physiology**, K.Sembulingam and Prema Sembulingam, Jaypee publications.
3. **Textbook of Biochemistry**, DM Vasudevan and Sreekumari S, Jaypee Publications.
4. **A Textbook of Animal Histology**, A. K. Berry, Emkay Publications, Delhi.
5. **Bailey's Textbook of Histology**, The Williams & Wilkins Company, Baltimore.

Unit IV ANIMAL DIVERSITY (Chordates) – General Topics :

Comp. anatomy of vertebrates – Heart and Kidney.

Reference Books for Unit IV :

1. **Textbook of Vertebrates**, R. L. Kotpal, Rastogi Publication, Meerut.
 2. **Chordate Zoology**, P. S. Dhami, and J. K. Dhami, S. Chand & Co., Delhi.
 3. **Introduction to Chordates**, T. C. Majupuria, Pradeep Publication, Jalandhar.
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Theory Paper-style and pattern of marks-distribution

PAPER – 204

(ANIMAL DIVERSITY (nonchordates & chordates), HUMAN HISTOLOGY)

<u>Q. No.</u>	<u>UNIT NO.</u>	<u>MARKS</u>
Q.1.A	Unit-I : 1 and 2	07
Q.1.B	Unit-I : 1 and 2 Unit-I : 3, 4 and 5 OR Unit-I : 3, 4 and 5	07
Q.2.A	Unit-II : A OR	07
Q.2.B	Unit-II : A Unit-II : B OR Unit-II : B	07
Q.3.A	Unit-III : Lung, bone and cartilage OR	07
Q.3.B	Unit-III : lung, bone and cartilage Unit-III : body fluids OR Unit-III : body fluids	07
Q.4.A	Unit-IV : A OR	07
Q.4.B	Unit-IV : A Unit-IV OR Unit-IV	07
Q.5	14 objective questions of 1 mark each. 3 questions from each of the four Units and remaining 2 questions from any of the four Units.	14

GUJARAT UNIVERSITY
Semester-4 Zoology

(SKELETON QUESTION PAPER FOR PRACTICAL EXAMINATION)

PAPER-206 (A)
(*Based on Theory Paper 204*)

Date :

Marks : 35

Time :

- Q.1** Dissect/ Sketch a labeled diagram of the given cockroach so as to expose the _____ system and show it to the examiner. **08**
- Q.2** Make/ Sketch a labeled diagram of a temporary mounting of _____ from the given Cockroach. **03**
- Q.3** Make a temporary mounting / Sketch a labeled diagram of the **Mouth parts** Of _____ . **04**
- Q.4** Identify specimens 1 to 6 as per instructions : **12**
- Sp.1 Identify and classify upto Class, giving reasons.
 - Sp.2 Identify and classify upto Class, giving reasons.
 - Sp.3 Identify and describe.
 - Sp.4 Identify and describe.
 - Sp.5 Identify, sketch and label.
 - Sp.6 Identify and comment.
- Q.5** Viva voce. **04**
- Q.6** Journal. **04**
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