

**TEMPLATE FOR FIRST MIDTERM EXAMINATION PAPER**



KRISHNA UNIVERSITY, MACHILIPATNAM – 521003  
DEPARTMENT OF BIOSCIENCES AND BIOTECHNOLOGY  
M.Sc – Zoology, I SEMESTER

First Midterm Examination, Month & Year

**Paper Code & Title: 20 ZOO 101: Systematics of Invertebrates**  
(Model Paper w.e.f 2020-21 admitted batch)

Time : 90 Minutes

Max. Marks : 30 Marks

**Answer ALL questions**

**(5X2 = 10 Marks)**

- 1.
- 2.
- 3.
- 4.
- 5.

**Answer Four questions choosing One question from each Unit.**

All questions carry Equal marks.

**(4X5 = 20 Marks )**

**6. UNIT-1**

a.

(OR)

b.

**7. UNIT-2**

a.

(OR)

b.

**8. UNIT-1 or UNIT-2**

a.

(OR)

b.

**9. UNIT-1 or UNIT-2 or UNIT-3**

a.

(OR)

b.

**TEMPLATE FOR SECOND MIDTERM EXAMINATION PAPER**



KRISHNA UNIVERSITY, MACHILIPATNAM – 521003  
DEPARTMENT OF BIOSCIENCES AND BIOTECHNOLOGY  
M.Sc – Zoology, I SEMESTER

Second Midterm Examination, Month & Year

**Paper Code & Title: 20 ZOO101: Systematics of Invertebrates**

(Model Paper w.e.f 2020-21 admitted batch)

Time : 90 Minutes

Max. Marks : 30 Marks

**Answer ALL questions**

**(5X2 = 10 Marks)**

- 1.
- 2.
- 3.
- 4.
- 5.

**Answer Four questions choosing One question from each Unit.**

**All questions carry Equal marks.**

**(4X5 = 20 Marks )**

**6. UNIT-4**

- a.
- (OR)
- b.

**7. UNIT-5**

- a.
- (OR)
- b.

**8. UNIT-4 or UNIT-5**

- a.
- (OR)
- b.

**9. UNIT-3 or UNIT-4 or UNIT-5**

- a.
- (OR)

**TEMPLATE FOR SEMESTER END EXAMINATION PAPER**



KRISHNA UNIVERSITY, MACHILIPATNAM – 521003  
DEPARTMENT OF BIOSCIENCES AND BIOTECHNOLOGY  
M.Sc – ZOLLOGY, I SEMESTER

**Paper Code & Title: 20 ZOO101 : Systematics of Invertebrates**

(Model Paper w.e.f 2020-21 admitted batch)

Time : 3 hours

Total marks: 70 M

1. **Answer all questions** (Two questions from each unit) (10x2=20 Marks)

- a.
- b.
- c.
- d.
- e.
- f.
- g.
- h.
- i.

Answer **Five Questions** choosing **One question from each unit** (A or B).

All questions carry Equal marks. (5x10=50 Marks)

2. A).  
B).

3. A).  
B).

4. A).  
B).

5. A).  
B).

6. A).  
B).



KRISHNA UNIVERSITY::MACHILIPATNAM  
M.Sc. – ZOOLOGY, I-SEMESTER  
**Paper Code & Title: 20 ZOO101 :Systematics of Invertebrates**

(Model Paper w.e.f. 2020-21 admitted batch)

Time: 3 Hours

Max. Marks : 70

**Answer ALL questions  
2 = 20 Marks)**

**(10 X**

**(Two questions from each unit)**

1.
  - a. Write any four taxonomic characters of animals.
  - b. What is genetic incompatibility? Write its significance in speciation.
  - c. Write a short note on curation process of identification.
  - d. Write any two characteristics of pseudocoelomata.
  - e. Define taxonomy with an example.
  - f. What is canal system? Write its importance in porifera.
  - g. Explain the polyp and medusa forms of coelenterates.
  - h. What are the excretory organs of phylum Annelida? And mention their types.
  - i. What is torsion? Which group of animals exhibits torsion?
  - j. What is ambulacral system? Mention its uses.

**Answer Five questions choosing One question from each unit (A or B).**

All questions carry equal marks

**(5 X 10 = 50 Marks)**

2.
  - A. Give an account on histological resume of Systematics hierarchy of categories.
  - B. Write an essay on speciation.
3.
  - A. Describe the curation process of identification.
  - B. Write a note on classification based on coelom.
4.
  - A. Give a detailed note on formation of scientific names of various taxa.
  - B. Describe the general characteristics of Porifera
5.
  - A. Write an account on pseudocoelomates and their schematic representation of classification.
  - B. Give a detailed note on characteristics of phylum Annelida
6.
  - A. Describe the classification of arthropods up to Sub-classes, with suitable examples.
  - B. Write an essay on Peripatus and its significance.



KRISHNA UNIVERSITY::MACHILIPATNAM

M.Sc. – ZOOLOGY, I-SEMESTER

**Paper Code & Title: 20 ZOO102 :Anatomy of Invertebrates & Vertebrates**

(Model Paper w.e.f 2020-21 admitted batch)

Time: 3 Hours

Max. Marks : 70

**Answer ALL questions**

**(10 X 2 = 20 Marks)**

**(Two questions from each unit)**

1. a. Distinguish the pseudocoelom and eucoelom with suitable examples.  
b. Mention any two examples having the nephridia as their excretory organs.  
c. Name the any two larval forms of echinoderms.  
d. Write any two economic importances of rotiferans.  
e. Distinguish the scales in fishes, reptiles and mention their place of origin.  
f. Define the 'portal system', write its types with examples.  
g. What is bidder's canal? Where it is present?  
h. Define the 'autonomous nervous system' and give an example.  
i. Define the blind spot, explain how it affects vision.  
j. Write any two functions of lateral line system in fishes.

**Answer Five questions choosing One question from each unit (A or B).**

All questions carry equal marks

**(5 X 10 = 50 Marks)**

**UNIT-1**

2. A. Define archenteron, and write a detailed note on protostomes and deuterostomes. With neat labelled diagrams.  
B. Give a detailed note on 'Coelom role in excretions and organs involved in it'.

**UNIT-2**

3. A. Write an essay on trochophore larva  
B. Describe the characteristic features of Chetognatha.

**UNIT-3**

4. A. Give an account on ectodermal derivatives.  
B. Write an essay on evolution of aortic arches.

**UNIT-4**

5. A. Describe the evolution of urino-genital system among vertebrates.  
B. Give a comparative account on brain of vertebrates.

**UNIT-5**

6. A. Describe the structure of eye with neat labeled diagrams.  
B. Write an essay on lateral line system with neat labeled diagrams.



KRISHNA UNIVERSITY::MACHILIPATNAM  
M.Sc. – ZOOLOGY, I-SEMESTER  
**Paper Code & Title: 20 ZOO103 :Cell Biology & Genetics**

(Model Paper w.e.f. 2020-21 admitted batch)

Time: 3 Hours

Max. Marks : 70

**Answer ALL questions**

**(10 X 2 = 20 Marks)**

**(Two questions from each unit)**

1. a. What are the work benches of protein synthesis, write its types.  
b. Name the cell organelles useful for chromosome movement during cell division.  
c. Write any two functions of microtubules in the cell.  
d. Explain the role of flagella in cell movement.  
e. Name the structural components of plasma membrane.  
f. Distinguish the active and passive transport with examples.  
g. Define the term 'apoptosis' and its significance  
h. Write any two disorders caused by chromosomal aberrations.  
i. Distinguish the exon and intron in gen.  
j. What are the major steps in post-translational modifications.

**Answer Five questions choosing One question from each unit (A or B).**

All questions carry equal marks

**(5 X 10 = 50 Marks)**

**UNIT-1**

2. A. Write a detailed note on mitochondria with neat labeled diagrams.  
B. Describe the structure of and function of nuclear membrane.

**UNIT-2**

3. A. Describe the different stages in mitosis.  
B. Write an essay on cilia and flagella structure and their role.

**UNIT-3**

4. A. Write a detailed note on molecular structure of plasma membrane.  
B. Explain the active transport mechanism across the plasma membrane.

**UNIT-4**

5. A. Write an essay on cell signaling  
B. What is sex determination, and write a detailed note on it.

**UNIT-5**

6. A. Explain the chromosomal organization of gene  
B. Define the term 'codon', and give a detailed note on protein synthesis.