UNIVERSITY OF THE PUNJAB

Part – I A/2016
Examination:- B.A./B.Sc.

Roll No. .....

Subject: Zoology-I
PAPER: A (Principles in Animal Life)

TIME ALLOWED: 2 hrs.
MAX. MARKS: 15

Attempt this Paper on Separate Answer Sheet provided.

Part -II (Subjective Type)

Attempt any THREE questions of the Following: 3+3+3

Q. 3. Attempt any three questions out of following

a. Write a note on Ribosomes.

b. What are multiple alleles. Write a note.

c. Describe interspecific interaction with reference to herbivory and predation.

d. Describe the fluid mosaic model of plasma membrane.

e. Write a note on cofactors and coenzymes

Part -III

Attempt any ONE question:

Q.4 Explain the structure of Eukaryotic chromosome 6

Q.5 Give a detailed account of cytoskeleton 6

UNIVERSITY OF THE PUNJAB

Roll No. .....

Part – I A/2016

Examination:- B.A./B.Sc.

Subject: Zoology-I **TIME ALLOWED: 1 hr.**

PAPER: A (Principles in Animal Life) **MAX. MARKS: 20**

NOTE: 1. Cutting and overwriting is not allowed in objective part (Part-I)
2. In Part-I all questions are compulsory. Answer these questions on the questions sheet only.
3. Answer any three (3) questions from part – II and any one question from Part – III on separate answer sheet provided.

IMPORTANT NOTE: Attempt Part-I in the given time of 1 hour and hand over to the Centre Superintendent. The Centre Superintendent will provide you Answer sheet for Part-II and Part-III.

Part -I

For Part-I Time Allowed: 1hr & Max. Marks: 20

Q. 1. Multiple choice questions (Tick mark the right answer)

0.5×20=10

1.	Acidic solutions have a pH.						
a.	Equal to 7	b.	Less than seven	c.	More than seven	d.	None of the above
2.	The fluid systems of most animals contain chemical substances that help regulate the acid-base balance. Such substances are called						
a.	Buffers	b.	Isotonic	c.	Hypotonic	d.	hypertonic
3.	Organic molecules that contain only carbon and hydrogen are known as						
a.	Carbohydrates	b.	Proteins	c.	Lipids	d.	hydrocarbons
4.	Fluid mosaic model of plasma membrane contains proteins and						
a.	Phospholipids	b.	Steroids	c.	Lipases	d.	Proteases
5.	Which mode of transport across the membrane needs energy derived from ATP						
a.	Osmosis			b.	Active transport		
c.	Diffusion			d.	Passive transport		
6.	Blood is a connective tissue in which plasma suspends specialized						
a.	RBC	b.	WBC	c.	Platelets	d.	All of above
7.	The functional unit of an animal's body made up of more than one type of tissues is						
a.	Organism			b.	Organ		
c.	Species			d.	Molecule		
8.	A plant eating animal is						
a.	Producer	b.	Secondary consumer	c.	Primary consumer	d.	Tertiary consumer
9.	The optimal pH for pepsin to perform its function is						
a.	3	b.	2	c.	4	d.	7
10.	In energy releasing phase of glycolysis how many ATPs are generated from one glucose molecule						
a.	2	b.	38	c.	4	d.	36
11.	During cell division the division of cell is known as						
a.	Mitosis	b.	Cytokinesis	c.	Cytokines	d.	Cytokinins
12.	A specific DNA sequence of about 220 nucleotides that has a specific location on any given chromosomes is known as						
a.	Centromere	b.	Centrosomes	c.	Centriole	d.	Kinetochore
13.	When the heterozygous expresses the phenotype of both homozygotes, it is known as						
a.	Dominance	b.	Codominance	c.	Multiple alleles	d.	Monohybrid cross

P.T.O.

14.	Chromosomes that are alike and are not involved in sex determination are known as						
a.	X chromosome	b.	Y chromosome	c.	Autosomes	d.	Sex chromosomes
15.	Hemizygous is a condition in which						
a.	Females have 1 gene for a trait	b.	Females have 2 genes for a trait	c.	Males have 2 genes for a trait	d.	Males have 1 gene for a trait
16.	Which of the following refers to pyrimidines						
a.	Cytosine	b.	Thymine	c.	Uracil	d.	All of the above
17.	Synthesis of an RNA molecule is known as						
a.	Replication	b.	Translation	c.	Transcription	d.	Reverse transcription
18.	The accumulation of matter in food webs is called						
a.	Biological catalysis	b.	Biological magnification	c.	Pollution	d.	All of above
19.	The zone that extends from the splash zone of ocean wave to the low tidal marks is called as						
a.	Littoral zones	b.	Neritic ecosystem	c.	Lotic	d.	Lentic
20.	In which ecosystems, temperature fluctuate widely, high during daylight and low at night time.						
a.	Grasslands	b.	Tropical rain forests	c.	Deserts	d.	Chaparral

Q. 2. Write the precise answer in the blanks provided **0.5×20=10**

1. The study of geographic distribution of plants and animals is known as _____
2. Multicellular organisms appeared and flourished in _____ era.
3. _____ is the study of the structure of entire organisms and their parts.
4. Ichthyology is the study of _____.
5. The atomic number is the number of _____ in the nucleus of one of its atoms.
6. Covalent bonds that link individual amino acids in chains are called _____.
7. In some instances, two protein chains join to form larger protein, the shape of which is called the _____ structure.
8. The membrane proteins embedded in it are called _____proteins.
9. _____ are membrane bound organelles that contains acid hydrolases enzymes.
10. In cytoplasm, at the base of each cilium or flagellum lies a short, cylindrical _____.
11. The optimum pH for most of the enzymes is usually between _____.
12. The major energy currency of all cells is nucleotides called _____.
13. In cellular respiration the two molecules of $FADH_2$ are produced in _____.
14. In Mitochondria, ATP synthetase activity is associated with _____.
15. The resting period between cell divisions is known as _____.
16. In cell cycle, _____ phase represent the early growth phase.
17. Genes that determine the expression of a particular trait can exist in alternative forms called _____.
18. The unit of inheritance are called _____
19. Descent with modification refers to _____.
20. _____ obtain nutrition from inorganic materials and an energy source.

UNIVERSITY OF THE PUNJAB

Part – I A/2016
Examination:- B.A./B.Sc.

Roll No. .....

Subject: Zoology-I
PAPER: B (Invertebrates Diversity)

TIME ALLOWED: 2 hrs.
MAX. MARKS: 15

Attempt this Paper on Separate Answer Sheet provided.

PART-II
SUBJECTIVE PORTION

Q.3. Give brief answer to any eight of the followings: 1x10=10

1. Write down characters of Phylum Apicomplexa.
2. What is process of budding in Protozoan?
3. What is Gametogony?
4. What is function of Lobopodia?
5. What are characters of class Calcarea?
6. What do know about reproduction class Anthozoa?
7. Describe conjugation in paramecium.
8. What is proglottid?
9. What is Corocidium?
10. Write characters of Beef tapeworm.

Q.4 Write note on any one of the following two questions (5)

a. Euglena b. Obelia

UNIVERSITY OF THE PUNJAB

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PAPER: B (Invertebrates Diversity) **MAX. MARKS: 20**

Attempt Part – I on the question sheet and Part – II on the Answer Sheet Provided.

***IMPORTANT NOTE:** Attempt this part in the given time of 1 hour and handover to the Centre Superintendent. Who will provide you answer sheet for Part – II.*

PART-I

OBJECTIVE PORTION

Q.1. Tick ( ) the correct option from the MCQs given below: 1/2x 20=10

1. The study of the kind and diversity of organism and evolutionary relationship among them is called:

   a. Classification b. Systematics c. Arrangement d. Taxonomy

2. Eubacteria is:

   a. False bacteriab. True bacteria c. multicellular organism d. unicellular organism

3. In diploblastic organization the body parts are organized into layers derived from:

   a. Two embryonic layers b. Three embryonic layers c. Four embryonic layers d. (both a & b)

4. Groups of organism believed to have had separate origin are said to be:

   a. Polyphyletic b. Monophyletic c. Triphyletic. d. diphyletic

5. Mutualism is symbiotic relationship in which both species:

   a. Benefit b. Lose c. Harmed. d. damaged

6. *Trypanosoma brucci* belong to class:

   a. Zoomastigophora b. Phytomastigophora c. Lobosea d. Sporozoea

7. The phylum Platyhelmintes contain over:

   a. 20,000 species b. 25,000 species c. 30,000 species. d. 40,000 species

8. *Diphyllobothrium latum* has scolex that act as:

   a. holdfast b. organ of movement c. food intake d. organ of attachment

9. Phylum Mollusca include nearly:

   a. 200,000 living species. b. 100,000 living species. c. 150, 000 living species. d. 250,000 living species

10. The two convex halves of the shell are called:

    a. Parts b. Valves c. Portions. d. sections

11. Octopuses are more:

    a. Sedentary animals b. Active animals c. Slow moving animals

12. Members of class polychaeta are mostly:

    a. Marine b. Freshwater c. Saltwater d. (both a & b)

13. Members of class Echinoidea live in

    a. Marine b. Freshwater c. Spring water d. Terrestrial condition

14. Class Holothuridea have approximately:

    a. 1500 species b. 1600 species c.1700 species d. 1800 species

15. Honey Bee have a social organization consisting of :

    a. Three castes b. two castes d. one caste. D. No caste

P.T.O.

16. Centepedes are fast moving:

a. Predators b. Prey C. Host d. Parasite

17. Brine shrimp live in:

a. salt water b. pond water c. River water d. Spring water

18. The outer layer of exoskeleton of Arthopod is called:

a. Epicutile b. Procutile c. chitin d. Epidermis

19. Body of annelids is:

a. worm like b. cylindrical c. flat d. round

20. Cuttle fish and nautili feed on small invertebrate on:

a. ocean floor b. Pond bottom c. in running water d. River bed

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Q.2 Fill in the blanks 1/2x20=10

1. Leech belong to class----------
2. An external jointed Skelton is called as ----------or ----------.
3. Horseshoe crab belongs to class----------.
4. The lobsters belong to the largest crustacean order ----------
5. Each kind of individual in an insect colony is called a----------
6. Sea urchin is specialized for living in ----------
7. Zoologist who specializes in study of protozoa are called ----------
8. *Amoeba proteus* belong to super class----------
9. Ciliates reproduce sexually by ----------
10. *Physalia* is member of class ----------
11. The gastrodermis of all Cnidarians lines a blind ending called----------
12. Turbellarians are the first group of ----------symmetrical animals.
13. Monogeneans have ----------generation in their life cycle.
14. Schistosomes are also called----------.
15. The cuticle or lorica in rotifer provides -------and is the main supporative organs.
16. The body surface of Kinorhynch is devoid of ------- and is composed of zonites.
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18. The medusa is dioecious and ----------.
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MAX. MARKS: 15

Attempt this Paper on Separate Answer Sheet provided.

Part -II (Subjective Type)

Attempt any THREE questions of the Following: **3+3+3**

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a. Write a note on Ribosomes.

b. What are multiple alleles. Write a note.

c. Describe interspecific interaction with reference to herbivory and predation.

d. Describe the fluid mosaic model of plasma membrane.

e. Write a note on cofactors and coenzymes

Part -III

Attempt any ONE question:

Q.4 Explain the structure of Eukaryotic chromosome 6

Q.5 Give a detailed account of cytoskeleton 6

UNIVERSITY OF THE PUNJAB

Roll No. .....

Part – I A/2016

Examination:- B.A./B.Sc.

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1.	Acidic solutions have a pH.						
a.	Equal to 7	b.	Less than seven	c.	More than seven	d.	None of the above
2.	The fluid systems of most animals contain chemical substances that help regulate the acid-base balance. Such substances are called						
a.	Buffers	b.	Isotonic	c.	Hypotonic	d.	hypertonic
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UNIVERSITY OF THE PUNJAB

Roll No. .....

Part – I A/2016

Examination:- B.A./B.Sc.

Subject: Zoology-I

PAPER: B (Invertebrates Diversity)

TIME ALLOWED: 1 hr.

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9. _____ are membrane bound organelles that contains acid hydrolases enzymes.
10. In cytoplasm, at the base of each cilium or flagellum lies a short, cylindrical _____.
11. The optimum pH for most of the enzymes is usually between _____.
12. The major energy currency of all cells is nucleotides called _____.
13. In cellular respiration the two molecules of $FADH_2$ are produced in _____.
14. In Mitochondria, ATP synthetase activity is associated with _____.
15. The resting period between cell divisions is known as _____.
16. In cell cycle, _____ phase represent the early growth phase.
17. Genes that determine the expression of a particular trait can exist in alternative forms called _____.
18. The unit of inheritance are called _____
19. Descent with modification refers to _____.
20. _____ obtain nutrition from inorganic materials and an energy source.

UNIVERSITY OF THE PUNJAB

Part – I A/2016
Examination:- B.A./B.Sc.

Roll No. .....

Subject: Zoology-I
PAPER: B (Invertebrates Diversity)

TIME ALLOWED: 2 hrs.
MAX. MARKS: 15

Attempt this Paper on Separate Answer Sheet provided.

PART-II
SUBJECTIVE PORTION

Q.3. Give brief answer to any eight of the followings: 1x10=10

1. Write down characters of Phylum Apicomplexa.
2. What is process of budding in Protozoan?
3. What is Gametogony?
4. What is function of Lobopodia?
5. What are characters of class Calcarea?
6. What do know about reproduction class Anthozoa?
7. Describe conjugation in paramecium.
8. What is proglottid?
9. What is Corocidium?
10. Write characters of Beef tapeworm.

Q.4 Write note on any one of the following two questions (5)

a. Euglena b. Obelia

UNIVERSITY OF THE PUNJAB

Roll No. .....

Part – I A/2016

Examination:- B.A./B.Sc.

Subject: Zoology-I **TIME ALLOWED: 1 hr.**

PAPER: B (Invertebrates Diversity) **MAX. MARKS: 20**

Attempt Part – I on the question sheet and Part – II on the Answer Sheet Provided.

***IMPORTANT NOTE:** Attempt this part in the given time of 1 hour and handover to the Centre Superintendent. Who will provide you answer sheet for Part – II.*

PART-I

OBJECTIVE PORTION

Q.1. Tick ( ) the correct option from the MCQs given below: 1/2x 20=10

1. The study of the kind and diversity of organism and evolutionary relationship among them is called:

   a. Classification b. Systematics c. Arrangement d. Taxonomy

2. Eubacteria is:

   a. False bacteriab. True bacteria c. multicellular organism d. unicellular organism

3. In diploblastic organization the body parts are organized into layers derived from:

   a. Two embryonic layers b. Three embryonic layers c. Four embryonic layers d. (both a & b)

4. Groups of organism believed to have had separate origin are said to be:

   a. Polyphyletic b. Monophyletic c. Triphyletic. d. diphyletic

5. Mutualism is symbiotic relationship in which both species:

   a. Benefit b. Lose c. Harmed. d. damaged

6. *Trypanosoma brucci* belong to class:

   a. Zoomastigophora b. Phytomastigophora c. Lobosea d. Sporozoea

7. The phylum Platyhelmintes contain over:

   a. 20,000 species b. 25,000 species c. 30,000 species. d. 40,000 species

8. *Diphyllobothrium latum* has scolex that act as:

   a. holdfast b. organ of movement c. food intake d. organ of attachment

9. Phylum Mollusca include nearly:

   a. 200,000 living species. b. 100,000 living species. c. 150, 000 living species. d. 250,000 living species

10. The two convex halves of the shell are called:

    a. Parts b. Valves c. Portions. d. sections

11. Octopuses are more:

    a. Sedentary animals b. Active animals c. Slow moving animals

12. Members of class polychaeta are mostly:

    a. Marine b. Freshwater c. Saltwater d. (both a & b)

13. Members of class Echinoidea live in

    a. Marine b. Freshwater c. Spring water d. Terrestrial condition

14. Class Holothuridea have approximately:

    a. 1500 species b. 1600 species c.1700 species d. 1800 species

15. Honey Bee have a social organization consisting of :

    a. Three castes b. two castes d. one caste. D. No caste

P.T.O.

16. Centepedes are fast moving:

a. Predators b. Prey C. Host d. Parasite

17. Brine shrimp live in:

a. salt water b. pond water c. River water d. Spring water

18. The outer layer of exoskeleton of Arthopod is called:

a. Epicutile b. Procutile c. chitin d. Epidermis

19. Body of annelids is:

a. worm like b. cylindrical c. flat d. round

20. Cuttle fish and nautili feed on small invertebrate on:

a. ocean floor b. Pond bottom c. in running water d. River bed

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Q.2 Fill in the blanks 1/2x20=10

1. Leech belong to class----------
2. An external jointed Skelton is called as ----------or ----------.
3. Horseshoe crab belongs to class----------.
4. The lobsters belong to the largest crustacean order ----------
5. Each kind of individual in an insect colony is called a----------
6. Sea urchin is specialized for living in ----------
7. Zoologist who specializes in study of protozoa are called ----------
8. *Amoeba proteus* belong to super class----------
9. Ciliates reproduce sexually by ----------
10. *Physalia* is member of class ----------
11. The gastrodermis of all Cnidarians lines a blind ending called----------
12. Turbellarians are the first group of ----------symmetrical animals.
13. Monogeneans have ----------generation in their life cycle.
14. Schistosomes are also called----------.
15. The cuticle or lorica in rotifer provides -------and is the main supporative organs.
16. The body surface of Kinorhynch is devoid of ------- and is composed of zonites.
17. *Enterobicus vermicularis* is also called-------.
18. The medusa is dioecious and ----------.
19. Ciliates reproduce asexually by ----------
20. Volvox is a colonial flagellates consisting of up to ---------cells embedded in a spherical gelatinous matrix.