



B.A. / B.Sc. Part – I
Annual Examination - 2018

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

TIME ALLOWED: 1 hr.
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 (OBJECTIVE)

- Q. 1 Multiple Choice questions (✓ Tick Mark the right answer) (0.5 x 20 = 10)**
- Through the year 2000, about 92% of population growth is expected to occur in _____.
a). third world countries b). the United States c). Europe d). Asia
 - When scientists talk about a / an _____, they are talking about a concept that has been supported by data from years of research.
a). theory b). datum c). observation d). hypothesis
 - Distilled water has a pH of _____.
a). 5 b). 6 c). 7 d). 8
 - All eukaryotic cells have three basic parts. Which of the following is not a basic part of a typical eukaryotic cell?
a). nucleus b). cytoplasm c). plasma membrane d). nucleoid
 - Which of the following is a cofactor?
a). calcium ions b). copper ions c). manganese ions d).
 - The end products of fermentation are _____ and _____.
a). pyruvate and glucose b). pyruvate and lactic acid
c). lactic acid and alcohol d). alcohol and glucose
 - A copy of a chromosome produced by replication is called a _____.
a). chromatid b). daughter chromosome c). sister chromosome d). both b and c
 - The principle of segregation states that _____.
a). during gamete formation pairs of factors move into gamete cells independently of one another.
b). heterozygous individuals express the dominant trait.
c). heterozygous individuals express the recessive trait.
d). pairs of hereditary factors are distributed between gametes during gamete formation
 - The visual expression that results from the genetic make up of an individual is called _____.
a). genotype b). phenotype c). karyotype d). holotype
 - All of the following would result in cells containing one or two Barr bodies except one.
a). a normal female b). a normal male c). a XXY male d). a XXX female
 - A DNA nucleotide consists of all of the following EXCEPT _____.
a). a base b). ribose c). deoxyribose d). phosphate
 - The explanation of why fossils of horses occur in South America even though there were no horses in South America at the time America was settled is found in the study called _____.
a). geology b). anthropology c). biogeography d). systematics
 - A change in the frequency of alleles in a population is definition of _____. (P.T.O.)
a). natural selection b). genetic drift c). evolution d). gene flow

14. The study of genetic events that occur in gene pools is called _____.
- a). evolutionary genetics b). population genetics c). gene pool biology d). allopatrics
15. Aggressive behavior of one animal toward another of the same species is called _____.
- a). dominance b). altruism c). agonistic behavior d). kin selection
16. Selection acting on related animals may affect the fitness of an individual. This phenomenon occurs when the fitness of an individual is based on the genes it passes on, as well as those common genes a relative passes on. This selection is called _____ selection.
- a). kin b). agonistic c). altruistic d). dominance
17. Which of the following sequences illustrate exponential growth?
- a). 2--->4--->6 --->8 b). 2--->3--->4 --->5 c). 2--->4--->8 --->16 d). 2--->4--->10 --->25
18. Overall, about _____ percent of the food consumed at one trophic level is converted into new biomass.
- a). 5 b). 10 c). 20 d). 60
19. The major energy currency of the cell is _____.
- a). ATP b). ADP c). AMP d). DNA
20. Assuming that 1,000 units of energy are available at the producer level of a stream ecosystem, how many units of energy would be available in the fourth trophic level (e.g., leaf material---> mayfly ---> stonefly---> small mouth bass)?
- a). 100 units b). 10 units c). 1 unit d). 0.1 unit

Q. 2 Write the precise answer in the blanks provided. (0.5 x 20 = 10)

1. The mating behavior of a sand hill crane would be studied by a / an _____.
2. In an experiment, the controlled variables should be the _____ in both the experimental and control groups.
3. Two monosaccharides can combine to form a _____.
4. Depeptides have _____ amino acids.
5. Cells involved with protection, support, and nourishment within the nervous system are called _____.
6. Coenzymes are nonprotein, organic molecules that participate in _____ catalyzed reactions.
7. Free fatty acids can be catabolized by entering the Krebs cycle via _____.
8. The fusion of gametes is called _____.
9. Each primary spermatocyte gives rise to _____ spermatids.
10. The idea that pairs of factors segregate independently of one another during gamete formation is known as the principle of _____.
11. A few animals like brine shrimp and some flatworms have more than two sets of chromosomes. This condition is referred to as _____.
12. The fact that more than one codon in mRNA can code for a particular amino acid is referred to as _____.
13. The idea that the earth is shaped to day by the forces of wind, rain, rivers, volcanoes, and geological uplift--just as it has been in the past in known as _____.
14. If the requirements of the Hardy-Weinberg theorem are all met, then _____.
15. Preparing and examining slides and photographs of metaphase chromosomes is called _____.
16. The variety of living organisms in an ecosystem is called _____.
17. The final community in a sere is called the _____.
18. When two organisms live in close association and both organisms benefit from the association, the relationship is called _____.
19. Populations that are prevented from achieving their carrying capacity and that tend to grow rapidly when conditions are favorable are said to be _____.
20. Training a young child to use mental processes to solve problems, for examples matching block shapes to similarly shaped openings in a board, involves a kind of learning called _____.



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TIME ALLOWED: 2 hrs.
MAX. MARKS: 15

**Answer the questions of Part II & Part III
on Separate Answer Sheet Provided.
SUBJECTIVE PORTION**

Part -II (Subjective Type)

Attempt any THREE questions of the Following:

3+3+3

- Q. 3. Attempt any three questions out of following
- Write a note on Producers
 - Write a note on the chemical communication
 - Write a note on Facilitated diffusion.
 - Describe the structure of Nucleotides.
 - Write a note on proton pump. How the cells convert energy.

Part -III

Attempt any ONE question:

- Q.4 Explain the process of Recombinant Technology. 6
- Q.5 What are lysosome. Describe the process of digestion and degradation. 6



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Attempt this Paper on Separate Answer Sheet provided.

PART-II: SUBJECTIVE TYPE

Q. 3. Give brief answer to any ten of the followings:

1x10=10

1. Define Schizogony.
 2. Write down two characters of class copepod.
 2. What are characters of Phylum Ciliphora?
 3. 4. Define Bacterium.
 5. What is Broad Fish Tapeworm?
 6. What are gravid progolttids?.
 7. What do you know about Sporogony?
 8. Give two characters of Phylum Porifera.
 9. Write two functions of Pseudopodia?
 10. Give example of symbiotic ciliates.
 11. Write two characters of phylum Sarcomastigophora.
 12. What is binary fission?
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Q.4 Write note on any one of the following two questions

(5)

- a) Protozoan b) Euglena