

Degree (Part-1) Examination 2021**(Session 2020-23)****B.Sc. (Honours)****ZOOLOGY***Time : Three Hours]**[Maximum Marks : 75*

Note: Candidates are required to give their answers in their own words as far as practicable. The questions are of equal value. Answer **any five** questions. Question No.1 and 2 are compulsory for answering.

1. Choose the most correct answer of the following multiple-choice questions. 15x1=15

(a) Standing freshwater ecosystem is called

(i) Lentic

(ii) Lotic

P.T.O.

- (iii) Estuarine
 - (iv) None of the above.
- (b) Ecological pyramid of Energy is
- (i) Always inverted
 - (ii) May be inverted or upright
 - (iii) Always upright
 - (iv) Dependent on the nature of food chain and food web
- (c) Ozone layer is present in
- (i) Troposphere
 - (ii) Stratosphere
 - (iii) Hydrosphere
 - (iv) Exosphere
- (d) Which one of the following is an edaphic factor?
- (i) Air
 - (ii) Water

- (iii) Soil
 - (iv) All of the above
- (e) The conversion of nitrate to nitrous oxide and nitrogen gas is termed as
- (i) Nitrification
 - (ii) Denitrification
 - (iii) Nitrogen fixation
 - (iv) None of the above
- (f) When the two ecosystems overlap each other, the area is called
- (i) Ecotone
 - (ii) Niche
 - (iii) Ecotypes
 - (iv) None of the above
- (g) National Aquatic Animal of India is
- (i) Rohu fish

- (ii) Crocodile
 - (iii) Tortoise
 - (iv) Gangetic Dolphin
- (h) Which one of the following agents causes the most disastrous effect on ozone layer?
- (i) Methane
 - (ii) Carbon dioxide
 - (iii) Chlorofluorocarbons (CFC)
 - (iv) Water vapor
- (i) The standard deviation of 10 persons having same body weight 56 kg will be
- (i) 5.6
 - (ii) 10
 - (iii) Zero
 - (iv) None of the above
- (j) Normal distribution is also known as
- (i) Gaussian curve

- (ii) Bernoulli distribution
 - (iii) Poisson distribution
 - (iv) None of the above
- (k) Which one of the following tests of significance is applied to compare the effect of two factors given to same individuals in the sample at two different occasions?
- (i) Unpaired t-test
 - (ii) Paired t-test
 - (iii) Chi square test
 - (iv) Z-test
- (l) If the calculated value of 't' at a degree of freedom (df) on some level comes lesser than the table value, then one can draw inference that
- (i) The difference between two means is significant
 - (ii) The difference between two means is insignificant
 - (iii) No possible to draw inference
 - (iv) The value of calculated 't' and table 't' will be

the same.

- (m) Among the birds, the longest distance covered for annual migration is undertaken by
- (i) Flamingo
 - (ii) Artic tern
 - (iii) Painted stork
 - (iv) Pelican
- (n) Drones of honey bee are
- (i) Fertile males
 - (ii) Infertile males
 - (iii) Infertile females
 - (iv) Immature queen
- (o) Parental care is a/an
- (i) Innate behavior
 - (ii) Learnt behavior
 - (iii) Imprinting behavior

(iv) Behavior related to habituation

2. Write short notes on any five of the followings:

5x3=15

(i) Ozone depletion

(ii) Sulphur cycle

(iii) Circannual rhythm

(iv) Goodness of Fit

(v) Median

(vi) Brooding

(vii) Habituation

3. Give an account of ecological succession.

4. Describe causes and effects of water pollution. Suggest remedial measures to minimize water pollution.

5. Enumerate major ecosystems of the world. Describe the forest ecosystem only.

6. Describe social organization of honey bees.

7. What do you mean by Student's t-test. Write the

formulae to find 't' value for both unpaired and paired 't' test. Explain it with suitable examples.

8. Glucose level (in mg/100 ml) of blood samples from a human population is measured as 84,96,105,96,98,106,100,103,106,116 and 89. Calculate the arithmetic mean, standard deviation and standard error of mean of the given data.
9. Define ethology. What do you mean by innate and learnt behavior. Describe with examples the behaviors learnt by operant and trial and error methods.
10. Give an account of parental care in amphibia.
