

## Higher Secondary Second year

## Model Question Paper – 1

## Zoology

Time : 2.30 hours

Marks : 70

## Section- I

I) Answer all the questions

15X 1 = 15

Choose the most suitable answer from the given four alternatives and write the option code and the Corresponding answer

- 1 The structural and functional unit of proteins is
  - a) Peptide
  - b) Aminoacid
  - c) Peptone
  - d) Polypeptide
- 2 Selected the wrongly matched pair
  - a) Albumin - Osmotic Pressure
  - b) Globulin - Antibody formation
  - c) Fibrinogen - Anti coagulant
  - d) Bilirubin - Waste product of RBC
- 3 Select the number of (isohedral) virus from the following:  
Adenovirus, SV15, Pox virus, Polio virus, Mumps virus
  - a) 2
  - b) 3
  - c) 4
  - d) 5
- 4 The organisms which are referred to as obligate intra cellular parasites are
  - a) Bacteria
  - b) Mycoplasma
  - c) Fungi
  - d) Virus
- 5 The organism that belongs to lentiviral subfamily is
  - a) RNA virus
  - b) Pox virus
  - c) DNA virus
  - d) Influenza virus
- 6 Identity the bacteriolytic enzyme among the following
  - a) Lysosome
  - b) Lysozyme
  - c) Isozyme
  - d) Endosome
- 7 Hassall's corpuscles are located in
  - a) Thymus
  - b) Lymph node
  - c) Spleen
  - d) Tonsil
- 8 During karyotyping the cells are immersed in
  - a) Isotonic Solution
  - b) Hypotonic Solution

- c) Hypertonic solution                      d) Homogenous solution
- 9 Identify the correct palindrome sequence among the following base pairs for  
5' GTTCCA 3'
- a ) 3' CAAGGT 5'      b) 3' ACCAAT 5'      c) 3' CGGAAT 5'      d) 3' CAATTG 5'
- 10 The halogen involved in destruction of ozone layer is
- a) Bromine                                      b) Bromine, Iodine  
c) Bromine chlorine                      d) Fluorine, Bromine
- 11 Montreal Protocol was signed in the year
- a )1986                                      b) 1987  
c) 1988                                      d) 1989
- 12 The presence of  $\beta$ -carotene in jersey's milk imparts \_\_\_\_\_ colour to it.
- a ) White                                      b) Orange  
c) Straw                                      d) Yellow
- 13 Identify the fowl breed which has black coloured flesh
- a ) Aseel                                      b) Brahma  
c) Busra                                      d) Karaknath
- 14 The wax of honey bees is mixed with the secretions of \_\_\_\_\_ gland to be converted into propolis
- a ) Wax gland                                      b) Cephalic gland  
c) Salivary gland                                      d) resinous gland
- 15 The book 'process of organic evolution' was written by
- a) Dobzhansky                                      b) Iwnaeowsky  
c) Ernest mayr                                      d) G.L Stebbins

## Section- II

Write any 6 questions(Q.20 Compulsory)

6x2 = 12

- 16 Why women/females have low blood volume when compared to men?
- 17 Which is called sailor's disease? What are the symptoms associated with it?
- 18 Write a note on the features that help in identification of bacteria.
- 19 Differentiate T cell and B cell.
- 20 What is Human genetics? What are its contributions to the field of genetics?
- 21 Differentiate ecumen and non-ecumen areas.

- 22 List out the technique/methods used for assessing urine-sugar analysis
- 23 Define Lamarckism.
- 24 Elaborate : i) Pens                      ii) Bouchots

### Section- III

**Answer any Six of the following in which question no. 30 is compulsory                      6x3 = 18**

- 25 Functions of Nephron.
- 26 What are dental caries? Give reasons.
- 27 What are the advantages of studying microbiology?
- 28 Differentiate specific non-specific immunity.
- 29 List out the factors that help in identification of chromosomes during Karyotyping.
- 30 Why studying of ecology is gaining importance these days?
- 31 How are poultry breeds classified? Give Examples
- 32 Why has the utility of auto analyser become inevitable these days?
- 33 Define theory of pangenesis

### Section- IV

**Give the answer for the following questions**

**5 X 5 = 25**

- 34 i ) Enumerate the valves of Air circulation system, write a note on their location, their function's
- a) ii) What is Haemostasis? Write about the steps involved in it.
- (or)
- b) I ) Elucidate how rhythmicity is ensured during breathing.
- ii) Differentiate inspiration and expiration.
- 35 Explain in detail about protozoan microbiology in man.
- Or
- What are antibiotics? Give Examples, Write in detail about the mode of action of antibiotics.
- 36 What is immuno deficiency disorder? Explain about it detail with examples.
- Or)
- Write a note on different methods of gene transfer.

- 37 Enumerate/name the organizations involved in Bio-diversity conservation.  
Or)  
List out the zoological names of cultivable fishes of India with their common names.
- 38 Explain about the mechanism of silk formation in silk worm .  
(Or)  
Write in detail about mariculture.

[www.Padasalai.Net](http://www.Padasalai.Net)

## Higher Secondary Second year

## Model Question Paper – 2

## Zoology

Time : 2.30 hours

Marks : 70

## Section- I

I) Answer all the questions

15X 1 = 15

Choose the most suitable answer from the given four alternatives and write the option code and the Corresponding answer

1 Select the number of auto immune diseases from the following

- i ) Rheumatoid arthritis      ii ) Myasthenia gravis      iii ) SCID  
 iv ) Multiple Sclerosis      v ) Gout      vi ) Rheumatic heart disease  
 a) 5      b) 4      c) 3      d) 2

2 Find the incorrect pair

- a ) Myxoedema - Hypothyroidism  
 b ) Tetany - Hyperparathyroidism  
 c ) Grave's disease - Hyper thyroidism  
 d ) Diabetes insipidus - poly urea  
 I ) a      ii ) b      iii) c      iv) d

3 Germ theory of disease was given by

- a) Louis Pasteur      b ) Joseph Lister  
 c) Robert Koch      d) Alexander Flemming

4 Series of vegetative cells of bacteria surrounded by a slimy sheath is called

- a) Trichome      b) Cluster      c) Chains      d) Filaments

5 Vaccines that are used to elicit immunity are prepared from \_\_\_\_\_ strains

- a) Virulent      b) attenuated  
 c) Mixed      d) viral

6 Find the number of correct statements

1. Monocytes get converted into macrophages during infection  
 2. They act as anti-oxidant

- a) 1      b) 2      c) both      d) None

7 'DOPA' is associated with which of the following genetic disease?

- a) Agammaglobulinemia      b) Albinism  
c) SCID      d) Gout
- 8 The process by which DNA gets transformed into mRNA is called  
a) Transcription      b) Translation  
c) Transition      d) Transformation
- 9 Select the incorrect pair  
a ) Seaweed - Gracilaria  
b ) Oyster - Palinurus  
c ) Crab - Scylla  
d ) mussel - Perna  
I ) a      ii ) b      iii) c      iv) d
- 10 Artemia salina belongs to the phylum  
a) Arthropoda      b) Mollusca  
c) Annelida      d) Echinodermata
- 11 MAB was launched in the year  
a ) 1971      b) 1972  
c) 1973      d) 1974
- 12 The habitat experiencing unusual rapid rate of habit modification loss, which are rich in endemic species is called as  
a ) Biosphere reserve      b) Hotspot  
c) zoological park      d) Endangered Zone
- 13 The type of fowl breed noted for its nugacity is  
a ) Aseel      b) Busra  
c) Karaknath      d) Chittagong
- 14 Select the number of non American fowl breed among the following  
i ) Plymouth rock, ii ) Leghorn      iii ) Ancone      iv ) Wyandotte      vi ) Minorca  
a ) 4      b) 3  
C) 2      d) 1
- 15 Sickle cell anaemia is the best example for  
a) Natural selection      b) Recombination of genes  
c) Polyploidy      d) Polymorphism

**Section- II**

**Write any 6 questions(Q.20 Compulsory)**

**6x2=12**

- 16 Vitaminosis is not applicable for water-soluble vitamins why?
- 17 Which are called bio catalysts? Why?
- 18 Define Antibiotic
- 19 Differentiate generalised and specialized transduction
- 20 Differentiate Antigen and Immunogen.
- 21 What is Plasmid? What is its significance?
- 22 Differentiate life span and life expectancy
- 23 List out the poultry by products.
- 24 What is Fecundity?

**Section- III**

**Answer any Six of the following in which question no. 30 is compulsory**

**6x3=18**

- 25 Nutritional Rickets is a common problem among the Indian population living below poverty line- justify .Suggest some measures for its prevention.
- 26 Name some of the modern techniques used for correcting bone deformities.
- 27 Define Zooanthroponosis.
- 28 Differentiate active and passive immunity.
- 29 Albinism is caused due to an inborn error in metabolism - Justify.
- 30 What are Green house gases? What are its different types? Give Examples.
- 31 What is Beehive? What are the different types of beehive?
- 32 Define Mendelian Population.
- 33 Define fish farming.

**Section- IV**

**5 X 5 = 25**

**Give the answer for the following questions**

34 i ) Explain how digested food materials get absorbed into the small intestine.

a) ii ) Write down the steps involved in root canal treatment.

(or)

b) I ) Gaseous exchange in alveoli.

ii) Physiological effects of sleep.

35 Write a note on structure of viruses.

Or

i ) Explain in detail about the techniques / methods that help to overcome graft rejection.

ii) What is differentiation? How was it proved experimentally by the embryologists?

36 Proteins undergo structural modification during its synthesis? Why? Write a note on the models that explains about its structure & its uses.

Or

Define poverty. Write a note on its alleviation measures.

37 Explain about the mechanism of recording of heart waves with a neat labelled diagram.

Or

What is natural selection? Write a note on the different types of selection.

38 Write an essay on the equipment used in bee hive.

(Or)

Integrated fish culture and its types.

## Higher Secondary Second year

## Model Question Paper – 3

## Zoology

Time : 2.30 hours

Marks : 70

## Section- I

I))Answer all the questions

15X 1 = 15

Choose the most suitable answer from the given four alternatives and write the option code and the Corresponding answer

- 1 Which type of muscular exercise is beneficial for cardio-vascular system
  - a) Isometric contraction
  - b) Isotonic contraction
  - c) Both a and b
  - d) Anaerobic muscular contraction
- 2 Unsaturated fatty acids are abundant in
  - a) Coconut oil
  - b) safflower oil
  - c) butter
  - d) vanaspathy
- 3 Match the following and find the correct answer
 

a) Hyper secretion of growth hormone in adults	A) Hyper glycaemia
b) Hyper secretion of thyroxine in adults	B) Cretinism
c) Hypo secretion of thyroxine in children	C) Myxoedema
d) Hypo secretion of Insulin	D) Acromegaly

  - a) I) C      ii) D      iii) A      iv) B
  - b) I) D      ii) C      iii) B      iv) A
  - c) I) B      ii) D      iii) A      iv) C
  - d) I) C      ii) A      iii) D      iv) B
- 4 Which of the following is antiretro viral drug
  - a) Interferon
  - b) Pencillion
  - c) Zidovudin
  - d) Streptomycin
- 5 The virus used to prepare small pox vaccine is
  - a) Adeno virus
  - b) Pox virus
  - c) Variola virus
  - d) Vaccinia virus
- 6 Acquired immunity is found in
  - a) Insects
  - b) Snails
  - c) Starfish
  - d) Birds and mammals
- 7 Transfer of immune products from an individual in to non-immune individual
  - a) Innate Immunity
  - b) Passive Adaptive immunity
  - c) Active adaptive immunity
  - d) Non-specific immunity

- 8 Which of the following is soluble Antigen?  
a) Virus                      b) Bacterial toxin    c) Bacteria                      d) Erythrocytes
- 9 If the palindrome sequence GGATTC read in 5'-3' direction the sequence on the opposite direction is  
a) GGATTC                      b) CCATTC                      c) CCTAAG                      d) CTTAAG
- 10 Which of the following is not related to Huntington's chorea?  
a) Uncontrolled twitching of voluntary muscles                      b) depression  
c) Occasional hallucination                      d) Partial albinism
- 11 A good choice among all the alternative fuel option is  
a) Natural Gas                      b) Butane  
c) Hydrogen                      d) Gobar gas
- 12 India's first power plant generating electricity from ocean energy is commissioned at  
A ) Chennai                      b) Vizhinam  
c) Masoolipattinam                      d) Vizagapattinam
- 13 Minorca originated from  
A ) Europe                      b) Asia  
c) Spain                      d) Australia
- 14 The life span of queen bee is  
A ) 4-5 years                      b) 3-4 years  
c) 2-3 years                      d) 5-6 years
- 15 How many cocoons are required to obtain 1 Kg of raw silk?  
a) 50,000                      b) 55,000  
c) 45,000                      d) 40,000

## Section- II

Write any six of the following

6x2=12

- 16 Identify True and False Statement  
a) Menstrual cycle ceases during pregnancy  
b) Leydig cells are found in the ovary
- 17 What is cataract?
- 18 What is bubonic plague? What are its symptoms?
- 19 Name two auto immune diseases
- 20 What is the reason for albinism?

- 21 What are biomedical wastes? How are they disposed off?
- 22 What are the symptoms for anthrax?
- 23 Name any four milch breeds
- 24 What is integrated fish culture?

### Section- III

**Answer any Six of the following in which question no. 30 is compulsory 6x3=18**

- 25 Name the following hormone
  - a) Hyper glyceimic hormone
  - b) Hypocalcemic hormone
  - c) Anti diuretic hormone
- 26 What is reflex arc? What are the organs involved in it?
- 27 Write a note on amoebiasis.
- 28 List out the Primary Lymphoidal organs.
- 29 What is pedigree Chart? What are the diseases identified by pedigree chart?
- 30 Why should biodiversity be conserved?
- 31 What are the uses of bee venom?(Any three)
- 32 What is 'Bottle Neck' effect?
- 33 Which is the best medicinal food of 21<sup>st</sup> century? Why?

### Section- IV

**Give the answer for the following questions 5 X 5 = 25**

- 34 What are dental caries? Explain its symptoms and treatment.  
Or  
Explain the mechanism of breathing.
- 35 Write an essay about symptoms, diagnosis control and management of AIDS.  
Or

What are the symptoms of graft rejection? What are the measures taken to prevent graft rejection?

36 Explain about human genetical diseases sickle cell anaemia and Huntington's chorea.

Or)

Explain about the management of Hazardous wastes.

37 Describe ECG [Electrocardiogram]

Or)

Describe genetic drift (or) sewall wright effect.

38 Describe about induced breeding technique in fish.

(Or)

What are environment and public health hazards caused by aquaculture practice. What are the steps taken by Government to overcome this?

[www.Padasalai.Net](http://www.Padasalai.Net)