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SUBJECT CODE NO:- B-2172
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y (Sem.-II) Examination OCT/NOV 2019
Zoology Paper-V
Genetics – I

[Time: 1:30 Minutes]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B
- 1) Attempt all questions.
 - 2) Illustrate your answer with suitable labeled diagram.

Section A

- Q.1 Define genetics and variation. Explain law of Heredity. 20
 OR
 What is epistasis? Explain it with suitable example.

- Q.2 Explain chromosomal aberration (structural and numerical) 20
 OR

Write short notes on (any four)

- a) X-linked inheritance
- b) Complementary gene
- c) Colorblindness
- d) ABO blood group in man
- e) Gynandro morphs
- f) CO₂ sensitivity

- Q.3 Select and write correct answer from the given alternatives in each sub question. 10

- 1) Mendel chose for his experiments the -----plant
 a) Bean b) pea c) rose d) cucumber
- 2) Which of the following blood groups belongs to the category of universal recipient?
 a) 'A' b) 'AB' c) 'B' d) 'O'
- 3) Extra nuclear inheritance occurs in -----
 a) Killer paramecium b) killer amoeba c) euglena d) hydra
- 4) In a cross of chicken with a rose comb to one with a Pea comb produces in f1 generation-----
 a) Walnut b) rose c) single d) Pea
- 5) The concept of sudden genetic change which breeds true in an organism is visualised in principle of -----
 a) Natural selection b) heridity c) variation d) mutation
- 6) Mutation is a source of -----
 a) Evolution b) variation c) adaptation d) all of the above

- 7) Multiple allelism controls inheritance of -----
a) Blood group b) phenyl ketonuria c) colorblindness d) sickle cell anemia
- 8) A gene suppress its effects in both homozygous and heterozygous condition called as -----
a) Recessive b) dominant c) both d) none of these
- 9) An off spring with a pair of unidentical factor (allele) is -----
a) Homozygous a) heterozygous c) hybrid d) polyzygous
- 10) Which is not an example of cytoplasmic inheritance
a) Kappa particles in paramecium
b) Male sterility in plant
c) CO₂ sensitivity in plant
d) Female sterility in maize

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SUBJECT CODE NO:- B-2171
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y (Sem.-II) Examination OCT/NOV 2019
Zoology Paper-IV
Arthropoda to Echinodermata and Protochordata

[Time: 1:30 Hours]

[Max.Marks:50]

- N.B**
- i) Attempt all questions.
 - ii) Illustrate your answer with suitable labeled diagram.

Q.1 Describe in details Female reproductive system of cockroach 20

OR

Give an account of the nervous system of pila

Q.2 Explain in details external features of Amphioxus. 20

OR

Write short notes on **(any four)**

- a. Madreporite
- b. Abdominal appendages of prawn
- c. Tube feet
- d. General characters of Herdmania
- e. Oral view of starfish
- f. Statocyst

Q.3 Select and write correct answer from the given alternatives in each sub questions : 10

1. The sex of prawn can be identified externally by observing these appendages.
 - a) II –chelate legs
 - b) I- Maxillipedes
 - c) I- abdominal appendage
 - d) II – nonchelate leg
2. Ootheca of cockroach is secreted by :
 - a) Mashroom gland
 - b) Conglobate gland
 - c) Collateral gland
 - d) Genital pouch of female
3. How many teeth are found in a row of radula
 - a) Seven
 - b) Five
 - c) Nine
 - d) Eleven

4. Function of pedicellariae :
 - a) Capture prey
 - b) Capture and removal food
 - c) Capture, removal debris and minute organisms
 - d) Help in respiration.
5. Osphradium is :
 - a) Olfactory
 - b) Gustatory
 - c) Tangoreceptor
 - d) Photoreceptor
6. Stomodaeal valve in cockroach is situated between :
 - a) Crop and Gizzard
 - b) Gizzard and Mesenteron
 - c) Mesenteron and ileum
 - d) Rectum and anus
7. The total no. of appendages present in prawn is :
 - a) Sixteen
 - b) Nineteen
 - c) Seven
 - d) Thirteen
8. Pila is :
 - a) Monoecious
 - b) Dioecious
 - c) Hermaphrodite
 - d) None
9. Reproduction in Hemichordates is mainly :
 - a) Asexual
 - b) By budding
 - c) Sexual
 - d) Regeneration
10. Which of the following term is not used for Herdmania
 - a) Undapasi
 - b) Mulaikanna
 - c) Sea squirt
 - d) Sea skirt.

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SUBJECT CODE NO:- B-2175
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y (Sem.-IV) Examination OCT/NOV 2019
Zoology Paper- XI
Animal Physiology (Special Emphasis on Mammals)

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

Q.1 Explain in detail salivary secretion and digestion. 20

OR

What is respiration? Explain breathing mechanism.

Q.2 Give in detail account on gametogenesis 20

ORWrite short notes on **any four** of the following

- a) Smooth muscle
- b) Structure of nephron
- c) Testosterone
- d) Neurotransmitters
- e) Structures of nerve cell
- f) Muscle fatigue

Q.3 Multiple choice questions 10

- 1) PH of human blood ranges between -----
 - a) 7.35-7.45
 - b) 6.9-7.00
 - c) 6.5-7.35
 - d) 7.00-7.2
- 2) Carboxyhemoglobin is formed when -----
 - a) CO₂ combines with haemoglobin
 - b) Carbon monoxide combines with hemoglobin
 - c) Nitrogen combines with hemoglobin
 - d) Carbon monoxide and carbon dioxide combines with hemoglobin
- 3) Bundle of his are located in the -----
 - a) Inter ventricular septum
 - b) Inter auricular septum
 - c) In the wall of right ventricle
 - d) In the wall of left ventricle

- 4) One of the digestive juices that lacks enzymes but aids digestion is -----
 - a) Buccus entericus
 - b) Bile
 - c) Chyme
 - d) Chyle
- 5) The naturally occurring anti-coagulant is the human blood is -----
 - a) Hirudin
 - b) Fibrinogen
 - c) Heparin
 - d) Serotonin
- 6) The middle piece of sperm contains -----
 - a) Proteins
 - b) Nucleus
 - c) Mitochondria
 - d) Centriole
- 7) Hormones from pituitary gland includes -----
 - a) Testosterone
 - b) Estrogen
 - c) Progesterone
 - d) All of the above
- 8) Glottis is a opening present in the froor of -----
 - a) Diaphragm
 - b) Mouth
 - c) Pharynx
 - d) Trachea
- 9) Space where oxon comes in functional contact with dendrite -----
 - a) Bridge
 - b) Synapse
 - c) Neuronrotor junction
 - d) Motor and plate
- 10) From blood the urea is removed by -----
 - a) Intestine
 - b) Spleen
 - c) Stomach
 - d) Kidney

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SUBJECT CODE NO:- B-2176
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y (Sem.-IV) Examination OCT/NOV 2019
Zoology Paper- XII
Biochemistry and Endocrinology

[Time: 1:30 Minutes]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

- i. Attempt all questions.
- ii. Illustrate your answers with suitable well labelled diagram.

Q.1 Explain in detail factors affecting enzyme action. 20

OR

Describe pathway of glycolysis. 20

Q.2 Explain in detail structure and functions of adenohipophysis. 20

OR

Write short notes on (any four) 20

- a. Deamination
- b. Deficiency of vitamins
- c. Islets of Langerhans
- d. Functions of neurohipophysis
- e. Functions of adrenal gland
- f. Hormones of thyroid gland

Q.3 Multiple choice questions. 10

1. Polysaccharides are _____.
 - a) Polymers
 - b) Acids
 - c) Proteins
 - d) Oils
2. Calcitonin is synthesized in _____.
 - a) Parathyroid gland
 - b) Thyroid gland
 - c) Pars intermedia
 - d) Adrenal cortex
3. Which bond is present in the primary structure of protein?
 - a) Ester
 - b) Hydrogen
 - c) Ionic bond
 - d) Peptide
4. Oxidation of fatty acids occurs in _____.
 - a) Cytosol
 - b) Matrix of mitochondria
 - c) Inner mitochondrial membrane
 - d) On the microsomes

5. Preformed vitamin A is Supplied by
a) Milk , fat and liver b) All yellow vegetables
c) All yellow fruits d) Leafy green vegetables
6. Richest source of vitamin D is _____.
a) Fish liver oil b) Margarine
c) Egg yolk d) Butter
7. Insulin is secreted by
a) α cells of Langerhans b) β cells Langerhans
c) Kupffer cells d) Gall bladder
8. A carrier molecule in the citric acid cycle is _____.
a) Acetyl Co-A b) Citrate
c) Oxaloacetate d) Malate
9. Which of the following is master gland of our body?
a) Adrenal b) Liver c) Pituitary d) Sex organs
10. In the ovary the progesterone and estrogen is secreted by –
a) Corpus albicans b) Corpus callosum
c) Corpus luteum and Graafian follicles d) Cells of Graafian follicles

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem.-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX : (602) (A)Fishery Science- II

[Time : 1:30 Hours]

[Total Marks :50]

Please check whether you have got the right question paper.

N.B. :

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

Q.1 Describe in detail the Sewage feed fisheries? 20

OR

Explain in detail the Protozoan and Bacterial diseases in fishes & their control.

Q.2 Describe fish preservation methods and add a note on fish spoilage? 20

OR

Write short notes on **any four** of the following.

- a) Seasonal pond
- b) Viral diseases
- c) Hatching Happa
- d) Value added product
- e) Drift net
- f) Sanitation

Q.3 Select and write answer from the given alternations in each sub question. 10

- 1) Pisciculture is rearing and production of _____.
 a) Fishes b) Birds c) Reptiles d) Wool yielding of animals
- 2) For induced Breeding in craps this is not used _____.
 a) Ovaprin b) Ovotide c) Wova – FH d) Methyl Testo telone
- 3) The stage of fish when a mouth is absent.
 a) Hatchlings b) Fry c) Fingerling d) Spawn
- 4) The most common old method of fish preservation is _____.
 a) Chilling b) Sun drying c) Smoking d) Salting

- 5) Which of the following is not obtained from sea water _____.
 a) Catla catla b) Shark c) Mackerel d) Sardine
- 6) Drying of fishes by lowering temperature is _____.
 a) Smoking b) Freeze drying c) Salting d) Chilling
- 7) Hypophysation is done in major crop _____.
 a) To increase size b) to increase their growth
 c) to increase breeding in fishes d) to increase their Palotobility
- 8) Out of the following the Indian Trout is _____.
 a) Barelius bola b) Salmo trutta fario
 c) Salmogairdeni d) Denio devario
- 9) The amount of protein in live body weight of fish is _____.
 a) 10 – 13 % b) 15 – 20 % c) 18 – 23 % d) 5 – 12 %
- 10) Shamgla jail is a fishing net used in _____.
 a) Gujarat b) West Bengal c) Maharashtra d) Odisha

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602) : (B) Animal Culture- II

[Time : 1:30 Hours]

[Total Marks :50]

Please check whether you have got the right question paper.

N.B. :

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

Q.1 Describe life cycle of Mulberry silkworm. **20**

OR

Write in detail about structure and working of silk gland.

Q.2 Write a note on important disease and pests of silkworm. **20**

OR

Write short notes on **any four** of the following.

- a) Predators of SLIK worms.
- b) Preservation and storage of cocoons
- c) Rearing house
- d) Methods of bed cleaning
- e) Co coon harvesting
- f) Muga silkworm

Q.3 Select and write answer from the given alternations in each sub question. **10**

1. The adult silk moth feeds on _____ plant.
 - a) Mulberry
 - b) Oak
 - c) Castor
 - d) None of these
2. Beauveria bassiana (balls) the causal organism for _____ disease of silkworm.
 - a) Green muscardine
 - b) White muscardine
 - c) Yellow Muscardine
 - d) Brown muscardine
3. Metarrhizium anisopliar is causal organisms of _____ disease of silkwarm.
 - a) Black muscardine
 - b) Red muscardine
 - c) Brown muscardine
 - d) Orange muscardine

4. Spicaria prasina is causal organisms for disease of silkwarm.
 - a) Yellow muscardine
 - b) Red muscardine
 - c) Green muscardine
 - d) Black muscardine
5. Silkworm Bombyx mori feeds on _____.
 - a) Arjun
 - b) Mulberry
 - c) Neem
 - d) Caster
6. The larval life of mulberry silkworms lasts for _____ weeks.
 - a) 1-2
 - b) 3-4
 - c) 8-9
 - d) 5-6
7. Muga silk produced by _____.
 - a) Anthrala mytitha
 - b) Antheraea Panyi
 - c) Antheraea roylei
 - d) Antheraca assoma
8. Semiculture is native of _____.
 - a) Japan
 - b) China
 - c) India
 - d) Korea
9. Total world raw silk production in 1990 – 91 was _____.
 - a) 72879 tonnes
 - b) 72879 quntals
 - c) 28790 tonnes
 - d) 728790 quntals
10. Pebrin disease of silkwarm is caused due to _____.
 - a) Spiciria
 - b) Nosema
 - c) Streptococci
 - d) All above

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602) : (C) Entomology - II

[Time : 1:30 Hours]**[Total Marks :50]**

Please check whether you have got the right question paper.

N.B. :

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

Q.1 Explain in detail classification and general characters of Midge fly of Jower and Red cotton bug of cotton. **20**

OR

What is Metamorphosis? Describe in detail life cycle of Rice Weevil.

Q.2 What are Pest control methods? Describe in detail chemical pest control. **20**

ORWrite short notes on **any four** of the followings.

- a) Pyrilla
- b) Pulse beetle
- c) Medical pest
- d) Jower stem borer
- e) Shoulder rotary duster
- f) White grub

Q.3 Select and write answer from the given alternations in each sub question. **10**

1. Eye flies are the _____ pest.

a) Medical	b) Veterinary	c) Agricultural	d) Household
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2. Chilo zonellus is the scientific name of _____.

a) Pyrilla	b) Jower stem borer	c) Sugarcane stem borer	d) White grub
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3. Insecticides are used in _____.

a) IPM	b) Chemical control	c) Biological control	d) Cultural control
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4. Migration of Insects occurs for _____.

a) Reproduction	b) Food	c) Climate change	d) All above
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5. Pod sucking bug is the pest of _____ crop.
a) Jower b) Cotton c) Sugarcane d) Groundnut
6. Napthaline ball is used in _____.
a) Systemic Poison b) Fumigation
c) Contact Poison d) All above
7. Dysdercus cingulatus is a scientific name of _____.
a) Pink bollworm b) Stem borer c) Pyrilla d) Red cotton bug
8. Mosquito is the _____ pest.
a) Medical b) Agricultural c) Veterinary d) Stored grain
9. Bot fly is the _____ pest.
a) Medical b) Agricultural c) Polyphagus d) Veterinary
10. Compression sprayer is used for _____.
a) Fumigation b) Dusting c) Spraying d) All above

OR

SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602) : (D) Parasitic Protozoa and Helminthes-II

[Total Marks :50]

N.B. :

1. Attempt all questions.
2. Illustrate your answer with suitable labeled diagram.

OR

Explain in detail structure and Life cycle of *Ancylostoma duodenale*.

OR

Write short notes on **any four** of the following.

- Hydatid cyst
- Male genital system of Trematode
- Morphology of schistosoma haematobium
- Microfilarae
- Cysticercus bovis
- Structure of Dracunculus medinensis.

1. The adult worm of *Echinococcus granulossus* contains _____.

- a) 3-4 segments b) 50-100 segments
c) 100-200 segments d) 1000-2000 segments
- In *Trichinella spiralis* infection encysted, coiled larvae can be seen in _____.
a) Stool b) Cerebrospinal fluid c) Sputum d) Muscle tissue
- Wuchererid was discovered by _____.
a) Huxley b) Ross c) Leibe d) Manson
- Elephantiasis in man is caused by _____.
a) Dracunculus b) Ancylostoma c) Oxyuris d) Microfilaride

5. Final moult in life cycle of *Ascaris* take place in _____.
a) Intestine b) Lungs c) Soil d) None of these
6. Viviparity generally occurs in _____.
a) *Ancylostoma* b) *Wuchereria* c) *Enterobius* d) *Trichuris*
7. Platyhelminthes are generally called as _____.
a) Round worms b) Flat worms c) Blind worms d) Tubicolous worms
8. Which of the following nematode lay eggs containing larvave _____.
a) *Trichinella spiralis* b) *Ascaris lumbricoides*
c) *Brugia Malayi* d) *Enterobius vermicularis*
9. Proglottids are present in _____.
a) Trematode b) Cestode c) Nematode d) Turbellaria
10. _____ of the following parasite does not possess rostellum.
a) *Taenia solium* b) *Taenia saginata*
c) *Echinococcus granulosus* d) *Hymenolepis nana*

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602)
(E) Computer Application & Medical Lab Tech-II

[Time: 1:30 Hours]

[Max.Marks:50]

N.B Please check whether you have got the right question paper.
 1) Attempt all questions.
 2) Illustrate your answer with suitable labeled diagram.

Q.1 Explain the Routine Examination of body fluids. 20

OR

Describe Basic requirement of Laboratory.

Q.2 Write a note on physical and chemical Examination of Urine. 20

OR

Write short notes on any four of the following:

- a) Autoclave
- b) Hot air oven
- c) Incubator
- d) Water bath
- e) Centrifuge
- f) Colorimeter

Q.3 Multiple Choice Questions:- 10

- 1) Elisa test is used for diagnosis for
 a) Cancer b) AIDS c) Jaundice d) Typhoid
- 2) Normal volume of semen is
 a) 2-6 ml b) 2ml c) 7-10 ml d) 0.5-1 ml
- 3) Formation of plasma proteins occurs in-----
 a) Spleen b) tissue c) liver d) kidney
- 4) What is the normal platelets count
 a) 50 thousand b) 1000 thousand c) 5000 thousand d) 2.5-5 lac

- 5) Leucocyte is commonly known
a) RBC b) WBC c) serum d) Thrombocyte
- 6) Which is liquid fraction of blood
a) RBC b) WBC c) Plasma d) Hb
- 7) Milky White color of urine is indicate
a) Parasitic infection b) Bacterial infection
c) Fungal infection d) Liver infection
- 8) In Oliguria volume of urine is
a) Increase b) Decrease c) Suppression d) a and b
- 9) Normal Volume of urine is
a) 2000ml-2500ml / 24 hrs b) 1000ml-1500ml/hrs
c) 500ml-800ml /hrs d) 200ml-400ml / 24 hrs
- 10) Which electrode used in PH meter
a) Calomel b) negative c) positive d) none of these

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602)
(F) Bio Technology-II

[Time: 1:30 Hours]

[Max.Marks:50]

- N.B Please check whether you have got the right question paper.
 1) Attempt all questions.
 2) Illustrate your answers with suitable labeled diagrams.
- Q.1 Define Transgenic animals. Explain microinjection with example. 20
- OR**
- Describe sterilization of laboratory and limitations of cell culture.
- Q.2 Explain commercial production of enzymes. 20
- OR**
- Write short notes on any four of the following:-
 a) Bacterial contamination
 b) Somatic cell fusion
 c) Cassette mutagenesis
 d) Liver transplantations
 e) Disease detection
 f) Application of biotechnology in medicine.
- Q.3 Select and write correct answer from the given alternatives in each sub questions. 10
- 1) The most effective method of sterilization is
 a) Gram rays b) boiling c) autoclaving d) Incineration
 - 2) The bacteria generally used for genetic engineering
 a) Bacillus b) Pseudomonas
 c) Clostridium d) Agro bacterium
 - 3) First cloned animal is
 a) Dolly sheep b) Dog c) Mule d) Cat
 - 4) The production of complete animals from somatic cells of an animal is called -----
 a) Gene cloning b) Animal cloning
 c) Cell cloning d) All of these

- 5) The technology used for production of monoclonal antibodies is -----
 - a) Mass culture technology
 - b) Hybridoma technology
 - c) Suspension culture
 - d) None of these
- 6) Embryo Therapy was devised by Handyside et. al to cure
 - a) Cystic Fibrosis
 - b) Haemophilia
 - c) Thalassemia
 - d) Severe combined immunodeficiency disease
- 7) Site-directed mutagenesis is also called
 - a) Oligonucleotide – directed mutagenesis
 - b) Nucleotide – directed mutagenesis
 - c) Directed mutagenesis
 - d) PCR mutagenesis
- 8) PCR is a -----
 - a) DNA degradation technique
 - b) DNA amplification technique
 - c) DNA sequencing technique
 - d) All of these
- 9) The technique to distinguish the individuals based on their DNA print patterns is called
 - a) DNA fingerprinting
 - b) DNA profiling
 - c) Molecular fingerprinting
 - d) All of these
- 10) Which of the following are commonly produced in animal cell cultures.
 - a) Interferon
 - b) mab
 - c) vaccines
 - d) all of these

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602) : (G) Dairy Technology -II

[Time: 1:30 Minutes]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

- i. Attempt all question.
- ii. Draw well labeled diagram wherever necessary.

Q.1 Define Gulabjamun. Explain composition and methods of production. 20

OR

What is Chakha. Explain the methods of preparation. 20

Q.2 Explain manufacturing process and renovation of Ghee production. 20

OR

Write a short notes on any four of the followings. 20

- a) Composition of fortified milk
- b) Packaging material
- c) Butter production
- d) Basundi
- e) Role of dairy industry
- f) Peda production

Q.3 Select and write correct answer from the given alternatives in each sub- questions. 10

1. Milk is only source of _____ in nature.
 - a) Calcium
 - b) Phosphorus
 - c) Lactose
 - d) Fatty acid
2. Microbial toxins disabling _____.
 - a) Immune system
 - b) Bacterial infection
 - c) Fungal infection
 - d) Host tissues
3. _____ acts as a balance wheel of dairy industry.
 - a) Milk
 - b) Butter
 - c) Khoa
 - d) Ghee

4. Boiling point of milk is :
 - a) 100 – 101°C
 - b) 105 – 110°C
 - c) 115 – 117°C
 - d) 102 – 105°C
5. Material required for preparation of Shrikhand is:
 - a) Dahi
 - b) Sugar (powdered form)
 - c) Nutmeg (powdered form)
 - d) All the above
6. Freezing at below - 20°C will kill most pathogenic food bacteria and inactivate toxins.
 - a) True
 - b) False
 - c) None of the above
 - d) All of the above
7. Minimum percent of fat in butter is:
 - a) 80%
 - b) 85%
 - c) 90%
 - d) 95%
8. Which of the following is called as frozen desert _____?
 - a) Khoa
 - b) Kulfi
 - c) Malai
 - d) Basundi
9. The final temperature for clarification of ghee ranges from _____.
 - a) 140° – 150°C
 - b) 110° – 120°C
 - c) 130° – 140°C
 - d) 90° – 100°C
10. Cultured butter milk is made from _____.
 - a) Skim milk
 - b) Cultured cream
 - c) Yoghurt
 - d) All the above

OR

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SUBJECT CODE NO:- B-2174
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem-VI) Examination OCT/NOV 2019
Elective Paper Zoology Paper-XX (602) : (H) Poultry Sciences-II

[Time: 1:30 hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

N.B

- i. Attempt all questions.
- ii. Illustrate your answer with suitable labeled diagram.

Q.1 Give in detail brooder management.

20

OR

Write in detail selection site for poultry farm and folding system.

Q.2 Describe in detail requirement of poultry feed and feed ingredients.

20

OR

Write short notes on any four of the following

- a) Non-conventional poultry feed
- b) Requirement of poultry feed
- c) Parasitic diseases
- d) Marketing of poultry products
- e) Preservation of poultry products
- f) Fungal diseases

Q.3 Select and write correct answer from the given alternatives in each sub question

10

1) ----- keep the chicks warm.

- | | |
|---------------|----------------------|
| a) Alligators | b) Water |
| c) Brooders | d) None of the above |

2) Why are brooders used in the broiler house -----

- a) So the farmer can catch them more easily
- b) So the chicks will eat more
- c) To keep the fox out of the chicken house
- d) To keep the baby chicks warm

3) Some chickens are grown for -----

- | | |
|------------|----------------------|
| a) Poultry | b) Meat |
| c) Chicken | d) None of the above |

- 4) The hatchery should be situated at least ----- it away from other poultry.
 - a) 1000 meter
 - b) 100 meter
 - c) 500 meter
 - d) None of the above
- 5) What is the last step before the eggs are taken to the store -----
 - a) They are cooled
 - b) They are collected
 - c) They are sorted
 - d) They are candled
- 6) Which of these steps happens first -----
 - a) The eggs are stored
 - b) The eggs goes to large lighted table
 - c) The egg is warmed
 - d) The egg is washed
- 7) Poultry provides as -----
 - a) Milk and oil
 - b) Water
 - c) Egg and meat
 - d) None of the above
- 8) How many weeks does it take for a meat type chicken to reach a weight of 4 pounds -----
 - a) 6 months
 - b) 32 weeks
 - c) 10 days
 - d) 6 to 8 weeks
- 9) New born chicks must be kept as warm as -----
 - a) Winter night
 - b) Winter day
 - c) Summer day
 - d) Summer night
- 10) A ----- can be as long as a foot Ball field.
 - a) Poultry form
 - b) Water
 - c) Broiler house
 - d) None of the above

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SUBJECT CODE NO:- B-2173
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem.-VI) Examination OCT/NOV 2019
Zoology Paper- XIX (601)
(Evolution)

[Time: 1:30 Minutes]

[Max.Marks:50]

N.B Attempt All Question.

Q.1 Define Isolation. Explain the role of Isolation in organic evolution. 20

OR

Describe in detail Darwin's theory of Natural Selection.

Q.2 What is Microevolution? Describe its salient features & Mechanism with suitable Examples. 20

OR

Write short notes on **any four** of the following

- a) Vestigial organs
- b) Fossil formation
- c) Parapatric
- d) Petrification
- e) Biogenetic law
- f) Moulds & Caste

Q.3 Select and write answer from the given alternatives in each sub question. 10

- 1) Which evidence of evolution is related to Darwin finches _____
 a) Evidence from bio geographical distribution
 b) Evidence from comparative anatomy
 c) Evidence from Embryology
 d) Evidence from palaeontology
- 2) Natural selection acts directly on _____.
 a) alleles b) genes c) phenotype d) Mutation
- 3) Which is not Vestigial organ in Man _____
 a) Third molar b) Mails c) Segmental Muscles of Abdomen d) Coccyx
- 4) The theory of use and disuse of organ was given by _____.
 a) Stebbins b) Lamarck c) Aristotle d) Vavilov
- 5) Which one of the following is an using fossil _____
 a) cycas b) Moss c) Sea charomycetes d) Spirogyra

- 6) A species inhabiting different type of graphical area is known as _____
a) Sympatric b) Allopatric c) Siblings d) Bio species
- 7) Continuity of Germplasm theory was given by _____.
a) De varies b) Weisman c) Darwin d) Launarle
- 8) The organs which have differentiate functions but similar organ is known as _____
a) Analogous b) Homologous c) Vestigal d) All of above
- 9) Mutation may be described as _____.
a) Continuous genetic variation b) Phenotypic change
c) Discontinuous genetic variation d) Change due to Hybridisation
- 10) _____ is the change in allele frequency brought by mutation genetic drift gene flow & natural selection.
a) Mega evolution b) Meso evolution c) Macro evolution d) Micro evolution

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2031
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-VI) Examination Oct/Nov 2019
Zoology Paper-I
Protozoa to Annelida

[Time: 1:30 Hours]

[Max. Marks: 50]

Please check whether you have got the right question paper.

N.B

- 1) Attempt all questions
- 2) Illustrate your answer with suitable labeled diagram.

Q.1 Describe in detail morphological structure of paramoecium 20

OR

Explain in detail sexual life cycle of plasmodium vivax.

Q.2 Give an account on digestive system of Leech. 20

OR

Write short notes on (any four)

- a) Leuconoid type of canal system
- b) General character of helminthes
- c) Scolex
- d) Structure of medusa
- e) Metacercaria larva
- f) Entamoeba histolytica

Q.3 Select and write correct answer from the given alternatives in each sub questions. 10

- 1) Meganucleus of paramoecium is meant for:
 - a) Behavioral control
 - b) Reproduction
 - c) Metabolic and vegetative function
 - d) None of these
- 2) Stage of plasmodium infective to primary host is transmitted by secondary host in the form of:
 - a) Schizont
 - b) Sporozoite
 - c) Ookinete
 - d) Merozoite
- 3) The middle layer of the body wall of porifera is:
 - a) Pinacocytes
 - b) Mesogloea
 - c) Mesenchyme
 - d) None of these
- 4) Obelia is a hydroid of:
 - a) Fresh water
 - b) Brackish water
 - c) Marine water
 - d) All of above

- 2

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2032
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. F.Y. (Sem-I) Examination Oct/Nov 2019
Zoology Paper-II
Cell Biology

[Time: 1:30 Hours]**[Max. Marks: 50]**

Please check whether you have got the right question paper.

N.B

- 1) Attempt all questions.
- 2) Draw labeled diagram wherever necessary.

Q.1 Describe in detail the first meiotic cell division and add a note on its significance. 20

OR

Give an detail account on structure and function of Endoplasmic reticulum. 20

Q.2 Enumerate the use of phase contrast microscope in cell biology. 20

OR

Write short notes on (any four) 20

- a) Nucleus
- b) t-RNA
- c) Plasma membrane
- d) Eukaryotic cell
- e) Functions of mitochondria
- f) Fixation

Q.3 Select and write correct answer from the given alternatives in each sub-question. 10

1) The name E.R. was coined by -----

- | | |
|-----------------------|-----------------|
| a) Porter and Kallman | b) Camilo Golgi |
| c) Watson & crick | d) Volkin |

2) Ribosomes contain maximum quantity at:

- | | |
|-------------|--------|
| a) Steroids | b) DNA |
| c) Lipids | d) RNA |

3) Primary Acrosomes was formed by:

- | | |
|--------------|------------------|
| a) Ribosomes | b) Nucleus |
| c) E.R | d) Golgi complex |

4) Replication of chromosomes occurs in:

- | | |
|---------------|--------------|
| a) Interphase | b) Metaphase |
| c) Telophase | d) Anaphase |

- 5) Who describe the structure of DNA
- a) Camlio Golgi
 - b) Robert Hook
 - c) Robert Brown
 - d) Watson & Crick
- 6) Cell was discovered by:
- a) Leeuwenhoek
 - b) Robert Hook
 - c) Robert Swanson
 - d) Robert Brown
- 7) Chiasmata formation during meiosis occurs at ----- stage:
- a) Diplotene
 - b) Pachytene
 - c) Zygotene
 - d) Diakineris
- 8) Mitochondria are related with:
- a) Glucose formation
 - b) ADP formation
 - c) AMP formation
 - d) ATP formation
- 9) Fluid mosaic model is related to:
- a) Plasma membrane
 - b) Golgi complex
 - c) Endoplasmic reticulum
 - d) Lysosome
- 10) The first operational light microscope was constructed by:
- a) Robert Hook
 - b) Scheleiden
 - c) Janssen & Hans
 - d) Schwann

Total No. of Printed Pages:02

SUBJECT CODE NO:- B-2035
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination Oct/Nov 2019
Zoology Paper-VII
Vertebrate Zoology

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B 1) Attempt All questions.
 2) Illustrate your answer with suitable labeled diagram.
- Q.1 Describe nervous system of scoliodon. 20
 Describe general characters of Pisces. 20
- Q.2 Describe flight adaptation in birds. 20
 Write short note on (any four) 20
 a) Gastrulation in chick
 b) Poisonous and non – poisonous snake
 c) Blastula
 d) External characters of calotes
 e) Migration in birds
 f) Structure of mammalian heart.
- Q.3 Multiple choice questions. 10
 1) Fishes are characterized by the presence of
 a) Dermal scale b) Paired fin
 c) Pharyngeal gill d) All of these
 2) Jaws are absent in
 a) Cyclostomata b) Fishes
 c) Mammal d) Scoliodon
 3) Snakes lacks
 a) Girdles b) Eyelids
 c) Limbs d) All of above
 4) The egg of frog can be defined as
 a) Centrolecithal b) Isolecithal
 c) Telolecithal d) Alecithal

- 5) Mammals are
a) Eurythermal b) Homeiothermal
c) Poikilothermal d) Stenothermal
- 6) The study of migration of birds is
a) Nidology b) Phenology
c) Phrenology d) Ecology
- 7) Placoid scales are found in
a) Bony fishes b) Lung fishes
c) Cartilaginous fishes d) Palaeontological fishes
- 8) In reptiles the skin is covered by
a) Plates b) Horny scales
c) Horny scutes d) All of the above
- 9) The name of structure in mammals which divide the body into two parts is called as
a) Diaphragm b) illeum
c) Trachea d) Lives
- 10) Placenta is totally absent in
a) All monotremes b) Metathesians
c) Euthesians d) All primates

Total No. of Printed Pages:02

SUBJECT CODE NO:- B-2036
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. S.Y. (Sem-III) Examination Oct/Nov 2019
Zoology Paper-VIII
Genetics- II

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B 1) Attempt all questions.
 2) Illustrate your answer with suitable labeled diagram.
- Q.1 What is genetic disorder? Explain klinefelter's syndrome. 20
 OR
 Explain the process of translation of gene. 20
- Q.2 Describe in detail DNA finger printing. 20
 OR
 Write short notes on any four of the following 20
 a) Transduction
 b) Colour blindness
 c) Monozygotic twins
 d) Types of restriction enzymes
 e) Albinism
 f) Phase vector
- Q.3 Multiple choice questions. 10
 1) Trisomic condition of Down's syndromes arises due to _____.
 a) Triploidy b) Translocation
 c) Non disjunction d) Dicentric bridge formation
- 2) Which of the following is a genetic disease?
 a) Phenylketonuria b) Blindness
 c) Cataract d) Leprosy
- 3) Which of the following is a end codon _____.
 a) AUG b) GUG c) UAA d) GGU
- 4) Hypertrichosis is an example of _____ genes.
 a) Holandric b) Hyper
 c) Dominant d) Mosaic
- 5) By which enzyme the unwinding of DNA strand is done _____.
 a) Helicase b) Amylase
 c) Endonuclease d) Transcription

- 6) Which of the following is also called bleeder's disease _____.
- a) Anaemia
 - b) Thrombocytopenia
 - c) Polycythemia
 - d) Haemophilia
- 7) A man who carries sex linked gene on his y chromosomes will transmit this gene.
- a) Half of his sons
 - b) Half of his daughter
 - c) All his sons
 - d) All his daughters
- 8) Which of the following is sex chromosomal disorder?
- a) Colour blindness
 - b) Thalassemia
 - c) Turner's syndrome
 - d) Down's syndrome
- 9) Cloning can be done in vitro, via _____.
- a) Polymerase chain reaction
 - b) Gel electrophoresis
 - c) Transposons
 - d) Lambda phages
- 10) Genetic engineering means-
- a) Manipulation of genes
 - b) Manipulation of cell contents
 - c) Manipulation of macula adherence
 - d) Formation of test tube baby

Total No. of Printed Pages:02

SUBJECT CODE NO:- B-2033
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper- XV
Ecology

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- N.B
- 1) Attempt all questions
 - 2) Illustrate your answer with suitable labelled diagram.
- Q.1 Explain mutualism and parasitism with suitable examples. 20
- OR
- What is basic concept of ecology? Explain its terminology. 20
- Q.2 Give an account of components of ecosystem. 20
- OR
- Write a short note on any four of the following. 20
- a) Ecological niche
 - b) Mortality
 - c) Pyramid of energy
 - d) Population density
 - e) Species abundance
 - f) Food Web
- Q.3 Select and write correct answer form the given alternative in each sub question. 10
- 1) Organismic concept of community is proposed by_____
 - a) Robert Koch b) Gleason c) Morgan d) Clements
 - 2) Rhythmic activity of organism for food, shelters and reproduction is_____.
 - a) Unidirectional b) Cyclic c) Biological clock d) Non – cyclic
 - 3) _____determines the carrying capacity of pupation.
 - a) Natality b) Limiting resources
 - c) Mortality d) Population growth rate
 - 4) Identify the possible link “X” in the following food chain.
 Grass → Insect → Frog → "X" → Eagle
 - a) Parrot b) Rabbit c) Cobra d) Wolf

- 5) Bell – shaped polygonal pyramid indicates _____.
a) Low percentage of young individuals
b) High percentage of young individuals.
c) Low percentage of old individuals
d) Moderate percentage of young individuals
- 6) Most of the inhabitants of caves have vestigial eyes because of _____.
a) Absence of light
b) Presence of light
c) Absence of salinity
d) None of above
- 7) The highest mean plant productivity is found in _____.
a) Tropical rain forest
b) Tundra
c) Desert
d) Temperate grass land
- 8) Human population growth curve is a _____.
a) S- shaped
b) Zig – zag shaped
c) J – shaped
d) Parabola
- 9) A long rectangular sample plot is _____.
a) Quadrate
b) Strip
c) Transect
d) None
- 10) The phenomenon in which some plankters shows changes in body form with the season of the year called as _____.
a) Metalimnion
b) Cyclomorphosis
c) Epilimnion
d) All of above

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Elective Paper
Zoology Paper-XVI (A) Fishery Science- I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Give an detail account of the general characters and classification of fishes 20

OR

Write in detail about status of freshwater fisheries (past, present and future)

Q.2 Explain in detail about Bombay duck fishery 20

OR

Write short notes on any four of the following

- a) Chilika lake fisheries
- b) Trout fisheries
- c) Milk fish fisheries
- d) Exploitation of reservoir fisheries
- e) Pelagic fisheries
- f) Effect of aquatic pollution on fisheries

Q.3 Select & write correct answers from the given alternatives 10

- 1) The common name of *Sardinella longiceps* is-----
 a) Mackerel b) Trout c) oil sardine d) milk fisheries
- 2) Study of fishes means-----
 a) Ichnology b) Ichthyology c) genecology d) lepidopteriology
- 3) Pullicate lake is -----
 (a) Brackish Water Lake (b) Marine Water Lake
 (c) Fresh water Lake (d) All of these
- 4) D.D.T. is----- pollutants
 (a) Biodegradable (b) Non-biodegradable
 (c) Plastic (d) None of above
- 5) National fisheries Development Board is situated at -----
 a) Delhi b) Mumbai c) Chennai d) Hyderabad
- 6) Jayakwadi reservoir is constructed on -----river
 a) Koyana b) Bhima c) Krishna d) Godavari
- 7) Estimated total length of river in India is about-----
 a) 40,000 Km b) 50,000 Km c) 29,000 Km d) All above

- 8) Cod liver oil is rich in -----
a) Iron b) Calcium c) Vitamin A d) Vitamin D
- 9) -----detect pressure vibrations & water currents
a) Lateral Line system b) galls c) Scales d) None of these
- 10) Collection of fish from natural habitat called -----
(a) capture fishery (b) culture fishery
(c) shell fish fisheries (d) fin fishes fishery

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (B) Animal Culture- I

[Time: 1:30 Hours]**[Max.Marks:50]**

Please check whether you have got the right question paper.

- iii) Attempt all questions.
- iv) Illustrate your answer with suitable labeled diagram.

Q.1 Write an essay on wild and domestic species of honey bees 20

OR

Write in detail on cast differentiation and division of work in honey bees.

Q.2 Describe bacterial, viral and fungal diseases of honey bees 20

OR

Write short note on any four of the following

- a) Bee wax
- b) Royal Jelly
- c) Bee venom
- d) Pollen
- e) Economics of bee keeping
- f) Humidity and temperature controls

Q.3 Select and write correct answer from the given alternatives in each sub questions. 10

1. Worker is _____ in honey bees
 - (a) Fertile male (b) Fertile Female
 - (c) Infertile female (d) Infertile male
2. Development of worker bee takes _____ days.
 - a) 18 – 20 b) 21 – 22 c) 23 – 24 d) 24 – 26
3. The behavior of honey bees leaving entire colony to new sites is _____
 - a) Swarming b) Fanning c) dancing d) absconding
4. American foulbrood in honey bees is caused due to _____
 - a) Bacillus b) Amoeba c) Nosema d) Protozoa
5. Sac brood disease of honey bees is caused due to _____
 - a) Bacteria b) Virus c) Fungus d) None
6. Monosaccharides content of honey is _____
 - a) 50 – 60% b) 60 – 65% c) 70 – 75% d) 82 – 90%
7. Bee wax is produced through wax glands of _____
 - a) Queen b) drone c) Pupa d) Worker

8. Bee Venom is used to treat one of the following _____
(a) Rheumatism (b) dysentery
(c) nausea (d) All above
9. Royal Jelly contains _____ sugar
a) 22 – 25% b) 10 – 17% c) 18 – 20% d) 30 -40%
10. Bee glue contains _____ essential oils.
a) 40% b) 30% c) 10% d) 20%

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (C) Entomology - I

[Time: 1:30 Hours]**[Max.Marks:50]**

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Describe general characters of order Thysanura and Collembella with suitable example. 20

OR

Give an account of reproductive system including development in grasshopper.

Q.2 Write an essay on Sericulture. 20

OR

Write short notes on any Four of the following

- a) Cockroaches
- b) Bed bugs
- c) Ametabolous metamorphosis
- d) Preservation of insects
- e) Economic importance of lac
- f) Life cycle of silk worm

Q.3 Select write correct answer from the given alternatives in each sub questions. 10

- 1) Product of silk work is _____.
 (a) Silk (b) Honey
 (c) Wax (d) All of these
- 2) There are _____ pairs of large sac in the abdomen of Grasshopper.
 a) 6 b) 8 c) 10 d) 12
- 3) Queen of Indian bee laying upto _____.
 a) 500 b) 1000 c) 1500 d) 2000
- 4) Gizzard is the part of _____.
 (a) Reproductive system (b) Digestive system
 (c) Nervous system (d) All of these
- 5) Honey is collected in _____.
 (a) Honey Comb (b) Broad Chamber
 (c) Super (d) Bottom brood
- 6) Pebrine disease is found in _____.
 (a) Lac worm (b) Bee worm
 (c) Silk worm (d) None

- 7) Ecdysone hormone is related to _____
(a) Fertilization (b) Moulting
(c) Oviposition (d) All of above
- 8) Moulting is called _____
(a) Instar (b) Pupa
(c) Ecdysis (d) Naids
- 9) Lac is secreted by the _____
(a) Male lac insect (b) Female lac insect
(c) Bed bug (d) Pediculus
- 10) Govt. of India established the central Silk Board in _____
(a) 1930 (b) 1935
(c) 1940 (d) 1949

OR

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SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (D) Parasitic Protozoa and Helminthes-I

[Time: 1:30 Hours]**[Max.Marks:50]**

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Define parasite. Describe types of parasites in detail. 20

OR

Explain in detail life cycle of p. falciparum

Q.2 Give an account of Eimeria tenella 20

OR

Write short notes on any four of the following

- a) Host parasite relationship
- b) B. coli
- c) Giardia intestinalis
- d) Sporogeny
- e) Control measures of P. Vivax
- f) Trophozoite of Trichomonas

Q.3 Select & Write correct answer from the given alternative in each sub questions 10

- 1) Malaria is transmitted by -----
 - (a) Female culex mosquito
 - (b) Female anopheles mosquito
 - (c) Male culex mosquito
 - (d) Male anopheles mosquito
- 2) E. gingivalis is present -----
 - a) mucosa of small intestine
 - b) colon & rectum
 - c) pus pockets of gums
 - d) salivary glands
- 3) Giardia was described by-----
 - a) Aristotle
 - b) Renold Ross
 - c) Lambl
 - d) None
- 4) Common name of Glossina Palpalis is -----
 - a) Tse Tse fly
 - b) Sandfly
 - c) butterfly
 - d) None
- 5) P. falciparum mostly causes -----
 - (a) Cerebral malaria
 - (b) fever
 - (c) abdominal Pain
 - (d) None of these

- 6) Trichomonas -----transmitted disease
 a) Air b) Water c) Sexually d) Soil
- 7) Best treatment for Coccidiosis-----
 (a) Antibiotics (b) Antiviral drug
 (c) Antipyretic (d) Sulpha drugs
- 8) ----- was coined the phylum Protozoa
 (a) Robert grant (b) Gegenbaur
 (c) Lamarck (d) Goldfuss
- 9) Arosetule is present in -----
 a) Trichomonas b) Giardia c) both a & b d) None
- 10) Undulating membrane is characteristic features of
 a) Trypanosoma b) B. coli c) E. Gingivalis d) All of these

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (E) Computer Application & Laboratory Technology -I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable diagram.

Q.1 What is Computer Programming? Describe with reference to C. 20

OR

What are storage devices? Explain with reference to input devices.

Q.2 Explain the history of computer and write any two application to biology. 20

OR

Write short note on any four of the following

- a) E-mail
- b) www Services
- c) MS word
- d) ROM
- e) Unix
- f) Printer

Q.3 Select and Write correct answer from the given alternative in each sub-questions. 10

1. Which of the following command of DOS is used to clear the screen?

- a) CIS
- b) REN
- c) DEL
- d) COPY

2. Which key combination is used in MS. Word to print a file?

- a) Ctrl + S
- b) Ctrl + P
- c) Ctrl + V
- d) Ctrl + X

3. GUI stands for

- a) Graphical user interface
- b) Geographical user interface
- c) Geological user interface
- d) None of these

4. To get to the end of the document in MS-Word press the keys-----
 - a) Alt + Home
 - b) Ctrl + Home
 - c) Ctrl + End
 - d) Alt + End
5. The maximum Length allowed for Primary name of a file DOS-----
 - a) 8
 - b) 12
 - c) 3
 - d) None
6. Operation System is a -----
 - a) Application Software
 - b) Computer Language
 - c) Application hardware
 - d) System hardware
7. WWW Stands for
 - a) Why Where Which
 - b) World Wide Web
 - c) World Wide Work
 - d) Internet
8. Which of the following is the first operating system in Windows.
 - a) Windows 4.3
 - b) Windows a5
 - c) Windows XP
 - d) Windows 7
9. When a file or folder is deleted it will parked in
 - a) ROM
 - b) RAM
 - c) Recycle bin
 - d) None of Above
10. What is the DOS command to clear the screen
 - a) DIR
 - b) COPY
 - c) DEL
 - d) CLS

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (F) Bio Technology-I

[Time: 1:30 Hours]**[Max.Marks:50]**

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 Define Biotechnology? Explain scope and Importance in detail. 20

OR

What is biotechnology? Explain old and new Biotechnology.

Q.2 Define restriction enzyme? Give an account on nomenclature and it's types 20

OR

Write short note on any four of the following:

- a) Micro injection
- b) Colony blotting
- c) Gene gun
- d) Autoradiography
- e) Plasmid
- f) PCR

Q.3 Select and write correct answer from the given alternatives in each sub questions 10

- 1) STSs are the physical mark of DNA which are detected by _____
 a) CAPS b) PCR c) RELP d) None
- 2) The enzyme α amylase is used to treat _____ disorder
 (a) Skin ulcer (b) digestive
 (c) leukemia (d) deworming
- 3) β – lactamase is used as an enzyme to treat the diseases _____
 (a) leukemia (b) digestive disorder
 (c) blood clot (d) penicillin allergy
- 4) _____ are involved in elimination reaction resulting in the removal of a group of items from the substrate molecule.
 (a) lysases (b) isomerases
 (c) hydrolases (d) none
- 5) _____ are those enzyme which catalyze hydrolytic reaction.
 (a) transferases (b) ligases
 (c) hydrolases (d) oxido reductases
- 6) Chemicals used for gene transfer methods include _____
 (a) Polyethylene glycol (b) CaCl_2
 (c) dextran (d) All of these

- 7) mRNA are converted into _____
a) rDNA b) cDNA c) dNTPS d) All
- 8) Insulin is secreted by the _____
a) Testes b) liver c) Islet of Langerhans d) None
- 9) Cohen et.al. (1973) reported the cloning DNA by using _____ as vector.
a) Plasmid b) phage c) Cosmid d) All of these
- 10) Recombinant transformation was developed by _____ in 1979.
(a) Jackson et.al. (b) Benton & Davis
(c) Mandell and Higa (d) none

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (G) Dairy Science –I

[Time: 1:30 Hours]**[Max.Marks:50]**

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

Q.1 What is microorganism? Give a detailed account, classification of microorganism. 20

OR

Write an Essay on Indian dairy product.

Q.2 Define Khoa? Give a detailed account of methods of production and defects of Khoa. 20

OR

Write short note on any four of the following

- a) Gradding of milk
- b) Food and nutritive value of Dahi
- c) Channa based sweet
- d) Storage of milk
- e) Cooling of milk
- f) Clean milk production

Q.3 Select and write correct answer from the given alternatives 10

- 1) During Fermentation milk -----is converted into acid
 - a) Glucose b) Lactose c) Fructose d) Sucrose
- 2) Psychrotropic bacteria grow at ----- temperature
 - a) 20 – 40°C b) above 40°C c) Below 47°C d) 5-7°C
- 3) Which of the following packaging materials cannot resist sterilization and freezing process_____?
 - a) Polyvinyl chloride (PVC) b) Polythene c) Polyester d) None of these
- 4) Pasteurized milk is _____
 - a) Fresh milk b) packed milked c) Skimmed milk d) None of these
- 5) Cream is a fat containing fraction separated from milk by_____
 - a) Centrifugation b) Pasteurization c) Condensation d) Rotation
- 6) Organism present in the curd are mainly _____
 - a) Strepto-cocci b) lactobacillus casei c) Both a & b d) None of these
- 7) The Coagulation temperature for preparation of channa is generally_____
 - a) 70°C b) 80°C c) 60°C d) 50°C

- 8) Khoa is used in _____
a) Gulab Jamun b) Pedha c) Barfi d) All of these
- 9) Which is not dairy product
a) Dahi b) Khoa c) Channa d) Isenglass
- 10) The specific gravity of fat of milk is _____
a) 0.93 b) 0.09 c) 1.00 d) 0.97

OR

Total No. of Printed Pages:2

SUBJECT CODE NO:- B-2034
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y. (Sem-V) Examination Oct/Nov 2019
Zoology Paper-XVI (H) Poultry Sciences-I

[Time: 1:30 Hours]

[Max.Marks:50]

Please check whether you have got the right question paper.

- i) Attempt all questions.
- ii) Illustrate your answer with suitable labeled diagram.

- Q.1 Give an detail account of American and Mediterranean poultry breeds 20
 OR
 Describe reproductive system of poultry breeds.
- Q.2 Give an account of management of Incubators 20
 OR
 Write short notes on any four of the following
- a) Fertility
 - b) Selection
 - c) Mating
 - d) Humidity
 - e) Control
 - f) Breed Club
- Q.3 Select and write correct answer from the given alternatives in each sub questions 10
1. White Cornish is the example of _____ breed
 (a) Mediterranean (b) American
 (c) Asiatic (d) English
 2. Causal organism of ranikhet disease of poultry is _____
 a) Fungus b) Virus c) Protozoa d) None
 3. When male and female of same breed are crossed, it is known as _____
 (a) outcrossing (b) Cross breeding
 (c) Inbreeding (d) None of above
 4. _____ breed is also known as indian game fowl.
 a) Nurie b) Kajal c) tekra d) Aseel
 5. Sperm of fowl remains alive in the oviduct for _____
 (a) 2 – 3 days (b) 4 – 5 weeks
 (c) 2 – 3 weeks (d) 5 – 6 weeks
 6. Egg of poultry contains _____ yolk
 (a) 30 – 36% (b) 40 – 46%
 (c) 50 -56% (d) None

7. Lipid contents in poultry fresh egg yolk is _____
a) 42-45% b) 52-55% c) 30-35% d) 60-65%
8. The poultry meat should be preserved below _____ temp for consumption.
a) 20°C b) 10°C c) 15°C d) 9°C
9. Average age of poultry for fair egg laying _____
a) 62-70 weeks b) 52-60 weeks c) 20-26 weeks d) 30-36 weeks
10. Iron contents in poultry egg is _____
a) 2.6 mg b) 3.6 mg c) 1.6 mg d) 4.6 mg