


INVERTEBRATES – I

Under CBCS – Credit 4

 Time: **3** Hours

 Max. Marks: **75**
SECTION – A
Answer ALL Questions :
(10 × 1 = 10)

1. Who is the father of taxonomy?
 - a) Darwin
 - b) Edward Jenner
 - c) Linnaeus
 - d) Fleming
2. Which of the following synthetic drug is used to cure malaria?
 - a) Quinine
 - b) Daraprim
 - c) Chloroquine
 - d) All of these
3. Sponges are primitive multicellular animals having
 - a) cellular grade of organization where there are no organs and systems
 - b) tissue grade of organization where there are organs and systems in the body
 - c) Both a & b
 - d) None of these patterns
4. Most of the sponges are
 - a) solitary
 - b) colonial
 - c) freshwater forms
 - d) cold water inhabitants
5. The term Coelenterata was coined by
 - a) Linnaeus
 - b) Clark
 - c) Grant
 - d) Leuckart
6. Coral reefs are made up of
 - a) CaCO₃
 - b) H₂SO₄
 - c) NaCl
 - d) H₂O
7. The excretory system in liver fluke is formed of
 - a) flame cells
 - b) chloragogen cells
 - c) rectal glands
 - d) green glands

8. To which of the following Phylum class Trematoda belongs
a) Platyhelminthes b) Arthropoda c) Mollusca d) Annelida
9. The egg of *Ascaris lumbricoides* is
a) oval b) spherical c) cylindrical d) tubular
10. Sexual dimorphism is found in
a) *Hydra* b) Earthworm c) *Ascaris* d) *Fasciola*

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. Define symmetry.
12. Comment on amoebiosis.
13. What are choanocytes?
14. Write short notes on Calcarea.
15. Bring out the functions of nematocyst.
16. List out the uses of flame cells.
17. State the control measures of enterobius.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) Enlist the general characters of Protozoa.
(OR)
b) Illustrate the life cycle of Plasmodium.

19. a) Write an account on spicules of sponges.

(OR)

- b) Classify the phylum Porifera upto class level.

20. a) Discuss the affinities of Ctenophora.

(OR)

- b) Explain the morphology of Obelia.

21. a) List out the general characters of Platyhelminthes.

(OR)

- b) Briefly explain the origin of Metazoa.

22. a) Depict the morphology of Ascaris.

(OR)

- b) Write down the mode of infection and control of *Wuchereria*?

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Describe the locomotion in Protozoa.
24. Explain the types and functions of canal systems in sponges.
25. Write an essay about coral reefs.
26. Elucidate the general morphology of *Fasciola hepatica*.
27. Enumerate the general characteristics of Aschelminthes.




INVERTEBRATES – II

Under CBCS – Credit 4

 Time: **3** Hours

 Max. Marks: **75**
SECTION – A
Answer ALL Questions :
(10 × 1 = 10)

1. Which class of annelids having bundles of setae?
 - a) Oligocheata b) Polychaeta c) Hirudinea d) Echiuroidea
2. The cavity lying between the body wall and the gut are filled with parenchyma is called
 - a) Acoelom b) Pseudocoelom c) Eucoelom d) Haemocoelom
3. The body of prawn is covered by
 - a) cuticle b) chitin c) dermis d) epidermis
4. Which of the following is living fossil belongs to the phylum Arthropoda?
 - a) Peripatus b) Housefly c) Limulus d) Prawn
5. The molting process in arthropods is known as
 - a) ecdysis b) tagmatization
 - c) metamorphosis d) pedomorphosis
6. The locomotory organs of Echinoderms are called
 - a) parapodia b) pseudopodia c) tube feet d) setae
7. How many pairs of tentacles present in Pila?
 - a) 2 b) 3 c) 4 d) 5
8. Osphradium of pila is a
 - a) photoreceptor b) phonoreceptor
 - c) chemoreceptor d) tangoreceptor

9. The locomotor organs of Echinoderms is called
a) parapodia b) pseudopodia c) tube feet d) setae

10. Life span of queen is _____.
a) two to four weeks b) twelve to Sixteen weeks
c) seven to nine weeks d) six to seven years

SECTION – B

Answer any FIVE Questions : (5 × 2 = 10)

11. Define metamerism?
12. List out the functions of metanephridium.
13. Comment on cephalothorax.
14. What is swarming?
15. Write short notes on green glands.
16. Define osphradium.
17. Write a note on olothuroidea.

SECTION – C

Answer ALL Questions : (5 × 5 = 25)

18. a) Point out the general characters of Annelida.

(OR)

b) Briefly explain the external morphology of Nereis.

19. a) Explain any five larval forms of Crustacea.

(OR)

b) “Peripatus is a connecting link between Annelida and Arthropoda”
– analyse.

20. a) Explain the external characters of Scolopendra.

(OR)

b) Narrate the social life of insects.

21. a) Depict the external morphology of apple snail.

(OR)

b) List out the advantages and disadvantages of torsion in gastropods.

22. a) Classify Echinodermata upto class level.

(OR)

b) Explain the general organisation of star fish.

SECTION – D

Answer any THREE Questions : (3 × 10 = 30)

23. Describe adaptive radiation in Polychaetes.

24. Enumerate the general characters of Arthropoda.

25. Highlight the economic importance of insects.

26. “Cephalopods are advanced molluscs” – Justify.

27. Explain the different larval forms of Echinodermata.




VIVEKANANDA COLLEGE, TIRUVEDAKAM WEST

(Autonomous & Residential)

[Affiliated to Madurai Kamaraj University]

B.A. / B.Sc. Degree (Semester) Examinations, November 2018

Part – IV : Non-Major Subject : First Semester : Paper – I

HUMAN ANATOMY

Under CBCS – Credit 2

 Time: **2 Hours**

 Max. Marks: **75**
SECTION – A
Answer ALL Questions :
(10 × 1 = 10)

- The term tissue was introduced by
a) Huxley b) Bichart c) Weber d) Murrage
- The study the structure and functions of the skin is called
a) Dermatology b) Psychology c) Phycology d) Mycology
- The functional unit of kidney is
a) Dendron b) Nephron c) Neuron d) Axon
- The pH in intestine is
a) 2.5 to 5 b) 7 c) 6 d) 8 to 9
- Persons of which blood group are universal recipients?
a) O b) A c) B d) AB
- The human lungs covered by
a) Pleura b) Hydra c) Tissue d) Pericardium
- Corpus callosum is found in the brain of
a) Frog b) Man c) Snake d) Parrot
- The pigment found in rods is
a) Retinene b) Melanin c) Photopsin d) Keratin
- The number of eggs released in the life time of a women is approximately
a) 40000 b) 4000 c) 400 d) 100
- Which is called “Master gland of the body”?
a) Thyroid gland b) Thymus gland
c) Adrenal gland d) Pituitary gland

SECTION – B
Answer any FIVE Questions :
(5 × 2 = 10)

- Write the dental formula of man.
- What is pericardium?
- Differentiate between the systolic and diastolic pressure.
- Write the skeletal parts of human forelimb.
- Expand TSH.
- Name any two immunoglobulins present in human blood plasma.
- Mention the any two female sex hormones.

SECTION – C
Answer ALL Questions :
(3 × 9 = 27)

- a) Describe the structure of human skin. **(OR)**
b) Explain the structure of a typical tooth in man.
- a) Briefly explain the structure of human heart. **(OR)**
b) Discuss the structure of human kidney.
- a) Describe the male reproductive system. **(OR)**
b) Elucidate the structure of human brain.

SECTION – D
Answer any TWO Questions :
(2 × 14 = 28)

- Explain the structure of eye in human.
- Discuss the structure of alimentary canal in man.
- Give an account on ABO Blood groups.
- Describe the structure, hormones and functions of pituitary gland.



**CELL BIOLOGY**

Under CBCS – Credit 4

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. Cell theory states that
 - a) all living organisms are made up of cells
 - b) cell is the basic unit of life
 - c) cells arise from pre – existing cells
 - d) all the above
2. Cellular organelles are absent in _____ cells.
 - a) bacterial
 - b) fungal
 - c) plant
 - d) animal
3. Plasmalemma is
 - a) permeable
 - b) selectively permeable
 - c) non-Permeable
 - d) semi permeable
4. Lysosomes were first discovered by
 - a) White
 - b) Flemming
 - c) De Duve
 - d) Brown
5. Kreb cycle is the component of
 - a) photosynthesis
 - b) aerobic respiration
 - c) anaerobic respiration
 - d) photorespiration
6. Ribosomes were first discovered by
 - a) Benda
 - b) Swanson
 - c) Altmann
 - d) Palade
7. Nuclear membrane is constituted by _____ of phospholipids.
 - a) monolayer
 - b) bilayer
 - c) trilayer
 - d) tetralayer

8. The main axis of loops in lampbrush chromosome is coated with
 a) proteins b) RNA and protein c) RNA d) amino acids
9. Watson and Crick's double helical DNA is _____ type.
 a) A b) B c) Z d) D
10. The degenerate codons differ in
 a) first base b) second base c) third base d) both a and b

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. What is meant by cell fractionation?
 12. Define active transport.
 13. Write short notes on secondary lysosomes.
 14. Comment on the mitochondrial matrix.
 15. Define oxidative phosphorylation.
 16. What is known as metastasis?
 17. Write the structure of transfer RNA.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) Explain the principle and applications of a compound microscope.
 (OR)
 b) Give an account of tissue fixation.
19. a) Describe the structure of endoplasmic reticulum.
 (OR)
 b) Enumerate the functions of lysosomes.

20. a) Describe the ultrastructure of mitochondria.

(OR)

- b) Give an account of different classes of ribosomes with their structural features.

21. a) List out the characteristics of nucleolus.

(OR)

- b) Explain the structure of giant chromosomes.

22. a) Bring out the salient features of Watson and Crick model of DNA.

(OR)

- b) Elucidate the structure of functional mRNA.

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Explain the principle and applications of electron microscope.
 24. Give an elaborate account on the functions of plasma membrane.
 25. Describe the process of Krebs's cycle.
 26. Elaborate the stages of mitotic cell division.
 27. Elucidate lac operon in *E.coli*.




GENETICS

Under CBCS – Credit 5

 Time: **3** Hours

 Max. Marks: **75**
SECTION – A
Answer ALL Questions :
(10 × 1 = 10)

1. Who is considered as father of genetics?
 a) Mendel b) Weismann c) Bateson d) Morgan
2. The genotypic ratio of monohybrid cross is
 a) 3:1 b) 1:2:1 c) 1:1 d) 9:3:3:1
3. The universal blood donors of the ABO system are type
 a) AB b) A c) B d) O
4. A person with antigen AB on his red blood cells will have _____
 antibody
 a) AB b) B c) A d) No
5. Mendel did not observe linkage due to
 a) mutation b) synapasis
 c) crossing over d) independent assortment
6. Coupling and repulsion are experimented on fruit fly by
 a) Bateson b) Morgan c) Punnet d) Sinnot
7. Which of the following type of sex determination occurs in man?
 a) XX – XO b) XY – XO c) XX – XY d) XXX – XY
8. Colour blindness is a
 a) recessive character b) dominant character
 c) genetic disorder d) both a & c

9. Killer strain of paramecium produces a toxic substance called
a) paramecin b) lignin c) kappa d) fibres

10. Which one of the following is inborn errors of metabolism?
a) Albinism b) Colour blindness
c) Haemophilia d) Anaemia

SECTION – B

Answer any FIVE Questions : **(5 × 2 = 10)**

11. Define test cross.
12. Give an example for epistasis?
13. What are multiple alleles? Give an example.
14. Differentiate multiple alleles and polygenic traits?
15. What is crossing over? Give its significance.
16. What causes colour blindness?
17. State the purpose of eugenics?

SECTION – C

Answer ALL Questions : **(5 × 5 = 25)**

18. a) Illustrate the law of independent assortment

(OR)

b) Briefly write on duplicate genes.

19. a) Define Rh factor. Write its significance during pregnancy.

(OR)

b) Write an account on M-N blood group.

20. a) Define linkage and its significance.

(OR)

b) Briefly explain about types of linkage repetition.

21. a) Write a short note on Haemophilia.

(OR)

b) Briefly write on sex determination in honeybees.

22. a) Write a short note on identical twins.

(OR)

b) Define pedigree analysis and the symbols used.

SECTION – D

Answer any THREE Questions : **(3 × 10 = 30)**

23. Demonstrate non-allelic interactions.
24. Elaborate the mode of inheritance of coat colour in rabbits.
25. Explain the process of construction of a chromosomal map.
26. Illustrate sex-linked inheritance in man with an example.
27. Write down the cause and features of Klinefelter or Down syndrome.




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B.Sc. Zoology Degree (Semester) Examinations, November 2018

Part – IV : Skill Based Subject : Third Semester : Paper – I

PUBLIC HEALTH AND HYGIENE

Under CBCS – Credit 2

 Time: **2 Hours**

 Max. Marks: **75**
SECTION – A
Answer ALL Questions :
(10 × 1 = 10)

- The most important function of carbohydrate is
 - Heart function
 - Supply energy
 - Tissues formation
 - Liver formation
- Rickets and osteomalasia is a
 - Vitamin D deficiency disease
 - Vitamin B deficiency disease
 - Vitamin E deficiency disease
 - Vitamin K deficiency disease
- Surface water originates from
 - Rain water
 - Dam water
 - Sea water
 - River water
- SDWA was started in
 - 1975
 - 1976
 - 1973
 - 1974
- Polio is a communicable
 - Viral disease
 - Bacterial disease
 - Fungal disease
 - Protozoan disease
- Dengue fever is transmitted by the bite of an *Aedes*
 - Mosquito
 - Housefly
 - Rat
 - Birds
- _____ is a central nervous stimulant.
 - Cocaine
 - Cannabis
 - Barbiturates
 - Heroin
- Myocardial infection is a
 - Blood cancer
 - Heart attack
 - Liver disease
 - Lung cancer
- Polio immunization programme was launched in India in the year
 - 1995
 - 1992
 - 1993
 - 1994
- Tuberculosis chemotherapy centre is located in
 - Chennai
 - Bangalore
 - Mumbai
 - Delhi

SECTION – B
Answer any FIVE Questions :
(5 × 2 = 10)

- Write any two symptoms of measles.
- Expand JE.
- What is First aid?
- What is balanced diet?
- Expand WHO.
- Write any two symptoms of rabies.
- What is Obesity?

SECTION – C
Answer ALL Questions :
(3 × 9 = 27)

- a) Write a brief account on vitamin deficiencies symptoms and preventive measures in man. **(OR)**
 - Classify nutrients.
- a) Explain the methods of sewage treatment. **(OR)**
 - State and explain the causes of hypertension.
- a) Comment on Filariasis. **(OR)**
 - State the role of NGOs in health education.

SECTION – D
Answer any TWO Questions :
(2 × 14 = 28)

- Classify food and explain the nutritional deficiencies in detail.
- Write the main activities of health programmes in India and explain the NMCP.
- Explain the causative agent, mode of transmission, symptoms and preventive measures of AIDS.
- Give a detailed account on occupational health hazards.



**ANIMAL ORGANISATION**

Under CBCS – Credit 5

Time: 3 Hours

Max. Marks: 75

SECTION – A**Answer ALL Questions :****(10 × 1 = 10)**

- The concept of five kingdom theory based on _____.
 a) Structure of nucleus b) mode of nutrition
 c) Structure of cell wall d) asexual reproduction
- Which phylum has a true coelom?
 a) Cnidaria b) Mollusca c) Porifera d) Annelida
- The closed blood vascular systems are the characteristics of _____.
 a) Arthropoda b) Nematoda c) Annelida d) None of these
- Human brain is mainly divided into
 a) two parts b) three parts c) four parts d) five parts
- What part of the brain stem regulates the heartbeat?
 a) Pons b) Medulla
 c) Hypothalamus d) Thalamus
- In cockroach, the inspiration and expiration is carried out by _____.
 a) Abdominal movement b) Antennae movement
 c) Appendage movement d) mouth part movement
- The air capillaries remain in close contact with _____.
 a) Blood capillaries b) Trachea c) Larynx d) Tracheole

8. Which pigment is responsible for day vision in human eye?
 a) Rhodopsin b) Iodopsin
 c) Haemotochrome d) melanin
9. What is the odour character of urine?
 a) Aromatic b) Fruity c) Sweety d) Woody
10. Female gonads are called _____.
 a) Ovaries b) Ovules c) Testes d) Sperms

SECTION – B

Answer any FIVE Questions : (5 × 2 = 10)

11. Asymmetry.
12. Egestion
13. Gliding.
14. Recovery stroke.
15. Meninges.
16. Cerebellum.
17. Nephron.

SECTION – C

Answer ALL Questions : (5 × 5 = 25)

18. a) What is meant by Coelom? Write note on different types of Coelom.
 (OR)
 b) Write notes Urochordata.
19. a) Write a brief account on ingestion of food in Amoeba.
 (OR)
 b) Write notes on various digestive glands of frog.

20. a) Write an account on blood circulation in Earthworms.
 (OR)
 b) Give an account on Flight mechanism in Pigeon.
21. a) Write a brief account on nervous system of earthworm.
 (OR)
 b) What is meant by Cerebrum? List out the functions of Cerebrum.
22. a) Write notes on the structure of Kidney in Man.
 (OR)
 b) Write an account on female reproductive systems of rabbit.

SECTION – D

Answer any THREE Questions : (3 × 10 = 30)

23. Write down the salient features of Protozoa.
24. Explain the structure and functions of lungs in Bird.
25. Write a detailed account on Locomotion in Amoeba.
26. Explain the structure of human eye with neat sketch.
27. Write an essay on formation of Urine in Man.



**BIOCHEMISTRY AND BIOPHYSICS**

Under CBCS – Credit 5

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. The pH of the human blood is
a) 6.0 b) 6.4 c) 7.0 d) 7.4
2. The isoelectric point is symbolised by
a) pH b) pI c) α d) γ
3. The enzymes catalyzing breakdown without addition of water are called
a) lyases b) hydrolases c) ligases d) oxidoreductases
4. The non-protein part of the enzyme is
a) holoenzyme b) apo enzyme c) vitamin d) proesthetic group
5. The molecules formed from complete oxidation of fructose 1, 6-diphosphate is
a) ATP b) NADP c) CO₂ and H₂O d) NADH
6. All the enzymes required for beta oxidation occurred in the
a) cytoplasm b) nucleus c) EPR d) mitochondria
7. Fatty acids are oxidised to form
a) ascorbic acid b) acetyl coA c) glutathione d) porphyrin
8. A coenzyme is
a) an organic non- proteinacious group, essential for enzyme activity
b) organic or inorganic group
c) same enzyme found in different organs or tissues
d) one that shares functions of other enzyme

9. When the tiny particles of a substance are dispersed through medium then mixture is called _____.

- a) alloy b) amalgam c) suspension d) colloid

10. The ATP has

- a) one high energy phosphate bond
b) two high energy phosphate bond
c) three high energy phosphate bond
d) four high energy phosphate bond

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. What is a base?

12. Define Buffer.

13. What are isoenzymes?

14. What are saturated fatty acids?

15. Comment on cytochrome C.

16. Define redox reaction.

17. Comment on free energy.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) Briefly explain isomerism with examples.

(OR)

b) Name any two buffers and their biological importance.

19. a) Write the structure and functions of cholesterol.

(OR)

b) Enlist the properties of enzymes.

20. a) Illustrate transamination.

(OR)

b) Brief the process of β oxidation.

21. a) Give the structure and functions of any two energy rich compounds?

(OR)

b) Give the energy budget any one of the major nutrients.

22. a) Write short notes on bioelectricity.

(OR)

b) State and explain about the first Law of thermodynamics.

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. Classify amino acids based on R group.

24. Elucidate the factors affecting enzyme action.

25. Explain the pathway of glycolysis. How much amount of ATP synthesis during this cycle?

26. Depict the cascade of respiratory chain.

27. Describe active transport across cell membrane.



**BIOTECHNOLOGY**

Under CBCS – Credit 5

Time: **3** HoursMax. Marks: **75****SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. The IPR is protected by
 - a) patents
 - b) copyright
 - c) trade Mark
 - d) all of these
2. The crown gall disease is caused by
 - a) *Agrobacterium rhizogenes*
 - b) *Agrobacterium tumifaciens*
 - c) Gemin Viruses
 - d) Tobamoviruses
3. _____ is the transfer of foreign DNA into host cells mediated through chemical.
 - a) Transfection
 - b) Transformation
 - c) Transduction
 - d) Conjugation
4. Sangers method of DNA sequencing is also known as
 - a) Dideoxy method
 - b) Klenow methods
 - c) Both a, b
 - d) Chemical modification method
5. What are molecular markers?
 - a) RFLP
 - b) RAPD
 - c) AFLP
 - d) All the above
6. Microarray chips are made up of
 - a) Silicon
 - b) Glass
 - c) Gold
 - d) Both a and b
7. NPV and CPV are _____ pesticides.
 - a) bacterial
 - b) fungal
 - c) viral
 - d) algal
8. Secondary metabolites are
 - a) essential to microbe function
 - b) by-products of metabolism that are not important to microbe function
 - c) products that require additional processing before they can be packaged
 - d) harvested during the exponential phase of growth

9. HAT is a selection medium for _____ cell culture.
a) mammalian b) bacterial c) plant d) fungal
10. Which is known as super bug
a) *P.aeruginosa* b) *P.alcaligens* c) *P.putida* d) *P.fragi*

SECTION – B

Answer any FIVE Questions :

(5 × 2 = 10)

11. Patent.
12. Transposan.
13. cDNA.
14. Annealing.
15. Cellus.
16. Bt cotton.
17. Xenobiotics.

SECTION – C

Answer ALL Questions :

(5 × 5 = 25)

18. a) Write a brief note on Intellectual property rights.
(OR)
b) Briefly explain type II restriction enzymes.
19. a) Write an account on insertional inactivation.
(OR)
b) How will you construct genomic library?

20. a) Brief the methodology of RFLP.
(OR)

b) Comment on cell cultures.

21. a) Enlist the advantages of biofertilizer.
(OR)

b) Write short notes on stress tolerant plants.

22. a) Give a brief note on Germline gene therapy.
(OR)

b) Write the schematic diagram for the production of mab.

SECTION – D

Answer any THREE Questions :

(3 × 10 = 30)

23. pBR³²² is a potential vector – justify.
24. Demonstrate sanger sequencing and its applications.
25. Explain the principle and procedure of PCR.
26. Elucidate the steps in the microbial production of ethanol.
27. Describe the process of microbial ore leaching with an example.



**SECTION – A****Answer ALL Questions :****(10 × 1 = 10)**

1. In stratified random sampling
 - a) samples are chosen at random
 - b) samples are chosen at random from different strata of a population
 - c) samples are drawn from selected clusters
 - d) samples are selected haphazardly according to administrative convenience
2. Statistics is considered as
 - a) an art
 - b) science
 - c) both art and science
 - d) none
3. Always the best measure of central tendency is
 - a) A.M
 - b) median
 - c) mode
 - d) All
4. Median is
 - a) central value
 - b) central tendency
 - c) positional average
 - d) all of them
5. Chi-square test has developed by
 - a) W.S. Gossett
 - b) Karl Pearson
 - c) A.R. Fisher
 - d) Pascal
6. Outcomes of an experiment are classified as
 - a) logged events
 - b) exponential results
 - c) results
 - d) events
7. Central Processing Unit (CPU) consists of
 - a) control unit
 - b) arithmetic and logic unit
 - c) main store
 - d) all of above
8. Among the following which is not a search engine
 - a) Google
 - b) Yahoo
 - c) Alta Vista
 - d) Gmail

9. The disease databases that can be viewed through
 a) PDB b) TrEMBL c) OMIM and OMIA d) Prosite
10. If two or more DNA sequence derived fromn a single common ancestor DNA sequence is
 a) Horizontal length b) Polypjhyletic
 c) Momo phyletic d) Desiphyletic

SECTION – B

Answer any FIVE Questions : **(5 × 2 = 10)**

11. Simple classification.
 12. Array data.
 13. Variance.
 14. Multiplication theorem.
 15. MS word.
 16. MS-Excel.
 17. Protein sequence databases.

SECTION – C

Answer ALL Questions : **(5 × 5 = 25)**

18. a) Briefly explain the scope of Biostatistics.
 (OR)
 b) Write short notes on Primary data.
19. a) The weight of 10 fishes in gms is given below. Find the mean by direct method and assumed mean method.

Sl. No.	1	2	3	4	5	6	7	8	9	10
weight	12	15	11	19	16	20	14	20	12	11

(OR)

- b) Give a brief note on Co-efficient of variation and its uses.

20. a) A coin is tossed once. Calculate the probability of head.
 (OR)

b) Comment on Student’s T-test.

21. a) List out the uses of Power point.
 (OR)

b) What are the web browsers using frequently by internet users? explain.

22. a) Write a short note on BLAST.
 (OR)

b) Give a brief note on CLUSTAL W.

SECTION – D

Answer any THREE Questions : **(3 × 10 = 30)**

23. Explain the types of frequency distribution.
 24. Calculate the standard deviation for following data which shows the length of fishes

Length in cm	5	6	7	8	9	10	11
No. of fishes	1	2	5	5	3	3	1

25. In a dihybrid experiment in F₂ generation the following plants appear: yellow round 940, yellow wrinkled 260, Green round 340 and Green wrinkled 60. With the help of X² test, verify that 9:3:3:1 ratio is followed.

26. Write an essay on various types of modern computers.

27. Give a detailed account on multiple sequence alignment.



**SERICULTURE**

Under CBCS – Credit 2

Time: 2 Hours

Max. Marks: 75

SECTION – A**Answer ALL Questions :****(10 × 1 = 10)**

1. The first authentic reference to silk is found in the chronicle of the chou king of
 a) China b) India c) Japan d) Russia
2. Name the method of covering the inter-row space between the mulberry plants with cut -straw.
 a) Training b) Pruning c) Manuring d) Mulching
3. Which part of silk gland drawn out silk in the form of fine filament?
 a) Spinneret b) Prothoracic gland
 c) Scent glands d) Lyonnet gland
4. The Powdery mildew diseases caused by
 a) Bacteria b) Fungus c) Virus d) Nematodes
5. Which is the optimum temperature for incubating of silkworm egg?
 a) 44°C b) 34°C c) 24°C d) 54°C
6. Raksha Rekha is a replant for
 a) Ant b) Uzi fly c) House fly d) Rat
7. Chandrika is a
 a) Basket b) Ant well c) Mountage d) Net
8. Which one is caused muscardine diseases to silkworm?
 a) Virus b) bacteria c) Fungi d) Protozoan
9. *Pedicolus ventricosus* is a _____.
 a) Straw mite b) Nematode c) Rat d) Squirrels

10. The dead pupa is found sticking to the inner shell of the cocoon is called

- a) Mute cocoon
- b) Rust cocoon
- c) Premature cocoon
- d) Fragile cocoon

SECTION – B

Answer any FIVE Questions : (5 × 2 = 10)

- 11. Expand and list out the functions of CSB.
- 12. State the significance of manuring.
- 13. What is bed cleaning?
- 14. Enumerate the advantages and disadvantages of chandrika?
- 15. Give any two methods to control the Uzi fly.
- 16. What is sorting of cocoon?
- 17. What is Deflossing?

SECTION – C

Answer ALL Questions : (3 × 9 = 27)

- 18. a) State the significance of Seedling propagation. (OR)
b) What is pruning? Give its advantages.
- 19. a) Describe the root rot disease of mulberry. (OR)
b) Discuss the silk gland of silkworm with neat labelled diagram.
- 20. a) Describe the methods of stifling. (OR)
b) Describe the fungal diseases of silkworm.

SECTION – D

Answer any TWO Questions : (2 × 14 = 28)

- 21. Describe the appliances used for silkworm rearing.
- 22. Explain different methods of Irrigation.
- 23. Write an essay on different methods of vegetative propagation in mulberry.
- 24. Describe the economic importance of silk and its by products.

