

INVERTEBRATE I (09CT11)

SECTION – A

ANSWER ALL QUESTIONS

10X1=10 Marks

Multiple choice questions:

1. The animals which lack of notochord is called -----
a. Invertebrates b. Vertebrates c. Chordates d. Omnivores
2. The father of the taxonomy is -----
a. Darwin b. J.G. Mendel c. Linnaeus d. A. Fleming
3. Which one of the following has a cellular grade of organization?
a. Porifera b. Platyhelminthes c. Coelenterate d. Protozoa
4. The locomotory organ of Protozoa is -----
a. Flagella b. Cilia c. Pseudopodia d. All the above
5. Paramecium belongs into the class of -----
a. Ciliata b. Flagellata c. Mastogophora d. Rhizopoda
6. Primary host of *Fasciola*
a. Human b. Pig c. Snail. d. Sheep
7. *Fasciola hepatica* occurs in
a. Bile duct of sheep b. Liver of sheep c. Liver of Human d. Human bile duct
8. Which one of the following are first formed metazoans
a. Amoeba b. Coelenterates c. Mollusca d. Echinodermata
9. Syncytial theory was proposed by
a. Haeckel b. Metschnikoff c. Greenberg d. Hadzi & Hanson
10. The term 'Turbellaria' was used by
a. Lankester b. Hatcheshek c. Ehrenberg d. Von Baer

SECTION – B

ANSWER ANY FIVE QUESTIONS

5X2=10 Marks

Very short answer:

11. Enlist the major phyla in Invertebrates.
12. Comment on Trichocyst.
13. Define Holozoic
14. List out the major class of Platyhelminthes with examples.
15. Draw and label the structure of female reproductive system of *Fasciola hepatica*.
16. Define: Hermaphrodites.
17. What are the main functions of Mehli's glands?

SECTION – C

ANSWER ANY THREE QUESTIONS

3X6=18 Marks

Short answer:

18. Write an account on general characteristics features of phylum Protozoa.
19. Explain the structure of Paramecium with a neat diagram.
20. Write a short note on locomotion of Paramecium.
21. Describe the excretory system of *Fasciola hepatica*.
22. Give an account on salient features of Platyhelminthes.

SECTION – D

ANSWER ANY ONE QUESTIONS

1x12=12 Marks

Long Answer:

23. Write an essay on the reproduction of Paramecium.
24. Describe the life cycle of *Fasciola hepatica*.

Genetics (09CT32)

SECTION – A

ANSWER ALL QUESTIONS

10X1=10 Marks

Multiple choice questions:

1. Genic balance theory was proposed by
a. Bridge` b. Morgan c. Boveri d. Lillie
2. In Grasshopper the sex determination type is
a. XX-XY Type b. XX-XO Type c. ZZ-ZW Type d. ZZ-ZO Type
3. Genes for colour blindness in man are located in
a. X-chromosome b. Y-chromosome
c. On both X and Y chromosome d. Either X, Y chromosome
4. Chromosomal theory of sex determination was proposed by
a. Balbiani b. Goldschmide c. Mendal d. Mc Clung
5. Which of the following is an example for hemizygous?
a. Hypertrichosis b. Bald readedness c. Haemophilia of Man d. Parkinson's disease.
6. Who is proposed Germplasm theory?
a. Aristotle b. Malpighi c. Weisman d. Darwin
7. How many characters selected by Mendel?
a. 7 b. 8 c.9 d. 10
8. The genotypic ratio of monohybrid cross is -----
a. 3:1 b. 1:2:1 c. 1:1 d. none
9. A single character is controlled by two or more pairs of non-allelic genes are called -----
a. Complementary gene b. Duplicate gene c. Epitasis d. Penetrance gene
10. The inhibiting gene is called-----
a. Epistatic gene b. Hypostatic gene c. Allelic gene d. none

SECTION – B

ANSWER ANY FIVE QUESTIONS

5X2=10 Marks

Very short answer:

11. What is sex liked genes?
12. Define Gynandromorphs
13. Comment on the term holandric genes.
14. Comment on mendelisms.
15. What are alleles?
16. Define backcross.
17. What are supplementary genes?

SECTION – C

ANSWER ANY THREE QUESTIONS

3X6=18 Marks

Short answer:

18. "Eye colour in Drosophila is an inheritance of X linked gene" – Explain.
19. Explain the role of hormones and environment in sex determination.
20. Discuss the reasons for Mendel's success.
21. Analyse the biochemical basis of Epitasis.
22. Explain the following:
 - i. Penetrance
 - ii. Expressivity

SECTION – D

ANSWER ANY ONE QUESTIONS

1x12=12 Marks

Long Answer:

23. Describe the crosses in the man related to sex linked inherited characters.
24. Write an essay on Mendel's law with example.

PG & Research Department of Zoology
Vivekananda College
Tiruvedakam West
Date: /07/2018

II B.Sc., Zoology

I Sessional Test
Ist Semester
Max.Marks: 25
Time: 1 Hours

Public Health and Hygiene (09SB31)

SECTION – A

ANSWER ALL QUESTIONS

5X1=5 Marks

Multiple choice questions:

1. The major components food is
a. Carbohydrate b. Protein c. Lipid d. All the above
2. Night blindness is due to the deficiency of
a. Niacin b. Vitamin-D c. Vitamin-A d. Vitamin-C
3. Which one of the following are trace elements?
a. Calcium b. Phosphorus c. Potassium d. Iodine
4. The primary function of protein is
a. Tissue building b. Bone formation c. Prevent dehydration d. All the above
5. Where are the headquarters of WHO located?
a. Geneva b USA c. India d. Russia

SECTION – B

ANSWER ANY TWO QUESTIONS

2X5=10 Marks

Very short answer:

11. Describe Balanced Diet.
12. Explain the scope of Public health and Hygiene.
13. Classify Nutrients deficiencies.

SECTION – C

ANSWER ANY ONE QUESTIONS

1X10=10 Marks

Long Answer:

14. Describe the classification of foods.
15. Write an account on vitamin deficiencies symptoms and preventive measures in human.

Biochemistry and Biophysics (09CT51)

SECTION – A

ANSWER ALL QUESTIONS

10X1=10 Marks

Multiple choice questions:

1. Acidity is considered by an excess of
a. Hydrogen ions b. Hydroxyl ions c. Both a and b d. none
2. The pH range of phenolphthalein is
a. 2.3-3.3 b. 4.3-5.3 c. 6.3-7.3 d. 8.3-10.0
3. p32 is used for the treatment of
a. Cancer b. Hyperthyroidism c. Heart failure d. Peritoneal effusions
4. Protein part of the enzyme is called
a. a. Holo enzyme b. Apo enzyme c. Prosthetic group d. Conjugated protein
5. The study of enzymes is known as
a. Endocrinology b. Biochemistry c. Enzymology d. Physiology
6. The class of enzymes involved in synthetic reactions are
a. Ligases b. Lyases c. Hydrolases d. Mutases
7. Glycolysis
a. Produces no ATP b. has no connection with the respiratory chain c. reduces 2 molecules of NAD for every glucose molecule processed d. takes place in the mitochondria
8. Which statement is not true of pyruvic acid?
a. It is a protein b. it is the end product of glycolysis c. it gets reduced during fermentation. d. it feeds into the citric acid cycle
9. Gluconeogenesis is:
a. a series of chemical reactions through which glucose is converted into glycogen b. the formation of glucose or glycogen from non carbohydrate sources c. reactions through which glycogen is converted into glucose d. also called Hexose Monophosphate shunt
10. The Krebs's cycle is also known as:
a. Succinic Acid Cycle b. Citric Acid Cycle c. Malic Acid Cycle d. Oxaloacetic Acid Cycle

SECTION – B

ANSWER ANY FIVE QUESTIONS

5X2=10 Marks

Very short answer:

11. What is isomerism?
12. Differentiate between stable isotopes and radioactive isotopes.
13. Enlist any two properties of enzymes.
14. Write short notes on isoenzymes.
15. Explain co-enzymes with suitable example.
16. What is metabolism?
17. Differentiate between anabolism and catabolism.

SECTION – C

ANSWER ANY THREE QUESTIONS

3X6=18 Marks

Short answer:

18. Define buffers. Explain its role in detail.
19. Describe the mechanism and theories of enzyme action.
20. How are the glucose molecules converted into lactate?
21. Write an account on Glycogenesis.
22. Brief the metabolic pathway of Glucogenolysis.

SECTION – D

ANSWER ANY ONE QUESTIONS

1x12=12 Marks

Long Answer:

23. Explain the uses of isotopes in medicine.
24. Give an account of the factors which influence enzyme activity.

III B.Sc., Zoology

PG & Research Department of Zoology
Vivekananda College
Tiruvedakam
Date: /07/2018

I Sessional Test
V Semester
Max.Marks: 50
Time: 2 Hours

Biotechnology (09CT52)

ANSWER ALL QUESTIONS

SECTION – A

10X1=10 Marks

Multiple choice questions:

- The term Biotechnology was coined in 1917 by
a. Karl Ereky b. Edward Jenner c. Louis Pasteur d. Robert Koch
- Which one of the following is IPR?
a. VAT b. Trademarks c. Copyrights d. Both b, c
- Which one of the following enzymes actively participated in cellular DNA repair process?
a. Restriction endonuclease b. DNA ligases c. Polymerase d. Transcriptase
- The subunit vaccines are the components of _____
a. Vectors b. Parasites c.Pathogen d. Yeast
- Which of the following is the causative organism of chicken pox?
a. Rotavirus b. Viricella –zooster virus c. Herpes virus d. Influenza virus
- Vaccination is the phenomenon of _____ immunization.
a. Expression b. Inactivation c. Inhibition d. Preventive.
- The technique working based on movement of charged particles in an electric field is
a. PCR b.RFLP c.Electrophoresis d.RAPD
- Earlier, the enzyme used in PCR was
a.Klenow enzyme b. Taq polymerase c.DNA polymerase I d. DNA polymerase III
- Southern blotting is used to separate
a. RNA b. DNA c.Proteins d. Lipids
- In India, the DNA fingerprinting is done in
a. CDFD b.ICAR c.ICMR d. DST

ANSWER ANY FIVE QUESTIONS

SECTION – B

5X2=10 Marks

Very short answer:

- Comment on adaptors.
- Define Patent.
- What is reverse transcriptase?
- Distinguish between antigens and antibodies.
- Write short notes on B-lymphocytes.
- Describe RAPD and add its applications.
- What is zoo blot?

ANSWER ANY THREE QUESTIONS

SECTION – C

3X6=18 Marks

Short answer:

- Explain the types of restriction endonucleases.
- Describe brief about IPR.
- Discuss briefly the steps involves for the preparation of monoclonal antibodies.
- Briefly describe the principle for creation of hybridoma cells.
- Describe RAPD and add its applications.
- Give an account on principle, procedure, variants, and applications of polymerase chain reaction.

ANSWER ANY ONE QUESTION

SECTION – D

1 x 12=12 Marks

Long Answer:

- “Biotechnology as an interdisciplinary pursuit”-Discuss.
- Elaborate the technique, and ethical issues of DNA fingerprinting.

BIOSTATISTICS, COMPUTER APPLICATIONS & BIOINFORMATICS – 09EP51

ANSWER ALL QUESTIONS

SECTION – A

10X1=10 Marks

Multiple choice questions:

1. Which one of the following is a one dimensional diagram?
a. Bar diagram b. Histogram c. Pie Diagram d. Ogive
2. Primary data is a _____ data
a. original b. accurate c. reliable d. All the above
3. Find out the mean 2,8,6,4,12,10,16
a. 8.2 b. 8.4 c. 8.6 d. 8.8
4. A small representative fraction of a population is called _____
a. population b. sample c. data d. none of these
5. The unprocessed freshly collected data is
a. Raw data b. Array data c. both a and b d. none of these
6. The first generation computers were organised during
a) 1990 to 2000 b) 1940 to 1950 c) 1950 to 1960 d) 1960 to 1970
7. The email platform was first commissioned by
a) Jenner b) J.J.Thomson c) ROY Thomson d) Roy Fredrick
8. The data in computers are represented by
a) Decimal b) Hexa decimal c) Quadra decimal d) Binary
9. Ms Office contains _____ numbers of packages
a) Five b) Four c) Three d) Two
10. The short cut key for pasting a Paragraph or a phrase in Ms Office is
a)Ctrl + P b) Ctrl + U c) Ctrl + V d) Ctrl + X

ANSWER ANY FIVE QUESTIONS

SECTION – B

5X2=10 Marks

Very short answer:

11. What is Random sampling?
12. Define Investigator.
13. What is exclusive method?
14. Write a short note on title bar of Ms Excel
15. What is custom animation in Ms Power point?
16. Define an inbox of email
17. Convert 202046 in to binary

ANSWER ANY THREE QUESTIONS

SECTION – C

3X6=18 Marks

Short answer:

18. Define data. Explain the types of data.
19. Describe the parts of a table.
20. Explain the types of classification of data with illustrations.
21. Differentiate the search engine and web browsers with suitable examples
22. How will you create a slide show using Ms Power Point?
23. What are the advantages and limitations of Ms Word?

ANSWER ANY ONE QUESTIONS

SECTION – D

1x12=12 Marks

Long Answer:

24. Prepare a frequency table with class intervals of weight of 50 Tilapia in grams collected from a pond
21,8,17,15,16,12,7,8,12,15,9,10,21,16,35,32,45,48,34,35,9,14,7,6,12,15,24,26,27,30,32,17,18,19,41,43,46,50,40,34,18,14,8,7,10,11,13,14,16,20.
25. How will you create and manage an E mail (OR) Describe various types of computers and their characteristics