



Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination – June / July 2021

II Semester

Class : I PG
Major : Zoology

Time : 3 Hours
Max. Marks: 100

20MZOC07 Biochemistry

Part A

10 x 1 = 10

Choose the Correct Answer

1. The heat that passes into or out of the system during a reaction is called _____ **CO3K1**
a. Entropy b. Enthalpy c. Reduction d. Oxidation
2. Oxidative phosphorylation takes place in _____ **CO3K1**
a. Ribosomes b. Golgi bodies c. Mitochondria d. Nucleus
3. _____ plays a major role in the metabolism of glucose. **CO1K1**
a. Glycogen b. Insulin c. Amino acids d. Lipids
4. Unsaturated fatty acids in fats react with ozone and oxygen to undergo a reaction called _____ **CO1K1**
a. Saponification b. Rancidity c. Hydrogenation d. Autoxidation
5. Which among following is a flavouring agent used in dishes. **CO2K2**
a. Sodium glutamate b. Sodium hydroxide
c. Sodium arsenite d. Glycine
6. The enzyme that inhibit the action of digestive enzymes is called _____ **CO2K1**
a. Pro enzyme b. Pre enzyme c. Anti enzyme d. Hypo enzyme
7. In pH meter calomel is connected with a platinum wire through _____ **CO4K1**
a. KCL b. Mercury c. HCL d. Lead
8. The preparation of Chromatography is called _____ **CO5K1**
a. Adsorbent b. Solute c. Chromatogram d. Elute
9. Gel electrophoresis is used to separate the mixtures of _____ according to their size. **CO5K1**
a. DNA b. Enzymes c. Gases d. Carbohydrates
10. The sample holder in spectrophotometer is also called as _____ **CO5K1**
a. Photocell b. Prism c. Beaker d. Cuvette

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or one page

- 11.a. Mention the role of cyclic AMP in cell signalling. **CO3K2**
(or)
- 11.b. How do you explain the electron transport chain? **CO1K3**
- 12.a. Outline the classification of carbohydrates. **CO2K4**
(or)
- 12.b. Focus on the functions of fatty acids. **CO2K4**
- 13.a. How will you classify proteins? **CO2K3**
(or)
- 13.b. Enumerate the types of enzyme inhibition. **CO1K1**
- 14.a. What is centrifuge? Add a note on the principles and applications of ultracentrifuge. **CO5K2**
(or)
- 14.b. What is chromatography? Explain the applications of chromatography. **CO5K2**
- 15.a. Give an account on the principle and types of spectroscopy. **CO5K2**
(or)
- 15.b. Experiment the methodology of polyacramide gel electrophoresis. **CO5K3**

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or three pages

- 16.a. Explain the laws of thermodynamics with an example. **CO1K2**
(or)
- 16.b. Record the role of different enzymes associated with biological oxidation. **CO2K1**
- 17.a. "TCA cycle is an important part of aerobic respiration"- Justify. **CO3K5**
(or)
- 17.b. Illustrate the β oxidation of fatty acids with suitable explanation. **CO3K4**
- 18.a. Record the metabolism of amino acid with the help of urea cycle. **CO3K1**
(or)
- 18.b. Elaborate the mechanism of enzyme action and the factors affecting enzyme action. **CO3K5**
- 19.a. How will you determine the pH using the pH meter. **CO4K3**
(or)
- 19.b. Illustrate the methodology of thin layer chromatography and its applications. **CO5K4**
- 20.a. Describe the principles and applications of UV visible Spectrophotometer. **CO5K2**
(or)
- 20.b. Briefly explain about the agrose gel electrophoresis. **CO5K2**
