

J.J.College of Arts and Science (Autonomous)

Sivapuram, Pudukkottai – 622 422

Department of Biochemistry

Bridge Course Syllabus

(Applicable for the candidates admitted from academic year 2015-2016 onwards)

Unit I

Basic Concepts of Chemistry

Atomic and Molecular Masses. Molar Mass and Molar Volume. Equivalent Mass of Acids, Bases and Salts. Periodic classification of elements, Periodic Trends in Properties. Bohr atom model: quantum numbers, shapes of atomic orbital, electronic configuration of atoms, dual property of an electron, Covalent bonds, Ionic or electrovalent bond, Coordinate covalent bond. Bond parameters, Polarity of Bonds. Sigma and Pi bonds. Hybridisation.

Unit - II

Plant physiology

Photosynthesis: Significance, site of photosynthesis, photochemical and biosynthetic phases, electron transport system, photorespiration, factors affecting photosynthesis, mode of nutrition : autotrophic, heterotrophic, saprophytic, parasitic and insectivorous plants. Plant growth regulators phytohormones: auxins, gibberellins, cytokinins, ethylene and abscisic acid. Photoperiodism and vernalization.

Unit - III

Human physiology

Cell biology, Muscles: Muscle action, Muscle tone. Respiration: Process of and conduction of heart beat. Blood components, Blood clotting factors. Anticoagulants, Lymph fluid. Brain, Spinal cord, CSF: Thyroid hormones-Insulin and Glucagon-Hormones of Adrenal cortex and Medulla. Reproductive Hormones. Excretion- Nephron. Reproductive system-Brief account of spermatogenesis, Oogenesis, Menstrual cycle- In vitro fertilization-Birth control.

Unit - IV

Microbiology and Biotechnology

Groups of Microorganisms, Contributors to Microbiology, Branches of Microbiology, Bright Field and Dark Field Microscope, Phase Contrast Microscope, Fluorescence and Electron Microscope. Development of Biotechnology, Advancements in Modern Biotechnology, Tools for Genetic Engineering, Methods of Gene transfer, Screening for Recombinants, Transgenic Plants, Genetically Modified Crops, Applications of Biotechnology.


Unit V

Biomolecules

Carbohydrates: classification - mono, oligo and polysaccharides. Lipids: Simple lipids and Compound lipids. Lipoproteins. Analysis of oils. Proteins: Structure and classification of amino acids, Structure of protein, Nucleic Acids: DNA and RNA, structure of nitrogen bases, Purines and Pyrimidines. Vitamins and Minerals: fat soluble and water soluble vitamins. Essential micro and macro minerals, sources and functions.

Reference books:

1. Basic concept of chemistry, L. J. Malone, T. O. Dolter, 8th Edition
2. Fundamentals of Plant Physiology - Jain V.K
3. Chatterjee C.C., Human Physiology, Medical Allied Agency, Calcutta, 11th edition, 1985.
4. Text Book of Microbiology - Anantha Narayanan R.
5. David Nelson and Michael M, 2017. Lehninger's Principles of Biochemistry, 7th edition.


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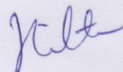
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Department of Biochemistry

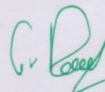
Bridge Course – Nov 2020

Attendance sheet for 2020-2021

S.No	Reg.No	Name of the student	28/11/20	29/11/20	30/11/20	01/12/20	02/12/20	03/12/20	04/12/20	05/12/20	06/12/20	07/12/20	08/12/20	09/12/20	10/12/20	11/12/20	12/12/20	13/12/20	14/12/20	15/12/20	16/12/20	17/12/20	18/12/20	19/12/20
1	U20BC1001	ANJALI.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	U20BC1002	ARTHIKA.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	U20BC1003	ASHA.B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	U20BC1004	DHARSHINI.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	U20BC1005	JAYA.N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	U20BC1006	KARTHIKA.K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	U20BC1007	KEERTHIKA.K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	U20BC1008	MONIKA.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	U20BC1009	MURUGAVALLI.M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	U20BC1010	NIVETHITHA.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	U20BC1011	PAVITHRA.P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	U20BC1012	PAVITHRA.P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	U20BC1013	POORANI.T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	U20BC1014	PRIYANKA.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	U20BC1015	RENUKA.V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	U20BC1016	SARANYADEVI.V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	U20BC1017	SARANYA.D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	U20BC1018	SENKA.V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	U20BC1019	SWATHI.M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	U20BC1020	THIRISHADEVI.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	U20BC1021	YAZHINI.B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
22	U20BC1022	BHARATHI.M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
23	U20BC2001	CHANDRU.B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
24	U20BC2002	CHARLES KUMAR.C	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
25	U20BC2003	DHARANIKANTI.D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
26	U20BC2004	KARTHICK RAJ.C.T	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
27	U20BC2005	MAHESWARAN.A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
28	U20BC2006	MUTHUKUMARAN.G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	U20BC2007	NALENTHIRAN.I	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
30	U20BC2008	PUGALENTHI.G	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
31	U20BC2009	SANJAY.M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	U20BC2010	SELVAKUMAR.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
33	U20BC2011	SUBRAMANI.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
34	U20BC2013	VASANTH.K	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
35	U20BC2014	VIGNESH.V	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	U20BC2015	VIGNESWARAN.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
37	U20BC2016	VIJAYA KUMAR.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
38	U20BC2017	AJAY.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
39	U20BC2018	HARIRAM.L	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
40	U20BC2019	SANTHOSH.S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P


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Bridge Course (2020-2021)
Pretest –Nov 2020

Time :1 hr.

Max. Marks :25

- 1. The principle used in pickling is**
 - a. Imbibition
 - b. Endosmosis
 - c. Plasmolysis
 - d. None of the above

- 2. Which of the following contain same number of carbon atoms as in 6 g of carbon-12?**
 - a. 7.5 g ethane
 - b. 8 g methane
 - c. both (a) and (b)
 - d. none of these

- 3. Theory of spontaneous generation was disproved by whom?**
 - a. Robert Koch
 - b. Edward Jenner
 - c. Louis Pasteur
 - d. All of them

- 4. An example of a heteropolysaccharide is**
 - a. Hyaluronic acid
 - b. Cellulose
 - c. Mannose
 - d. Starch

- 5. Which of the following did Edward Jenner used to protect the boy against small pox?**
 - a. Cow pox material
 - b. Small pox material
 - c. Both the above
 - d. Rabbit pox

- 6. The cell theory was forwarded by**
 - a. Embden and Meyer Hoff
 - b. Schleiden and Schwann
 - c. T.H. Morgan
 - d. Singer and Nicholson

- 7. The starch -sugar interconversion theory was given by**
 - a. Steward
 - b. Scarth
 - c. Levitt
 - d. Raschke

- 8. The molar mass of the gas is**
 - a. 66.25 g mol⁻¹
 - b. 44 g mol⁻¹
 - c. 24.5 g mol⁻¹
 - d. 662.5 g mol⁻¹

- 9. In a microscope the light is focussed on the object through**
- condenser lens
 - objective lens
 - ocular lens
 - oil immersion lens
- 10. Which one of the following represents 180g of water?**
- 5 Moles of water
 - 90 moles of water
 - 6.02×10^{23} 180 molecules of water
 - 6.022×10^{24} molecules of water
- 11. Flow of matter from a region of higher concentration to a region of lower concentration is called**
- Imbibition
 - Osmosis
 - Diffusion
 - Plasmolysis
- 12. The equivalent mass of potassium permanganate in alkaline medium is**
- 31.6
 - 52.7
 - 79
 - None of these
- 13. The name 'cell' was coined by**
- Leeuwenhoeck
 - Robert Brown
 - Robert Hook
 - Galileo
- 14. The protoplasm was considered as a polyphase colloidal system by**
- Altmann
 - Hemming
 - Wilson Fisher
 - Butschili
- 15. Among the following scientists, who discovered solid medium?**
- Louis Pasteur
 - Edward Jenner
 - Robert Koch
 - None of them
- 16. The differential base present in DNA and RNA is**
- Adenine
 - Guanine
 - Cytosine
 - Uracil
- 17. The equivalent mass of ferrous oxalate is**
- molar mass of ferrous oxalate 1
 - molar mass of ferrous oxalate 2
 - molar mass of ferrous oxalate 3
 - none of these

18. Which of the following fungi grow on Alexander Fleming's plate?

- a. Penicilliumchrysogenum
- b. Penicilliumnotatum
- c. Streptomyces griseus
- d. Penicilliummornefii

19. The movement of water into and out of cells is controlled by

- a. Water potential
- b. Endosmosis
- c. Exosmosis
- d. Plasmolysis

20. A Phosphoprotein present in milk is

- a. histone
- b. casein
- c. mucin
- d. insulin

21. Living cells which are wet cannot be viewed in a / an

- a) Compound microscope
- b) Phase - contrast microscope
- c) Electron microscope
- d) Dark - field microscope

22. Long chain alcohols are present in

- a. Waxes
- b. Fats
- c. Oils
- d. Phospholipids

23. Congo Red dye can be used to stain

- a. Plant cell
- b. Nerve cell
- c. Gland cell
- d. Yeast cell

24. Glucose is a

- a. Monosaccharide
- a. Disaccharide
- b. Oligosaccharide
- c. Polysaccharide

25. Which of the following organisms does not obey Koch's postulates?

- a. Cow pox virus
- b. Small pox virus
- c. Treponema pallidum
- d. M.Tuberculosis



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Post test – Nov 2020

Time :1 hr

Max.Marks :25

1. The first compound microscope was invented by

- a. Robert Hook
- b. Anton von Leewenhoek
- c. Kepler and Galileo
- d. Zaccharias Janssen

2. Which of the following is known as animal starch

- a. Glycogen
- b. Amylose
- c. Cellulose
- d. Amylopectin

3. This element is a constituent of chlorophyll

- (a) Manganese
- (b) Magnesium
- (c) Potassium
- (d) Zinc

4. Sucrose is a

- a. Disaccharide
- b. Monosaccharide
- c. Trisaccharide
- d. Tetra saccharide

5. In the plasma membrane the lipid bilayer is covered by

- a. proteins
- b. carbohydrates
- c. water molecules
- d. nucleic acid

6. Phosphatitylcholine is

- a. Cephalin
- b. Lecithin
- c. Ceramide
- d. Myristate

7. In microscopy a nucleus is normally stained using

- a. Neutral red
- b. Janus green B
- c. Eosin
- d. Hematoxylin

8. Which of the following elements will have the highest electronegativity?

- a. Chlorine
- b. Nitrogen
- c. Cesium
- d. Fluorine

9. The component that makes the difference between phase contrast microscope and Bright Field microscope is

- a. Objective
- b. Phase plate
- c. Condenser
- d. Occular

10. In cytological technique Bouin's solution is used for

- a. fixation
- b. dehydration
- c. cleaning
- d. embedding

11. Lactose is made up

- a. Glucose & mannose
- b. Fructose & glucose
- c. Ribose & ribulose
- d. Glucose & galactose

12. The transpiration pull theory was supported by

- a. Renner
- b. Curtis
- c. Clark
- d. All the above

13. Which one of the following is used as a standard for atomic mass.

- a. ^{12}C
- b. ^{13}C
- c. ^{14}C
- d. ^{16}O

14. The resolving power of unaided human eye is

- a. 1 cm
- b. 100 μm
- c. 200 μm
- d. 400 μm

15. A three dimensional image of the object can be produced using

- a. compound microscope
- b. dark-field microscope
- c. transmission electron microscope
- d. scanning electron microscope

16. Which of the following is ketohexose

- a. Glucose
- b. Fructose
- c. Ribose
- d. Galactose

17. The group of elements in which the differentiating electron enters the anti penultimate shell of atoms are called

- a. p-block elements
- b. d-block elements
- c. s-block elements
- d. f-block elements

18. Which of the following antibiotics was discovered by Waksman?

- a. Streptomycin
- b. Neomycin
- c. Actinomycin
- d. All the above

19. J.C. Bose gave the

- a. relay pump theory
- b. root pressure theory
- c. pulsation theory
- d. cohesion - tension theory.

20. Hydroponics is otherwise called

- a. soil-less agriculture
- b. tank farming
- c. chemical gardening
- d. all the above

21. Who invented Phase contrast microscope

- a. Robert Koch
- b. Frits Zernike
- c. George Strokes
- d. Alexander Fleming

22. Which of the following compounds have percentage of carbon same as that in ethylene

- a. propene
- b. ethyne
- c. benzene
- d. ethane

23. Lignin and cellulose have affinity for water. This is called

- a. adhesion
- b. cohesion
- c. root pressure
- d. none of the above

24. The lipids of plasma membrane are mainly

- a. Glucose molecules
- b. Phospholipid molecules
- c. Protein molecules
- d. All the above

25. What would be the IUPAC name for an element with atomic number 222?

- a. bibibium
- b. bididium
- c. didibium
- d. bibibium



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Mark statement for Pre-test 2020-2021

Time :1 hr

Max.Marks :25

S.No	Reg.No	Name of the student	Marks
1	U20BC1001	ANJALI.S	13
2	U20BC1002	ARTHIKA.R	10
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10	U20BC1010	NIVETHITHA.S	14
11	U20BC1011	PAVITHRA.P	13
12	U20BC1012	PAVITHRA.P	14
13	U20BC1013	POORANI.T	14
14	U20BC1014	PRIYANKA.S	15
15	U20BC1015	RENUKA.V	15
16	U20BC1016	SARANYADEVI.V	12
17	U20BC1017	SARANYA.D	15
18	U20BC1018	SENKA.V	10
19	U20BC1019	SWATHI.M	11
20	U20BC1020	THIRISHADEVI.R	12
21	U20BC1021	YAZHINI.B	15
22	U20BC1022	BHARATHI.M	15
23	U20BC2001	CHANDRU.B	10
24	U20BC2002	CHARLES KUMAR.C	11
25	U20BC2003	DHARANIKANTH.D	12
26	U20BC2004	KARTHICK RAJ.C.T	12
27	U20BC2005	MAHESWARAN.A	10
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31	U20BC2009	SANJAY.M	10
32	U20BC2010	SELVAKUMAR.S	11
33	U20BC2011	SUBRAMANI.S	11
34	U20BC2013	VASANTH.K	12
35	U20BC2014	VIGNESH.V	11
36	U20BC2015	VIGNESWARAN.R	14
37	U20BC2016	VIJAYA KUMAR.R	13
38	U20BC2017	AJAY.S	10
39	U20BC2018	HARIRAM.L	10
40	U20BC2019	SANTHOSH.S	11

[Signature]
HOD

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[Signature]
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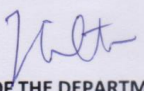
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S.No	Reg.No	Name of the student	Marks
1	U20BC1001	ANJALI.S	25
2	U20BC1002	ARTHIKA.R	21
3	U20BC1003	ASHA.B	21
4	U20BC1004	DHARSHINI.S	25
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13	U20BC1013	POORANI.T	21
14	U20BC1014	PRIYANKA.S	25
15	U20BC1015	RINUKA.V	25
16	U20BC1016	SARANYADEVI.V	22
17	U20BC1017	SARANYA.D	25
18	U20BC1018	SINIKAV	21
19	U20BC1019	SWATHI.M	21
20	U20BC1020	THIRISHADEVI.R	24
21	U20BC1021	YAZHINI.B	25
22	U20BC1022	BHARATHI.M	25
23	U20BC2001	CHANDRU.B	23
24	U20BC2002	CHARLES KUMAR.C	25
25	U20BC2003	DHARANIKANTH.D	24
26	U20BC2004	KARTHICK RAJ.C.T	25
27	U20BC2005	MAHESWARAN.A	20
28	U20BC2006	MUTHUKUMARAN.G	24
29	U20BC2007	NALENTHIRAN.T	25
30	U20BC2008	PUGALENTI.G	20
31	U20BC2009	SANJAY.M	20
32	U20BC2010	SELVAKUMAR.S	20
33	U20BC2011	SUBRAMANIS	21
34	U20BC2013	VASANTH.K	21
35	U20BC2014	VIGNESH.V	22
36	U20BC2015	VIGNESWARAN.R	24
37	U20BC2016	VIJAYA KUMAR.R	23
38	U20BC2017	VIJAY.S	20
39	U20BC2018	HARIRAM.L	20
40	U20BC2019	SANTHOSH.S	23


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Attendance sheet for 2021-2022

S.No	Reg.No	Name of the student	8/11/21	9/11/21	10/11/21	11/11/21	12/11/21	13/11/21	14/11/21	15/11/21	16/11/21	17/11/21	18/11/21
1	U21BC1001	BHAVYA SHREE.R	P	P	P	P	P	P	P	P	P	P	P
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3	U21BC1003	NIVETHA SRI E.S	P	P	P	P	P	P	P	P	P	P	P
4	U21BC1004	PAVITHRA.C	P	P	P	P	P	P	P	P	P	P	P
5	U21BC1005	RAKSHANA.M	P	P	P	P	P	P	P	P	P	P	P
6	U21BC1006	SAMEERA.A	P	P	P	P	P	P	P	P	P	P	P
7	U21BC1007	SNEHA.T	P	P	P	P	P	P	P	P	P	P	P
8	U21BC2001	ABINASH.K	P	P	P	P	P	P	P	P	P	P	P
9	U21BC2002	ALAGURAJAN.K	P	P	P	P	P	P	P	P	P	P	P
10	U21BC2003	JEGATHESHWARAN.M	P	P	P	P	P	P	P	P	P	P	P
11	U21BC2004	KAVIRAJ.P	P	P	P	P	P	P	P	P	P	P	P
12	U21BC2005	SUDHAAHAR.A	P	P	P	P	P	P	P	P	P	P	P

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Bridge Course (2021-2022)
Pre test – Nov 2021

Time :1 hr

Max.Marks :25

1. Animal cells usually have

- a) single golgi apparatus
- b) double golgi apparatus
- c) Poly golgi apparatus
- d) dictyosome

2. Which of the following is second most electronegative element?

- a) Chlorine
- b) Fluorine
- c) Oxygen
- d) Sulphur

3. Which basic amino acid is neutral or basic based on chemical environment?

- a) Lysine
- b) Arginine
- c) Tryptophan
- d) Histidine

4. The ribosomes are meant for

- (a) phosphorylation
- (b) respiration
- (c) protein synthesis
- (d) oxidation

5. How many amino acids are found in nature?

- a) 20
- b) 100
- c) 300
- d) 25

6. Tumor cells can be diagnosed by

- a. PCM
- b. BFM
- c. Light Microscope
- d. Electron Microscope

7. Contact exchange theory was put forward by

- a. Jenny and Overstreet
- b. Hylmo and Kramer
- c. Bennet and Clark
- d. De Vries and Curtis

8. Peptide bond is present in

- a. Carbohydrates
- b. Proteins
- c. Lipids
- d. Nucleic acids

9. Which of the following is called as the cell respiratory organelle

- (a) ribosomes
- (b) lysosomes
- (c) golgi bodies
- (d) mitochondria

10. The element with positive electron gain enthalpy is

- a) Hydrogen
- b) Sodium
- c) Argon
- d) Fluorine

11. The power houses of the cell are

- a) Lysosomes
- b) Ribosomes
- c) Mitochondria
- d) Centrosomes

12. They are mainly used in scanning electron microscope

- a. Transmitted electrons
- b. Primary electrons
- c. Secondary electrons
- d. Elastically scattered electrons

13. The role of mitochondria in oxidative phosphorylation was explained by

- (a) Leninger
- (b) Embden
- (c) Krebs
- (d) Meyer hoff

14. Which one of the following is the least electronegative element?

- a) Bromine
- b) Chlorine
- c) Iodine
- d) Hydrogen

15. Which of the following nitrogenous base is not found in DNA

- a. Adenine
- b. Thymine
- c. Guanine
- d. Uracil

16. What is the medium used in electron microscope?

- a. Air
- b. Water
- c. Vacuum
- d. Light

17. Photosynthesis takes place in

- a. mitochondria
- b. peroxisomes
- c. chloroplasts
- d. ribosomes

18. Lenses used in TEM

- a. Objective lens
- b. Electromagnetic lens
- c. Glass lenses
- d. Condenser lenses

19. Which one of the following arrangements represent the correct order of least negative to most negative electron gain enthalpy

- a) $Al < O < C < Ca < F$
- b) $Al < Ca < O < C < F$
- c) $C < F < O < Al < Ca$
- d) $Ca < Al < C < O < F$

20. Which one of the following is a five carbon compound?

- a. fructose
- b. erythrose
- c. ribose
- d. DHAP

21. In electron microscope light source is

- a. Electric light
- b. Electron Beam
- c. Sun light
- d. Fluorescent light

22. During cyclic electron transport, which one of the following is produced

- a. NADPH₂ only
- b. ATP only
- c. NADH₂ only
- d. both ATP and NADPH₂

23. The theory explaining passive absorption of mineral salts is

- a. Ion exchange
- b. Carrier Concept
- c. Cytochrome pump theory
- d. None of the above

24. The correct order of electron gain enthalpy with negative sign of F, Cl, Br and I having atomic number 9, 17, 35 and 53 respectively is

- a) $I > Br > Cl > F$
- b) $F > Cl > Br > I$
- c) $Cl > F > Br > I$
- d) $Br > I > Cl > F$

25. Sugar present in RNA is

- a. Ribulose
- b. 2-Deoxy ribose
- c. Ribose
- d. Glucose



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Post test – Nov 2021

Time :1 hr

Max.Marks :25

1. Which of the following is a total parasite

- a. Cuscuta
- b. Viscum
- c. Drosera
- d. Monotropa

2. Which one of the following is true about metallic character when we move from left to right in a period and top to bottom in a group?

- a) Decreases in a period and increases along the group
- b) Increases in a period and decreases in a group
- c) Increases both in the period and the group
- d) Decreases both in the period and in the group

3. Peroxisomes are found in the cells of

- a) Protozoa
- b) Porifera
- c) Coelenterata
- d) Platyhelminthes

4. To which hierarchical level of protein structure does α helix belong?

- a) Primary structure
- b) Secondary structure
- c) Tertiary structure
- d) Quarternary structure

5. The lysosome originates from

- (a) mitochondria
- (b) ribosomes
- (c) nucleus
- (d) golgi apparatus

6. In a given shell the order of screening effect is

- a) $s > p > d > f$
- b) $s > p > f > d$
- c) $f > d > p > s$
- d) $f > p > s > d$

7. Lysosomes are involved in

- a) intracellular digestion
- b) extracellular digestion
- c) Phagocytosis
- d) pinocytosis

8. Which amino acids cannot be synthesized by our body?

- a) Non-essential amino acids
- b) Polar amino acids
- c) Essential amino acids
- d) Aromatic amino acids

9. It is used to illuminate specimen in fluorescent microscope

- a. Mercury arc lamp
- b. Sunlight
- c. Tungsten lamp
- d. LED

10. The catalytic activity of an enzyme is restricted to its small portion called

- (a) active site
- (b) passive site
- (c) allosteric site
- (d) all Choices are correct

11. Dye used to stain specimen in fluorescent microscopic view

- a. Acridine dye
- b. Rezazurin
- c. Methylene Blue
- d. Flurochrome

12. An active enzyme made of polypeptide chain and a co-factor is

- (a) coenzyme
- (b) substrate
- (c) apoenzyme
- (d) holoenzyme

13. Which of the following organelle forms the intra cellular transporting system

- (a) mitochondria
- (b) lysosomes
- (c) Endoplasmic reticulum
- (d) ribosomes

14. The pigment which is highly efficient in absorbing solar energy is

- a. phycobilins
- b. chlorophyll
- c. carotinoids
- d. xanthophyll

15. One of the following process is employed to introduce a foreign gene into a cell

- a. electrolysis
- b. electroporation
- c. plasmid
- d. ligation

16. Lung cancer may be caused by

- a) cigarette smoking
- b) shale oil
- c) radioactive ores
- d) beta-naphthylamine

17. At Isoelectric point (pI), the ionic form of amino acid is called as

- a) Anion
- b) Zwitter ion
- c) Cation
- d) None of the above

18. Restriction enzymes are synthesized by

- a. bacteria only

- b. yeast and bacteria only
- c. eukaryotic cells only
- d. all kinds of cells

19. Which of the following bacterium oxidizes ammonia to nitrate

- a. Nitrosomonas
- b. Rhizobium
- c. Closteridium
- d. E. coli

20. How does electron affinity change when we move from left to right in a period in the periodic table?

- a) Generally increases
- b) Generally decreases
- c) Remains unchanged
- d) First increases and then decreases

21. Each restriction enzyme cleaves a molecule only at

- a. the ends of genes
- b. methyl groups
- c. nucleotide sequence
- d. the time of DNA replication

22. Which one of the following is a C4 plant?

- a. rice
- b. wheat
- c. sugarcane
- d. potato

23. Which of the following pairs of elements exhibit diagonal relationship?

- a) Be and Mg
- b) Li and Mg
- c) Be and B
- d) Be and Al

24. Which of the following orders of ionic radii is correct?

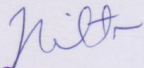
- a) $H^- > H^+ > H$
- b) $Na^+ > F^- > O^{2-}$
- c) $F^- > O^{2-} > Na^+$
- d) None of these

25. The essential component for the formation of chlorophyll

- a. Mg
- b. Fe
- c. Cl
- d. Mn




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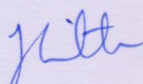
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Mark statement for Pre-test 2021-2022


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7	U21BC1007	SNEHA.T	13
8	U21BC2001	ABINASH.K	12
9	U21BC2002	ALAGURAJAN.K	09
10	U21BC2003	JEGATHESHWARAN.M	07
11	U21BC2004	KAVIRAJ.P	08
12	U21BC2005	SUDHAHAR.A	05


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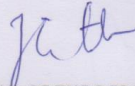

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