

"Dissemination of Education for Knowledge, Science and Culture"

-Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha's

Vivekanand College, Kolhapur (An Empowered Autonomous Institute)

Department of Zoology

Academic Year: 2024-25

Date: 13/03/2025

Notice

All the students of **B. Sc. II (Major)** are hereby informed that Continuous Internal Evaluation (CIE) Examination of Semester-IV, 2025 is held on **Thursday, 20th March, 2025 at 12:00 pm** in Zoology Department. Attendance is mandatory to all the students. Students who remain absent for examination will be responsible for their own loss.

Topics: B.Sc. II Semester-IV syllabus

Type of Examination: MCQs

Total Marks: 20 Marks (Each Paper)



Dr. G. K. Sontakke

HEAD

**DEPARTMENT OF ZOOLOGY
VIVEKANAND COLLEGE, KOLHAPUR
(EMPOWERED AUTONOMOUS)**

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Department of Zoology

B.Sc. Part- II Semester-IV- ZOOLOGY (Major)

Continuous Internal Evaluation (CIE) March, 2025

Paper VII & VIII- Principles of Biochemistry (DSC03ZOO41) and Histology (DSC03ZOO42)

Attendance

Total Marks: 20 (Each paper)

Sr. No.	Roll No.	Name of the Student	Signature	
			Principles of Biochemistry	Histology
1	7849	Adagale Paras Charudatta	PARAS	PARAS
2	7850	Baraskar Aditi Satish	Vslebar Ab	Vslebar Ab
3	7851	Khot Vira Sachin	Vslebar	Vslebar
4	7852	Mane Pranoti Prakash	PPr	PPr
5	7853	Momin Shireen Sajid	Sajid	Sajid
6	7854	More Sanika Sanjay	SsMos	SsMos
7	7855	Nadaf Muskan Mohammad Rafiq	Muskan	Muskan
8	7856	Navale Rutuja Pradeep	RNavale	RNavale
9	7857	Patil Anushka Rajgonda	Anushka	Anushka
10	7858	Patil Gouri Vijay	G.V. Patil	G.V. Patil
11	7859	Patil Madhuri Sanjay	Madhuri	Madhuri
12	7860	Patil Sayali Ashok	SAYALI	SAYALI
13	7861	Patil Suhani Suraj	Suhani	Suhani
14	7862	Shirgave Rutuja Bajarang	Rutuja	Rutuja
15	7863	Todkar Shravani Sanjay	Sitodkar	Sitodkar
16	7864	Bariya Avinaben Vinodbhai	Avinaben	Avinaben
17	7865	Kamble Ketan Keraba	Ketan	Ketan
18	7866	Kamble Ratndip Rajaram	Ratndip	Ratndip
19	7867	Patil Dhananjay Anandrao	Dhananjay	Dhananjay
20	7868	Powar Yash Mahadev	Yash	Yash
21	7956	Chavan Sakshi Madhav	Sakshi	Sakshi
22	7957	Mane Sangramsingh Sandip	Sangram	Sangram
23	7958	Mahekar Pruthviraj Tatoba	Ab	Ab
24	7962	Kadre Dnyaneshwari Balaso	DRK	DRK

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Q. 1. Select the Correct Alternative

[20]

1. bond joins monosaccharides to form disaccharides

- ☒ A) Peptide B) Hydrogen C) Glycosidic D) Phosphodiester

2. is the final electron acceptor in the ETC

- ☒ A) NADH B) FADH₂ C) Oxygen D) ATP

3. complex in the ETC is responsible for ATP synthesis

- ☒ A) Complex I ☒ B) Complex II C) Complex III D) ATP synthase (Complex V)

4. is the main purpose of the pentose phosphate pathway

- ☒ A) ATP production ☒ B) NADPH and ribose-5-phosphate production
C) Lactate formation D) Urea synthesis

5. is the primary enzyme responsible for glycogen breakdown in glycogenolysis

- ☒ A) Glycogen synthase ☒ B) Glycogen phosphorylase
C) Phosphoglucomutase D) Glucose-6-phosphatase

6. of the following is NOT a function of lipids.

- ☒ A) Energy storage B) Structural component of membranes
☒ C) Enzyme catalysis D) Hormone synthesis

7. Lipids that contain both hydrophilic and hydrophobic regions are called

- ☒ A) Amphipathic B) Hydrophobic C) Hydrophilic D) Saturated

8. Fatty acid synthesis primarily occur in

- ☒ A) Mitochondria B) Nucleus ☒ C) Cytoplasm D) Endoplasmic reticulum

9. is the key enzyme in fatty acid synthesis.

- ☒ A) Acetyl-CoA carboxylase B) HMG-CoA reductase
C) Lipase D) Carnitine acyltransferase

10. molecule provides the carbon atoms for fatty acid biosynthesis.

- ☒ A) Acetyl-CoA B) NADPH C) Pyruvate D) ATP

11. a chemical reaction that transfers an amino group to a ketoacid to form new amino acids.

- ☒ A) Transamination B) Deamination C) Ubiquitination D) Analokination

12. Amino acids that must be obtained from the diet in mammals are termed amino acids.

- A) active B) inactive ☒ C) essential D) non-essential

13. Urea cycle converts

☒ A) Keto acids into amino acids

☐ B) Amino acids into keto acids

☒ C) Ammonia into a less toxic form

☐ D) Ammonia into a more toxic form

14. is not an essential amino acid

☒ A) Glycine

☐ B) Leucine

☐ C) Methionine

☒ D) Histidine

15. The majority of having catalytic capability that are essential for maintaining various life processes

☒ A) Enzymes

☒ B) Proteins

☐ C) Hormones

☐ D) Metals

16. enzymes add water, carbon dioxide or ammonia across double bonds or eliminate these to create double bonds.

☐ A) Transferases

☐ B) Oxidoreductase

☒ C) Hydrolases

☐ D) Lyases

17. The temperature at which an enzyme shows its highest activity is called temperature

☒ A) Optimum

☐ B) Minimum

☐ C) Minor

☐ D) Maximum

18. The chemical substance that combines with the enzymes and inhibits its catalytic activity is called an

☐ A) Activators

☐ B) Inducers

☒ C) Inhibitor

☐ D) Enhancers

19. Urea cycle occurs in

☒ A) liver

☐ B) muscle

☒ C) kidney

☐ D) Brain

20. In competitive inhibition, the inhibitor

☒ A) binds to active site of an enzyme

☐ B) binds to an allosteric site of an enzyme

☐ C) denatures the enzyme

☐ D) enhance the enzyme activity

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Q. 1. Select the Correct Alternative

[20]

1. ✓the study of the structure and function of tissues and cells at a microscopic level.
A) ☒ Histology B) Anatomy C) Physiology D) Pathology
2. ✓ Cartilage and bone are the types of.....
A) muscular tissue B) ☒ connective tissue C) meristematic tissue D) epithelial tissue
3. ✓ Brunners gland is the characteristic feature of.....
A) Oesophagus B) ☒ Duodenum C) Stomach D) Rectum
4. ✓ The following cells are found in gastric glands EXCEPT
A) Parietal cells B) Goblet cells C) Chief cells D) ☒ Argentaffine cells.
5. ✓ The region of the kidney where artery, vein and ureter are attached is called the.....
A) cortex B) medulla C) calyx D) ☒ hilus.
6. ✓ Macula densa is a collection of densely packed epithelial cells of
A) Alveoli B) ☒ Kidney C) DCT D) Loop of Henle
7. ✓ Type II Pneumocytes present in the
A) Heart B) kidney C) DCT D) ☒ Alveoli
8. ✓ is phagocytic cell present in liver.
A) Goblet cells B) Parietal Cells C) ☒ Kupffer cells D) hepatocytes
9. ✓ Islets of Langerhans is group of cells present in.....
A) Heart B) ☒ Pancreas C) Liver D) Alveoli
10. ✓ Inner lining of PCT is composed of epithelial tissue.
A) squamous B) ☒ stratified C) Cuboidal D) columnar
11. ✓ Leydig cells are present.....
A) inside seminiferous tubules B) ☒ between seminiferous tubules
C) in epididymis D) in vas deferens
12. ✓ The mature follicle that holds the secondary oocyte before release from the ovary is called
A) primary follicle B) secondary follicle C) graafian follicle D) ☒ tertiary follicle
13. ✓ Posterior pituitary gland is also called as
A) Adenohypophysis B) Pars distalis C) ☒ Neurohypophysis D) Pars intermedia

14. Pinealocytes are present in

- A) Pituitary gland ☒ B) Pineal gland C) Thyroid gland D) Adrenal gland

15. Parafollicular cells of thyroid gland produces.....

- A) Somatostatin ☒ B) Calcitonin C) ACTH D) PTH

16. is the main function of glucagon produced by alpha cells of islets of Langerhans.

- A) Raising production of glucocorticoids
B) Lowering production of glucocorticoids
☒ C) Raising blood glucose level
D) Lowering blood glucose level

17. is the correct order of layers of cortex of the adrenal gland (from the outer surface to the medulla)

- A) Zona glomerulosa - zona reticularis - zona fasciculata
B) Zona reticularis - zona glomerulosa - zona fasciculata
☒ C) Zona glomerulosa - zona fasciculata - zona reticularis
D) Zona reticularis - zona fasciculata - zona glomerulosa

18. Epicardium, endocardium and myocardium are layers of

- ☒ A) Heart B) Lungs C) Kidney D) Pituitary gland

19. Osteoblasts and osteoclasts are the cells of

- A) Cartilage ☒ B) Bone C) Capillaries D) Ligament

20. is the connective tissue covering that surrounds cartilage.

- ☒ A) Perimysium B) Periosteum ☒ C) Perichondrium D) Perineurium

18
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