

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2023
(Fifth Semester)

Branch – BIOCHEMISTRY

**DISCIPLINE SPECIFIC ELECTIVE - I: PHYSIOLOGY &
ENDOCRINOLOGY**

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

- 1 The absorption of fructose by intestinal mucosa is
(i) co-transport mechanism (ii) simple diffusion
(iii) facilitated transport (iv) active transport
- 2 Which of the following hydrolytic enzymes act in low pH?
(i) Peroxidases (ii) Hydrolases
(iii) Amylases (iv) Proteases
- 3 This pressure facilitates filtration while urine is being formed
(i) filtrate hydrostatic pressure (ii) osmotic blood pressure
(iii) capillary hydrostatic pressure (iv) all of these
- 4 Capillary hydrostatic pressure during filtration is built in the glomerulus as
(i) size of Bowman's capsule is significantly large
(ii) an afferent arteriole is narrow compared to efferent
(iii) Bowman's capsule is cup-shaped
(iv) an efferent arteriole is narrow compared to afferent
- 5 This hormone is not secreted by Hypothalamus
(i) PRH (ii) FSH
(iii) CRH (iv) TRH
- 6 This hormone is responsible for "fight-or-flight" response
(i) Thyroxine and melatonin (ii) insulin and glucagon
(iii) epinephrine and norepinephrine (iv) oestrogen and progesterone
- 7 The cranial nerve that regulates the heartbeat
(i) VII (ii) VIII
(iii) IX (iv) X
- 8 Which of the following is another name for the third ventricle of the brain?
(i) diocoel (ii) paracoel
(iii) rhinocoel (iv) metacoel
- 9 Menstruation is due to _____
(i) Reduction of FSH (ii) Increase of LH
(iii) Reduction in Estrogen and progesterone (iv) Decrease in LH

Cont...

- 10 Aldosterone is secreted by _____
(i) Zona glomerulosa (ii) Zona fasciculata
(iii) Zona reticularis (iv) Zona pellucida

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 7 = 35)

- 11 a. Explain the composition and functions of blood.

OR

- b. Describe the role of GI tract.

- 12 a. What are the proteins involved in muscular contraction? Explain.

OR

- b. Give an account on glomerular filtration.

- 13 a. Give a note on visual cycle.

OR

- b. Explain the structure and function of neuron.

- 14 a. Describe the disorders of pituitary gland.

OR

- b. Elucidate the general classifications of hormones.

- 15 a. Write a physiological role of pancreas.

OR

- b. Discuss the action of androgen and estrogen.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks

(3 x 10 = 30)

16. Discuss the components of Respiratory systems and their functions.

17. Explain the structure and functions of heart.

18. Elucidate the composition and functions of CSF.

19. Discover the biosynthesis and biological functions of thyroid gland.

20. Write a detail note on adrenal gland.

Z-Z-Z

END