

**ATAL BIHARI VAJPAYEE MEDICAL UNIVERSITY, LUCKNOW**  
**MBBS DEGREE EXAMINATION - 1st PROF PROFESSIONAL**  
**SUPPLEMENTARY EXAM - MARCH 2024**

**PHYSIOLOGY - PAPER – II**

**SECTION A - Multiple Choice Questions (MCQs)**

**PAPER CODE: 2422130002**

**SET: A**

**Note: Choose one correct answer in the OMR sheet provided. No overwriting should be done.**

**Time: 20 Minutes**

**(20 x 1 = 20 MARKS)**

1. The hormone responsible for the conversion of Wolffian duct into vas deferens in the male fetus is:

- a) Estrogen
- b) Progesterone
- c) Testosterone
- d) Cortisone

2. Bitter taste is mediated by the action of:

- a) Guanyl cyclase
- b) G protein
- c) Tyrosine kinase
- d) Epithelial Na channels

3. Otoconia are suspended in:

- a) Synovial fluid

- b) Endolymph
- c) Perilymph
- d) Hemolymph

4. The major source of  $\text{NH}_3$  produced by the kidney is:

- a) Glutamine
- b) Alanine
- c) Glycine
- d) Uric acid

5.  $\text{H}^+$  secretion in the renal tubule is affected by:

- a) Increase in  $\text{pCO}_2$
- b) Mineralocorticoids
- c) Decreased  $\text{K}^+$  level
- d) Carbonic anhydrase inhibitor

6. Glucose transport in the PCT of the kidney takes place by:

- a) Active transport
- b) Secondary active transport
- c) Passive transport
- d) Bulk flow

7. Wernicke's area:

- a) Is present in the parietal cortex
- b) Lies near the auditory area of the temporal lobe
- c) Is located in the occipital cortex

d) Is a motor area

8. Destruction of the lateral nucleus of the thalamus leads to:

- a) Satiety
- b) Aphagia
- c) Hyperphagia
- d) Somnolence

9. The hormone that is a derivative of a single amino acid is:

- a) Estrogen
- b) Epinephrine
- c) Thyroxine
- d) Progesterone

10. Which of the following is a criterion of brain death?

- a) Absence of cortical function
- b) Absence of eye opening
- c) Absent pharyngeal gag reflex
- d) Absence of caloric response

11. Biological rhythms are controlled by:

- a) Suprachiasmatic nucleus
- b) Ventromedial nucleus
- c) Arcuate nucleus
- d) Supraoptic nucleus

12. Prostaglandin in seminal fluid comes from:

- a) Prostate gland
- b) Seminal vesicles
- c) Leydig cells
- d) Sertoli cells

13. Progesterone has the ability to:

- a) Inhibit ferning of cervical mucus
- b) Antagonize the effect of aldosterone
- c) Give rise to secretory endometrium
- d) Prevent ovulation if given in sufficient doses

14. Impedance matching increases the force of sound waves on the tympanic membrane by:

- a) 12 times
- b) 17 times
- c) 22 times
- d) 27 times

15. Argyll Robertson pupil is a condition in which the pupillary constriction in response to light stimulus:

- a) Is absent
- b) Is delayed
- c) Is not affected
- d) Is present only in one eye

16. One of the following DOES NOT form the filtration barrier in nephrons:

- a) Mesangium
- b) Podocytes
- c) Endothelial cells
- d) Parietal layer of Bowman's capsule

17. Automatic bladder is seen in:

- a) Spinal shock
- b) Cauda equina lesion
- c) Filum terminale lesion
- d) Superior sagittal sinus lesion

18. Which of the following statements about the PCT is false?

- a) About 60% of water is reabsorbed here
- b) Glucose is completely reabsorbed here
- c) Hydrogen ions are secreted here
- d) The fluid leaving the PCT is hypotonic

19. The wave in EEG with the highest frequency is:

- a) Delta wave
- b) Beta wave
- c) Theta wave
- d) Gamma wave

20. Signals from the Golgi Tendon Organ are carried by:

- a) Ia Fibres
- b) Ib Fibres

c) IIa Fibres

d) IIb Fibres

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