

2406000101020602
EXAMINATION AUGUST 2024
FIRST MBBS
PHYSIOLOGY (PAPER - II)(NEW) - LEVEL 2

[Time: As Per Schedule]

[Max. Marks: 100]

Instructions:**1. Fill up strictly the following details on your answer book**

- a. Name of the Examination: **FIRST MBBS**
- b. Name of the Subject: **PHYSIOLOGY (PAPER - II) (NEW) - LEVEL 2**
- c. Subject Code No: **2406000101020602**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Section A**Q.1 MCQ****20**

1. C-AMP acts through
 - A. Activation of protein kinase
 - B. Activation of adenylate cyclase
 - C. Increased calcium release
 - D. PIP3 pathway
2. Overall regulating organ for neuro-endocrinal system is
 - A. Hypothalamus
 - B. Pituitary
 - C. Thalamus
 - D. Pineal gland
3. The primary physiological effect of insulin seems to be:
 - A. Decreased glycogen synthesis in the liver
 - B. Increased glucose uptake by the brain
 - C. Decreased lipid synthesis in the liver
 - D. Increased glucose uptake by many different tissues
4. Ovulation coincides with:
 - A. Increased progesterone
 - B. GnRH release
 - C. LH surge
 - D. Decreased oestrogen

5. Mechanism of action of Intrauterine contraceptive device (IUCD) is based on
 - A. It prevents fertilized ovum implantation in the endometrium
 - B. It inhibits ovulation
 - C. It blocks the entry of sperms in female genital tract
 - D. It promotes anovulatory cycles

6. Average weight gain during whole of pregnancy is:
 - A. 5-7.5 Kg
 - B. 6.5-8.5 Kg
 - C. 10-12.5 Kg
 - D. 13-15 Kg

7. Which of the following transmitter substances almost always tend to inhibit the post- synaptic neuron:
 - A. Gamma-amino butyric acid (GABA)
 - B. Dopamine
 - C. Glycine
 - D. Norepinephrine

8. Weber Fechner's law deals with:
 - A. Frequency discrimination
 - B. Receptive field organization
 - C. Intensity discrimination
 - D. Two-point discrimination

9. Lower motor neuron is characterized by all **EXCEPT**:
 - A. Usually a single muscle is involved
 - B. Flaccid paralysis
 - C. Muscle atrophy is not severe
 - D. Deep reflexes are absent

10. Pyramidal tracts originate in all of the following **EXCEPT**:
 - A. Somatosensory cortex
 - B. Premotor cortex
 - C. Motor cortex
 - D. Red nucleus

11. Thalamus is the relay center for all of the following **EXCEPT**:
 - A. Smell
 - B. Proprioception
 - C. Pain
 - D. Temperature

12. Most of the refraction that occurs in the eye
- A. Anterior surface of the cornea
 - B. Posterior surface of cornea
 - C. Anterior surface of lens
 - D. Posterior surface of lens
13. In athletes bradycardia is because of
- A. Increased sympathetic tone
 - B. Increased vagal tone
 - C. Decreased venous return
 - D. increased cardiac output
14. Cerebellar nystagmus occurs with damage to
- A. Vermis
 - B. Flocculonodularlobe
 - C. Anterior lobe
 - D. Posterior lobe
15. Tremors associated with cerebellar disease are:
- A. Present at rest
 - B. Present with action
 - C. Restricted to hands and trunk
 - D. Present during sleep
16. The arrangement of three minute ear ossicles across the cavity from tympanic membrane to oval window is :
- A. Malleus-incus-stapes
 - B. Malleus-stapes-incus
 - C. Stapes-incus-malleus
 - D. Incus-stapes-malleus
17. Extrapramidal tract includes all **EXCEPT**:
- A. Rubrospinal tract
 - B. Tectospinal tract
 - C. Corticospinal tract
 - D. Medial longitudinal fasciculus
18. Accidental removal of parathyroid glands during thyroidectomy results in:
- A. Hypercalcemia
 - B. Tremors and muscle spasms
 - C. Myxedema
 - D. Fall in BMR
19. All are seen in cushing's syndrome **EXCEPT**:
- A. Truncal obesity
 - B. Hypertension
 - C. Hypoglycemia
 - D. Hirsutism
20. Total removal of thyroid gland in adults produces:
- A. Dwarfism
 - B. Mental retardation
 - C. Poor resistance to cold
 - D. Sexual retardation

Section B**Q.2 Long Answer Questions****10**

A 30 yrs. old male patient reports to the surgical Out Patient Department with the complaints of increased body temperature and perspiration. He also complained of increase in appetite and weight loss along with sleep disturbance since last six months. On inspection the eyes were prominent along with a small nodular swelling in the neck.

- a. What is the likely condition? **2**
- b. What investigations are needed to establish diagnosis? **3**
- c. What is the patho-physiology behind the condition? **3**
- d. What are the possible treatments? **2**

Q.3 Answer in Short (Any 5 out of 6)**5*3=15**

- a. Cholinergic receptors.
- b. Heat loss mechanism.
- c. Three important actions of aldosterone.
- d. Function of corpus leutum.
- e. Broca's area.
- f. Conductive deafness.

Q.4 Short notes (Any 3 out of 4)**3*5=15**

- a. Wallerian degeneration.
- b. Properties of reflex action.
- c. Function of cortisol.
- d. Ovarian cycle.

Section C**Q.5 Long Answer Question****1*10=10**

Enlist the hormones involved in calcium metabolism. Describe the mechanism of action, functions and regulation of parathormone.

2+2+3+3=10**Q.6 Answer in Short (Any 5 out of 6)****5*3=15**

- a) Sertoli cell.
- b) Functions of growth hormone.
- c) Aqueous humor.
- d) Analgesic system.
- e) Aphasia.
- f) Paradoxical sleep.

Q.7 Short notes (Any 3 out of 4)**3*5=15**

- a) Menstrual cycle
- b) Mechanism of Hearing
- c) Functions of sympathetic nervous system.
- d) Functions of Hypothalamus.
