

RAN-2506000101022602 / 2406000101020602
First Year M.B.B.S. (New) Examination November - 2025
Physiology (Paper - II)
Time: 3 Hours]
[Total Marks: 100
સૂચના : / Instructions

(1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the above details on your answer book.

Seat No.:

Student's Signature

SECTION – “A” Multiple Choice Questions (MCQ)
Instruction: Select one of the most appropriate choice out of four options in each multiple choice question
Q.1. MCQ based (20 marks)
(20)

1. All of the following hormones causes hyperglycemia except:
 - a) Growth hormone
 - b) Cortisol
 - c) Glucagon
 - d) Insulin
2. Major Inhibitory Neurotransmitter in brain
 - a) Glutamate
 - b) GABA
 - c) Acetylcholine (Ach)
 - d) Norepinephrine
3. Which of the following hormone does not need a second messenger?
 - a) FSH
 - b) LH
 - c) Glucagon
 - d) Oestrogen
4. Sympathetic nerve in spinal cord originate between
 - a) C1 – C6
 - b) C7 – T2
 - c) T1 – L2
 - d) T12 – L5
5. All transmitted by posterior column except.
 - a) Vibration
 - b) Pressure
 - c) Temperature
 - d) Position Sense
6. Which papilla does not contain taste buds?
 - a) Fungiform
 - b) Filiform
 - c) Vallate
 - d) Foliate
7. The auditory pathway passes via all except
 - a) Cochlear nuclei
 - b) Superior olivary nucleus
 - c) Trapezoid body
 - d) Superior colliculus
8. Site of ADH action is:
 - a) Proximal tubule
 - b) Collecting tubules & ducts
 - c) Loop of Henle
 - d) Straight vessel

9. Pacinian corpuscles transmit which sensation?
 - a) Touch
 - b) Pressure
 - c) Cold
 - d) Heat
10. After fertilization corpus luteum maintain for few weeks due to secretion of
 - a) Follicle stimulating hormone
 - b) Estrogen
 - c) Progesterone
 - d) Human chorionic gonadotrophin
11. Which of the following is not associated with monosynaptic reflex?
 - a) Fast reflex
 - b) Stretch reflex
 - c) Long latency
 - d) After discharge is not seen
12. Group B nerve fibers are situated in:
 - a) Muscle spindles
 - b) Fibers carrying pain sensation
 - c) Preganglionic autonomic fibers
 - d) Post ganglionic autonomic fibers
13. Insulin increases entry of glucose into:
 - a) Renal tubular cells
 - b) The mucosa of small intestine
 - c) Most neurons in the cerebral cortex
 - d) Skeletal muscle
14. Testosterone secreted by:
 - a) Sertoli cells
 - b) Seminal vesicle
 - c) Epididymis
 - d) Interstitial cells of Leydig
15. Which of the following is not an extrapyramidal tract:
 - a) Reticulospinal
 - b) Rubrospinal
 - c) Corticospinal
 - d) Vestibulospinal
16. Normal aqueous humour pressure in anterior chamber of eye is:
 - a) 4-6 mmHg
 - b) 12-18 mmHg
 - c) 24-30 mmHg
 - d) 50-60 mmhg
17. Excessive secretion of Aldosterone results in
 - a) Metabolic acidosis
 - b) Metabolic alkalosis
 - c) Respiratory acidosis
 - d) Respiratory alkalosis
18. Motor aphasia refers to defect in:
 - a) Auditory comprehension
 - b) Verbal comprehension
 - c) Verbal expression
 - d) Peripheral speech apparatus
19. All of the following are normal content of seminal fluid except:
 - a) Fructose
 - b) Hyaluronidase
 - c) Albumin
 - d) Zinc
20. Which one of the following is excitatory interneuron in the cerebellum?
 - a) Golgi cell
 - b) Basket cell
 - c) Purkinje cell
 - d) Granule cell

SECTION - B

(40 marks)

- Q.2.** Enumerate descending tracts. Describe pyramidal tract in detail. Write a note on differences between Upper Motor Neuron(UMN) and Lower Motor Neuron(LMN) lesion. **2+5+3-10**
- Q.3.** **Short notes. (any 5 out of 6) (3 marks each)** **(5×3=15)**
- a. Microglial cells are called scavenger cells.
 - b. Hypoparathroidism causes Tetany.
 - c. Impedence matching can increase pressure in the middle ear.

- d. Thalamus act as a sensory gateway.
- e. Menstrual blood does not normally contain clots.
- f. Iodine deficiency can leads to Goiter.

Q.4. Short notes. (any 3 out of 4) (5 marks each)

(3×5=15)

- a. Thyroid hormone synthesis
- b. Organ of Corti
- c. Oxytocin
- d. Olfactory pathway

SECTION - C

(40 marks)

Q.5. Short notes. (any 4 out of 5) (5 marks each)

(4×5=20)

- a. Spermatogenesis.
- b. Wallerian degeneration.
- c. Physiological consequences of sedentary life style.
- d. Thermoregulatory mechanisms.
- e. Female contraceptive methods.

Q.6. Short notes. (any 4 out of 5) (5 marks each)

(4×5=20)

- a. Describe professional qualities and role of physician.
 - b. Cushing's syndrome.
 - c. Cerebellar dysfunctions.
 - d. Visual pathway lesions.
 - e. EEG changes during NREM sleep.
-