

**KALOJI NARAYANA RAO UNIVERSITY OF
HEALTH SCIENCES
WARANGAL, TELANGANA STATE-506 002
MBBS FIRST YEAR EXAMINATIONS:
NOVEMBER, 2023
PHYSIOLOGY (New Regulation)
PAPER - II**

Time: 3 Hours

Max. Marks: 100

Note: Answer all questions

Draw diagrams whenever necessary with Black Ball point pen/HB pencil/any dark Colour pencil

Multiple Choice Questions:

1. Contractile unit of muscle is the portion of myofibril between:

- a) A and H band
- e) Two adjacent Z lines
- b) Z line and A band
- d) A and I band

2. An example for multi-unit (non syncytial) smooth muscle is:

- a) Stomach
Iris
- b) Uterine myometrium

d) Ureters

3. The inhibitory amino acid neurotransmitters in the CNS are

- a) Glutamate and glycine
- c) GABA and glycine
- b) Glutamate and aspartate
- d) Aspartate and glycine

4. Which of the following is the correct Brodmann's number designation for the primary

motor cortex.

- a) 6
- e) 4
- b) 3
- d) 1

5. The ability to detect two points simultaneously applied the skin is based on which of the

following physiologic mechanisms.

- a) Presynaptic inhibition
- ✓) Medial inhibition
- b) oral inhibition
- d) Feed-forward inhibition

6. A 45-year-old woman reported with diminished hearing in the right ear for the last 2 years,

Rinne's test (without masking) is negative on the right ear

and positive on the left side.

With the Weber's test, the tone is perceived as louder in the left ear. Which of the

following is most likely.

- a) Conduction loss in the right ear
- e) Sensorineural hearing loss in the left ear
- b) Sensorineural hearing loss in the right ear
- d) Conduction loss in the left ear

7. Pheochromocytomas predominantly secrete

- a) Epinephrine
- Both epinephrine and norepinephrine
- b) Norepinephrine
- d) Dopamine

8. Not a feature of Sertoli cell:

- a) Nourish sperms and control their release
- e) Secrete testosterone
- b) Provide blood testis barrier
- d) Secrete inhibin

9. A 30-year-old woman is breast feeding her infant during suckling reflex, which of the

following hormonal responses is expected.

Increased secretion of antidiuretic

- a) hormone (ADH) from the supraoptic nuclei
Increased secretion of oxytocin from the paraventricular nuclei
Increased secretion of ADH from the
- b) paraventricular nuclei
- d) Decreased secretion of neurophysin
10. The HCG is first measured in the blood
- a) 8 to 9 days after ovulation
c) At 10-12 weeks of pregnancy
b) 8 to 9 days after fertilization of ovum
d) At 8 weeks of pregnancy

Essay/ Long Answer Questions:

11. A 10-year-old male reported with history of excessive thirst, frequent urination and weight

loss for the past six months and in the past two days he has nausea and vomited on several

occasions. He was brought with extreme nauseating feeling to the casualty and his breath

emitted fruity odour. The lab investigation in casualty revealed blood glucose level of 435

mg/dl, pH of 7.23 (NR-7.35-7.45) and urine tested positive for glucose and acetone

bodies.

- a. Identify the condition.
- b. State the hormones regulating blood glucose.
- c. Describe the regulation of blood glucose.
- d. Discuss in detail the Mechanism of action of insulin.

12. A person aged 60 years with drunken gait attended to outpatient department. On

examination he had Slurred speech, dysmetria and intentional tremor.

- a) Identify the condition.
- b) Enumerate the other symptoms in the above disease
- c) Describe about the functions of the part damaged in the above condition.
- d) Discuss about Feed-Forward inhibition.

Short Answer Questions:

13. Discuss the functions of hypothalamus.
14. Discuss in detail about Motor End Plate.
15. Define Aphasia. And list out other types briefly.
16. Write in detail the action of Oxytocin.
17. Impedance matching.
18. Define Sleep. Write in detail about types of Sleep and waves in stages of Sleep.
19. Describe about molecular basis of Skeletal Muscle Contraction.

Very Short Answer Questions:

20. Structure and function of cornea.
21. Describe Ovulation and add a note on safe period.
22. Enumerate the theories of ageing and measures to prevent ageing.
23. Describe Cryptorchidism and its effects.
24. Muscle proteins.
25. Describe the rights and responsibilities of Patients.

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