

## 2019 Scheme

Q.P. Code: 114001

Reg. no.: .....



### First Professional MBBS Degree Supplementary (SAY) Examinations August 2021 Physiology II

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

#### Long Essays

(2x15=30)

1. A young female exhibits abnormal fatigability of muscles. Muscular movements, though initially strong, rapidly tire as the day advances or after a vigorous exercise. The symptoms to appear are ptosis, weakness of chewing, swallowing and speaking. She was unable to undertake work above the level of the shoulder. The symptoms showed a remitting course and often were precipitated by emotions, infections and pregnancy.

Remarkable recovery was seen after injection of neostigmine intramuscularly.

- What is your diagnosis
  - Name the structure involved in this disease.
  - Describe the structure involved and the normal physiological mechanism of it.
  - What is the main cause for this condition
  - Name any other condition that can affect this structure
  - How does injection of neostigmine improve the condition. Describe other drugs which can act at this site. (1+ 1+7+2+1+3)
2. Describe the origin, course and termination and functions of cortico-spinal tract. Add a note on hemiplegia. List the differences between upper motor neuron and lower motor neuron lesion. (7+3+5)

#### Short essays

(5x8=40)

3. Inter-cellular communication.
4. Describe the functions of aldosterone. Explain aldosterone escape. Add a note on Conn's syndrome.
5. Describe the visual pathway with a help of a neat labelled diagram and explain the effects of its lesion. Add a note on direct and indirect light reflex.
6. Describe the functions of testosterone in fetal and adult life. What is cryptorchidism.
7. Describe the mechanism of action of insulin and its functions. Add a note on clinical signs and symptoms of diabetes mellitus. Explain glucose tolerance test curve.

(PTO)

**Write briefly**

**(5x4=20)**

8. Draw and label the audlogram in conductive deafness. Superimpose a normal audlogram on it.
9. Describe the mechanism of transduction of sweet and salt sensation. Add a note on ageusia.
10. Describe the properties of skeletal muscle.
11. Classify hormones. Explain positive feedback.
12. Draw and label a skeletal muscle action potential and indicate the ionic basis of each part.

**One word Answers**

**(10x1=10)**

13. Pushing the wall is an example for ----- contraction.
14. Minimum strength of current given indefinitely to excite a tissue is called as -----
15. Glycine is an example of ----- neurotransmitter
16. The receptor for inverse stretch reflex is -----
17. In spinal cord the dorsal root is sensory and the ventral root is motor, this law is called
18. Compound action potential is produced by ----- nerve.
19. Fluid present in inner ear is -----
20. The phase of menstrual cycle occurring after ovulation is called -----
21. Cerebro spinal fluid is absorbed by -----
22. Permanent method of sterilization in males is -----

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