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1020E327

Candidate's Seat N

First M.B.B.S. (New Course) Examination

Physiology

Paper-II

Date : 22-10-2020, Thursday]

[Max. Marks : 100

[Time : 3 Hours

- Instructions :** (1) Answer to the point.
(2) Figure to the right indicates marks.
(3) Draw diagrams wherever necessary.
(4) Write legibly.
(5) Use separate answer books for each section.

SECTION-I**Q.1. Write the following Structured Long Question (any 1 out of 2)****1x10=10 marks**

1. Define and Classify Synapse. Describe properties of Synapse.
2. Define Sleep and write the stages of sleep. Differentiate between REM and NREM sleep.

Q.2. (A) Write the following case-based scenario/ Applied short Notes (any 2 out of 3)**2x6=12 marks**

1. A 60 year old patient presents with complaints of muscle weakness and fatigue with work which improves on rest. He has complaint of drooping of eyelids, double vision and difficulty in swallowing. When doctor injects anti-cholinesterase drug, there is improvement in patient's muscle weakness.
 - a) Identify the clinical condition in the given scenario. (2marks) MG
 - b) Write the cause of this clinical condition. (2marks) AChR Ab
 - c) Explain the physiological basis of treatment of this clinical condition? (2marks)
2. A 36year old female presents with complaints of swelling in neck, intolerance to heat, excessive sweating, weight loss and nervousness. On examination doctor finds enlarged neck gland and protrusion of eyeballs.
 - a) Identify the probable clinical condition in given scenario. (2marks) Hyperthyroidism
 - b) What is the cause of enlargement of neck gland in this clinical condition? (2marks) Goitre
 - c) What is the cause of protrusion of eyeballs in this clinical condition? (2marks)
3. Describe any three functions and any three dysfunctions of Basal Ganglia.

Q.2. (B) Write Short Notes (any 3 out of 4)**3x6=18 marks**

1. Contraceptives.
2. Spermatogenesis.
3. Mechanism of HCl secretion in stomach.

[P.T.O.]

✓ 4. Functions of Saliva.

Q.3. Answer in only 2-3 sentences (any 5 out of 6)

5x2=10 marks

- ✓ 1. Hypothalamus acts as a thermodetector and thermostat. Explain.
- ✓ 2. What is Deglutition Apnoea?
- ✓ 3. Define upper motor neuron and lower motor neuron.
- ✓ 4. What is the role of fetal test in sex differentiation?
5. Give the use of "Morning after" pill.
- ✓ 6. Gastric mucosal surface is protected from damage by gastric acid. Explain.

SECTION-II

Q.4. Write the following Structured long Question (any 1 out of 2)

1x10=10 marks

- ✓ 1. Define Diabetes mellitus? Describe the causes, signs and symptoms of Diabetes Mellitus. Enumerate complications of Diabetes Mellitus.
2. Differentiate between Gigantism and Acromegaly.

Q.5. (A) Write short notes (any 2 out of 3)

2x6=12 marks

- ✓ 1. Define and explain Sarcomere.
- ✓ 2. Describe the sequence of events in Excitation-contraction coupling.
3. Define and differentiate between Neuron and Neuroglia.

Q.5. (B) Write short notes (any 3 out of 4)

3x6=18 marks

- ✓ 1. Errors of Refraction.
- ✓ 2. Functions of Middle Ear.
- ✓ 3. Types of Colour Blindness.
- ✓ 4. Fight or Flight reaction

Q.6. Answer only in 2-3 sentences (any 5 out of 6)

5x2=10 marks

- ✓ 1. Name the various types of Taste sensations. *S (S3, BU)*
- ✓ 2. What is Olfactory fatigue? *Adaptation*
3. What is Aldosterone escape?
- ✓ 4. Hypofunction of Para-thyroid gland causes Hypocalcemia. Explain.
- ✓ 5. Which nerve fibers carry Pain sensation? *C, Aδ*
- ✓ 6. Para-sympathetic nervous system is anabolic. Explain.