20-01-2023

I-MBBS (Part-I) **11 12 A1 + 1112 A2**

(This question paper consists of 2 pages)

First M.B.B.S. (Main) Examination (New Scheme)

January - 2023

Physiology

Paper- I

Time: Three Hours

Maximum Marks: 100

Attempt all questions in both sections.

Section-A

1. Fill in the blanks: **6x1=06**

a) Sex chromosome karyotype 47 XXY is known as …… syndrome.

b) Cessation of menstrual cycle after the reproductive age is called as …….

c) Diabetic ketoacidosis is characterised by rapid deep respiration known as …… breathing.

d) The jumping of depolarisation from node to node in myelinated nerve is known as …… conduction.

e) Parkinsonism is due to deficiency of …… neurotransmitter.

f) The yellowish pigmented spot at the posterior pole of the eye is called …….

2. Answer the following MCQ: **4x1=4**

i. Fertilization of ovum normally occurs in

a) Uterus

b) Cervix

c) Fallopian tube

d) None of the above

ii. Medial geniculate body is concerned with

a) Hearing

b) Vision

c) Smell

d) Taste

iii. Aspirin decreases body temperature when given during pyrexia by

a) Decreasing heat production

b) Decreasing interleukin -1

c) Decreasing prostaglandin synthesis

d) Decrease release of pyrogen

iv. Acromegaly

a) Occurs in children

b) Results in tall person

c) Causes enlargement of membranous bones

d) Causes reduction in blood glucose level

3. A 50 year old obese man comes to outpatient department with presenting complaints of tiredness, increased frequency of urination, increased appetite and excessive thirst.

over past few weeks. On examination his vital parameters are normal. Blood sugar (Random) is 325 mg/dl. Based on the above case scenario, answer the following questions:

a) What is the most probable diagnosis?

b) Explain the pathophysiology of the disease diagnosed.

c) What further investigations you would like to suggest for this patient?

4. Write short note on (Any Five). 5x2=10

a) Color vision.

b) Auditory pathway.

c) Na^+ - K^+ pump.

d) Circadian rhythm.

e) Gate control theory of pain.

f) Pathophysiology of fever.

5. Explain briefly (Any Three). 3x5=15

a) Muscle spindle.

b) Spermatogenesis.

c) Rapid eye movement (REM) sleep.

d) Gibbs – Donnan effect.

Section-B

6. Describe origin, function and salient features of pyramidal tracts. Discuss differences between upper and lower motor neuron lesions.

7. What will happen and why (Any Five). 5x2=10

a) If growth hormone deficiency occurs in children.

b) To basal body temperature at the time of ovulation.

c) To muscle tone in Parkinson's disease.

d) To vision if right optic tract gets damaged.

e) To thermoregulatory responses if a person gets exposed to cold.

f) To cell volume if Na^+ - K^+ pump is inhibited.

8. Explain briefly (Any Four). 4x5=20

a) Parturition.

b) Negative feedback.

c) Motor aphasia.

d) Conditioned reflexes.

e) Endocrine function of testis.

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