M- 004M

MBBS FIRST PROFESSIONAL EXAMINATION, 2021

PHYSIOLOGY

Paper II

Time Allowed: Three Hours **Maximum Marks- 100**

Note:- Attempt all questions. All part of a question should be answered together. Figures in parenthesis indicate marks allotted to a question.

Section-A

Q1. Define shock. Discuss the cardiovascular compensatory changes that occur during shock (20)

Q2. Write briefly: (2x10)

a) Name the posterior pituitary hormones. Explain their action.

b) Describe the hormonal control of ovulation and explain the tests to detect ovulation

Q3. **Multiple Choice Questions** (10x1=10)

1. **Isovolumetric relaxation phase ends with:**
   a) Peak of "C" venous wave
   b) Opening of A-V valve
   c) Beginning of T wave
   d) Closure of semilunar valve
2. **Sympathetic stimulation causes all EXCEPT:**
   a) Increase in heart rate
   b) Increase in BP
   c) Increase in total peripheral resistance
   d) Increase in venous capacitance
3. **During cardiac cycle, aortic valve opens at:**
   a) Beginning of systole
   b) End of diastole
   c) End of isovolumetric contraction
   d) End of diastasis
4. **Dicrotic notch in aortic pressure curve is:**
   a) Magnified by aortic regurgitation
   b) Of no diagnostic valve
   c) Absent in arteriosclerosis
   d) Coin-cident with second heart sound
5. **Major part of total peripheral resistance is due to:**
   a) Medium and small arteries
   b) Arterioles
   c) Capillaries
   d) Venules

6. All are increased during exercise EXCEPT:
   a) Cardiac output
   b) Venous return
   c) Coronary blood flow
   d) Peripheral vascular resistance
7. **Insulin secretion is decreased by:**
   a) Glucagon
   b) Glucose
   c) Vagal stimulation
   d) Adrenaline
8. **Calcitonin produces hypocalcemia by:**
   a) Increased renal Ca^{++} excretion
   b) Decreased bone resorption
   c) Decreased renal Ca^{++} absorption
   d) Decreased intestinal Ca^{++} absorption
9. **Sperm becomes motile in:**
   a) Seminal vesicle
   b) Rete testis
   c) Epididymis
   d) Ejaculatory duct
10. **Increased secretion of following hormone occurs in postmenopausal women:**
    a) Oestrogen
    b) Progesterone
    c) FSH
    d) Cortisone

Section-B

Q1. What are the functional divisions of cerebellum. Describe their functions with relevant connections. Explain the signs of Cerebellar dysfunction. **(20)**

Q2. Write briefly: **(2x10)**

a) What are the physiological changes that occur when the body is exposed to low temperature

b) Explain the direct and indirect light reflex with their pathways. What is Argyll Robertson pupil

Q3. Multiple Choice Questions **(10x1)**

1. **Inhibitory neurotransmitter in CNS neuron is :**
   a) Glutamate
   b) Aspartate
   c) GABA
   d) Taurine
2. **Nightmare is seen in:**
   a) REM sleep
   b) Stage I NREM sleep
   c) Stage II NREM sleep
   d) Stage IV NREM sleep

3. **Renshaw cell inhibition is a typical example of ..... inhibition**
   a) Direct
   b) Recurrent
   c) Indirect
   d) Presynaptic
4. **Motor aphasia refers to defect in:**
   a) Peripheral speech apparatus
   b) Auditory comprehension
   c) Verbal comprehension
   d) Verbal expression
5. **Which of the following carries conscious proprioception:**
   a) Spinocerebellar tract
   b) Pontocerebellar tract
   c) Anterior spinothalamic tract
   d) Dorsal column
6. **The optical power of the eye is:**
   a) 25 Dioptres
   b) 50 Dioptres
   c) 60 Dioptres
   d) 75 Dioptres
7. **Most of the refraction that occurs in the eye, occurs at the:**
   a) Anterior surface of the lens
   b) Posterior surface of the lens
   c) Anterior surface of the cornea
   d) Posterior surface of the cornea
8. **The 'attenuation reflex' is due to:**
   a) Contraction of tensor tympani only
   b) Contraction of stapedius only
   c) Contraction of tensor tympani and stapedius
   d) Inward movement of the oval window
9. **The taste buds responsible for bitter taste are situated at:**
   a) At the tip of the tongue
   b) Just behind the tip
   c) At the sides
   d) At the posterior aspect
10. **Raised ECF K^+ levels are seen in:**
    a) Ectolymph (Perilymph)
    b) Endolymph
    c) Aqueous humor
    d) Vitreous humor

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