

Question Paper

Exam Date & Time: 06-May-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

BPharm Semester II - End Semester Examination May 2019

Exam Date: 06-05-2019

Human Anatomy and Physiology-II [PHA-BP201T]

Marks: 75

Duration: 180 mins.

I Multiple Choice Questions (MCQs)

Answer all the questions.

Section Duration: 30 mins

- 1) When a depolarising graded potential causes axonal membrane to depolarise to threshold, it results in opening of (1)

Voltage gated calcium channel
Voltage gated sodium channel
Voltage gated potassium channel
Voltage gated magnesium channel

- 2) Local anaesthetics block action potentials by inserting in to (1)

Calcium channel
Potassium channel
Sodium channel
Na-K ATPase

- 3) Continuous conduction, a mode of action potential propagation occurs along (1)

Dendrites
myelinated axons
unmyelinated axons
Nissl bodies

- 4) The cerebral aqueduct circulates the CSF in one of the following directions (1)

Lateral ventricle to third ventricle
Third ventricle to fourth ventricle
Third ventricle to lateral ventricle
Fourth ventricle to subarachnoid space

- 5) 5 Neurons having several dendrites and one axon (1)

Bipolar
Unipolar
Multipolar
Pseudounipolar

- 6) Seetha met with a road accident and suffers spinal cord compression. She is suffering in pain and cannot distinguish the sensation in her calf muscle or her toes. She is having trouble in telling how her lower limbs are positioned. What part of the spinal cord has been affected? (1)

Thoracic region

Lumbar region

Cervical

Midbrain

- 7) Beta-2 receptor is located in (1)

Heart

Lungs

Brain

Adipose tissue

- 8) Papillae that contain thread like structures without taste buds (1)

Filiform

Foliate

Fungiform

Vallate

- 9) You have gone to "all-you-can-eat" buffet and consumed large amount of food. After returning home while watching television you slept on the sofa. Now which division of the nervous system will be handling your body. (1)

Sympathetic nervous system

Somatic nervous system

Parasympathetic nervous system

Central nervous system

- 10) What will be net filtration rate? If the glomerular blood hydrostatic pressure = 52 mmHg; capsular hydrostatic pressure = 12 mmHg and blood colloid osmotic pressure = 30 mmHg. (1)

10 mmHg

70 mmHg

42 mmHg

52 mmHg

- 11) Among the following hormones, which will increase the glomerular filtration rate? (1)

Renin

Atrial natriuretic peptide

Vasopressin

Oxytocin

- 12) Increase in carbon dioxide levels in blood is called as (1)

hypoxia

ischemia

hypokalemia

hypercapnia

3) In the renin angiotensin system which one of them is the powerful vasoconstrictor substance (1)

Angiotensinogen

Angiotensin - I

Angiotensin -II

Aldosterone

4) Parathyroid hormone is secreted when the levels of calcium (1)

increases in blood

increases in bone

decreases in blood

decreases in bone

5) Cushing's syndrome is caused because of (1)

excess of cortisol secretion

decrease of cortisol secretion

excess of aldosterone secretion

decrease of aldosterone secretion

6) Diabetes mellitus that occur during pregnancy is called as (1)

Insulin dependent diabetes mellitus

Insulin in-dependent diabetes mellitus

Gestational diabetes

Diabetes does not occur during pregnancy

7) A small flap like structure that covers the opening of trachea and prevents the entry of food into it is called (1)

Larynx

Glottis

Epiglottis

Voice-cord

8) Deficiency of surfactant secreted from the Type II cells of alveoli in premature infants can (1) cause

Respiratory distress syndrome

Chronic obstructive pulmonary disorder

Bronchial asthma

Chronic bronchitis

- 19) Insulin and thyroxine arrive at an organ at the same time. However, thyroxine causes effect on the organ but insulin does not why? (1)

Thyroxine is lipid soluble but insulin not

Thyroxine is a local hormone while insulin is a circulating hormone

Thyroxine inhibits the action of insulin

The organ cells have receptors for thyroxine but not for insulin.

- 20) Name the antigen produced by prostate gland (1)

Prostate specific antigen

Prostate sensitive antigen

Prostate sperm producing antigen

Prostate steroidal antigen

II Long Answers

Answer all the questions.

- 1) Draw a neat diagram of nephron. Explain the process of tubular reabsorption. Imagine the discovery of a new toxin that blocks renal tubular reabsorption but does not affect the filtration. Predict the short-term effects of the toxin. [4+4+2] (10)
- 2) Describe various secretions and physiological functions of adrenal gland. (10)

III Short Answers

Answer all the questions.

- 1) Explain the following clinical terms: epidural block, meningitis and lumbar puncture. (5)
- 2) Explain the process of image formation in eye with suitable diagrams. (5)
- 3) Discuss the functions of different types of neuroglia. (5)
- 4) While playing cricket, Mr. Gupta was hit by a bouncer, right on the nose. His X-ray reports revealed break of both the nasal bones. Describe the structure of external nose and depict the location of the break. (5)
- 5) Describe the functions of parasympathetic system. (5)
- 6) Write short note on resuscitation methods for respiration. (5)
- 7) Describe how progesterone helps prepare the female body for pregnancy and helps maintain pregnancy. (5)

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