

PARUL UNIVERSITY
FACULTY OF PHARMACY
B. Pharm. Winter 2019 -20 Examination

Semester:2**Subject Code: BP201T****Subject Name: Human Anatomy and Physiology-II (Theory)****Date:20/11/2019****Time:02:00 pm to 05:00pm****Total Marks: 75****Instructions:**

1. Figures to the right indicate maximum marks.
2. Make suitable assumptions wherever necessary.

Q.1 Multiple Choice Questions (MCQs) (1 Mark Each)**(20)**

1. The central nervous system includes all the following components, except _____
 - a) spinal cord
 - b) medulla oblongata
 - c) autonomic ganglia
 - d) diencephalon
2. Most sensory receptors
 - a) are stimulated by different types of stimuli
 - b) are stimulated only by specific stimuli
 - c) possess a high threshold for their specific stimuli
 - d) only 'b' and 'c' are correct
3. One example of a function of neuroglial cells is to...
 - a) Add myelin to axons
 - b) Produce neurotransmitters
 - c) Bind neurotransmitters
 - d) Link one neuron cell to another at the synapse
4. An involuntary response by the nervous system to a stimulus is a
 - a) Synapse
 - b) Reflex
 - c) Motor response
 - d) Smooth muscle
5. The axon has voltage gated ion channels. The term "voltage gated" means that...
 - a) Ion channels open and close because of changes in the neuron's voltage.
 - b) Neuron voltage is controlled by neuroglial cells.
 - c) Ion gates will not respond unless the neuron is in the CNS.
 - d) Voltage can only be controlled by a reflex.
6. Digestion of which of the following would be affected the most if the liver were severely damaged?
 - a) carbohydrates
 - b) lipids
 - c) proteins
 - d) All of these would be affected equally.
7. One of the major functions of the large intestine is to _____
 - a) Secrete digestive enzymes.
 - b) Break down hemoglobin.
 - c) Regulate the release of bile.
 - d) Reabsorb water from chyme.
8. The purpose of the intestinal villi is to _____
 - a) Secrete serous fluid to decrease friction among the organs.
 - b) Push the fecal matter into the rectum.
 - c) Secrete mucous to facilitate the movement of chyme through the alimentary canal.
 - d) Increase surface area for nutrient absorption.
9. Amino acids are almost completely reabsorbed from the glomerular filtrate via active transport in the :
 - a) proximal tubule
 - b) loop of Henle
 - c) distal tubule
 - d) collecting duct
10. K^+ excretion is markedly influenced by :
 - a) aldosterone
 - b) amount of Na^+ delivered to tubules
 - c) rate of tubular secretion of H^+
 - d) all of the above .
11. In the presence of ADH, The distal nephron is least permeable to _____
 - a) water
 - b) ammonia
 - c) urea
 - d) Sodium.
12. Androgens are produced by the _____.
 - a) ovaries
 - b) testes

- c) hypothalamus
d) Islets of Langerhans.
13. The alpha cells of the pancreas secrete _____ which targets the _____.
a) glucagon; liver
b) melatonin; liver
c) glucagon; kidney
d) calcitonin; thyroid
14. Which of the following has both endocrine and exocrine functions?
a) anterior pituitary
b) thyroid
c) adrenal medulla
d) pancreas
15. The hormone that stimulates uterine contractions is _____
a) oxytocin
b) estrogen
c) granular cell carcinoma
d) progesterone
16. The production of testosterone in the interstitial cells is stimulated by _____
a) inhibin
b) luteinizing hormone
c) follicle-stimulating hormone
d) progesterone
17. During internal and external respiration, gases move by _____
a) osmosis
b) active transport
c) diffusion
d) endocytosis
18. The volume of air that can be exhaled after normal exhalation is the
a) tidal volume
b) residual volume
c) inspiratory reserve volume
d) expiratory reserve volume
19. In the lungs
a) P_{CO_2} in the alveoli is the same as that in the capillaries
b) P_{O_2} in the alveoli is the same as that in the capillaries
c) P_{CO_2} in the alveoli is higher than that in the capillaries
d) P_{CO_2} in the alveoli is lower than that in the capillaries
20. Touch receptors
a) are found only in the skin
b) are all encapsulated receptors
c) include two-element receptors
d) are stimulated by vibration

Q.2 Long Answers (any 2 out of 3) (10 Mark Each)

(20)

1. Define and classify nervous system. Explain anatomy and physiology of neuron.
2. Explain mechanism and regulation of respiration.
3. Discuss structure and functions of stomach. Explain acid production and its regulation.

Q.3 Short Answers (any 7 out of 9) (5 Mark Each)

(35)

1. Explain anatomy and functions of liver.
2. Write structure and functions of pituitary gland.
3. Discuss physiology of menstruation.
4. Write a short note on protein synthesis.
5. Explain physiology of urine formations.
6. Describe spermatogenesis and oogenesis.
7. Write functions of adrenals and pancreas.
8. Differentiate sympathetic and parasympathetic nervous system.
9. Explain reflex activity.