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BINA CHOWDHURY CENTRAL LIBRARY
(GIMT & GIPS)
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Roll No. of candidate

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2019

B.Pharm. 2nd Semester End-Term Examination

HUMAN ANATOMY AND PHYSIOLOGY — II

(New Regulation)

(w.e.f. 2017-18)

Full Marks – 75

Time – Three hours

The figures in the margin indicate full marks
for the questions.

SECTION A — (20 × 1 = 20 marks)

1. Answer ALL questions.

- (i) Sphincter that regulates entry of pancreatic secretions and bile entering the duodenum.
- (a) Pyloric sphincter
 - (b) Sphiner of Oddi
 - (c) Internal sphincter
 - (d) Lower esophageal sphincter
- (ii) The _____ is the outermost meninges which forms supportive & protective partitions of the brain & spinal cord.
- (a) Arachnoid mater
 - (b) Dura mater
 - (c) Denticulate mater
 - (d) Pia mater

[Turn over

- (iii) The only complete ring of cartilage present in the lowermost portion of the larynx is
- (a) Cricoid
 - (b) Corniculate
 - (c) Epiglottic
 - (d) Thyroid
- (iv) Ring like contractions, with regular intervals disappear to be replaced by another such contraction
- (a) Pendulous movement
 - (b) Segmentation contractions
 - (c) Migrating Motor Complex
 - (d) Basic electrical rhythm
- (v) Calcium level in the blood is regulated by the
- (a) Parathyroid and thyroid
 - (b) Adrenal medulla and pancreas
 - (c) Testes and thyroid
 - (d) Parathyroid and thymus
- (vi) Adjacent nucleotides of DNA are joined by
- (a) Ionic bond
 - (b) Covalent bond
 - (c) Phosphodiester bond
 - (d) Peptide bond
- (vii) Damage to thymus gland in children can lead to
- (a) Lack of hemoglobin content of blood
 - (b) Loss of cell mediated immunity
 - (c) Reduction in stem cell production
 - (d) All the above
- (viii) Thick layer which surrounds the ovum is
- (a) Corna radiata
 - (b) Zona pellucida
 - (c) Membrane granulose
 - (d) Theca interna
- (ix) Peptide bond formation between amino acid of growing polypeptide chain is catalyzed by
- (a) Amino acyl tRNA synthetase
 - (b) Peptidyl synthetase
 - (c) Peptide polymerase
 - (d) Peptidyl transferase

(x) In the kidneys, osmotic pressure controls

(a) Glucose reabsorption

(b) Water reabsorption

(c) Sodium reabsorption

(d) None of the above

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(xi) What is the role of messenger RNA in proteins synthesis?

(a) It catalyses the process

(b) It modifies messenger RNA molecules prior to protein synthesis

(c) It provides the genetic blue print for the protein

(d) All of above

(xii) _____ are vessels that project into the villi and absorb fatty substances

(a) Lymphatics (b) Arteries

(c) Veins (d) Lacteals.

(xiii) During inspiration

(a) Alveolar pressure is greater than atmospheric

(b) Alveolar pressure is less than atmospheric.

(c) Alveolar pressure is the same as atmospheric

(d) Alveolar pressure is one of the few pressures where the reference pressure is not atmospheric.

(xiv) CO_2 can be transported in the blood by which of following form?

(a) As bicarbonate

(b) As dissolved CO_2 the blood

(c) Bound to hemoglobin

(d) All of above.

- (xv) The passage that link Epididymis to the seminal vesicle
- (a) Vas deferens
 - (b) Urethra
 - (c) Semeniferous tubule
 - (d) Cowpers gland
- (xvi) Nervousness, increased body temperature and high blood-pressure are indications of _____
- (a) Hypoglycemia
 - (b) Diabetes Mellitus
 - (c) Hypothyroidism
 - (d) Hyperthyroidism.
- (xvii) Action potential is measured in millivolts (mV) and is ranged from
- (a) -90 mV to $+20\text{ mV}$
 - (b) -70 mV to $+30\text{ mV}$
 - (c) -65 mV to $+50\text{ mV}$
 - (d) -30 mV to $+60\text{ mV}$.
- (xviii) Pneumotaxic area, part of brainstem responsible for controlling rate of respiration present in
- (a) Medulla oblongata
 - (b) Upper pons
 - (c) Lower Pons
 - (d) Cerebellum
- (xiv) Which type of glial cell most numerous within the CNS, responsible for axon guidance and synaptic support, to the control of the blood brain barrier and blood flow.
- (a) Astrocytes
 - (b) Oligodendrocytes
 - (c) Microglia
 - (d) Ependymal cells.

(xx) _____ found in the wall of the bladder, contracts during micturation to release urine.

- (a) Trigone muscle
- (b) Trapezius muscle
- (c) Detrusor muscle
- (d) None of above.

SECTION B

2. Answer any TWO : (2 × 10 = 20)

- (a) Explain role saliva, gastric juice and pancreatic juice in digestion. Describe the mechanism of respiration. (6 + 4 = 10)
- (b) Name difference cranial nerves along with their origin and innervations. Brief the structure and function of spinal cord. (6 + 4 = 10)
- (c) What is menarche? Explain the physiology of menstrual cycle. Brief the physiology role of insulin, progesterone, melatonin and thyroxin. (1 + 5 + 4 = 10)

SECTION C

3. Answer any SEVEN (7 × 5 = 35)

- (a) Explain the role of Renin-Angiotensin-Aldosterone system. (5)
- (b) Name the sphincter muscles of stomach? Brief the structure and function of liver. (1 + 4 = 5)
- (c) Discuss the functions of cerebrum, cerebellum and hypothalamus. (5)
- (d) Describe the mechanism of fertilization. (5)