

Total No. of printed Pages = 03

34(1)PHYSI

2014

HUMAN PHYSIOLOGY

Full Marks: 100

Time: 3 Hours

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

1. Essay type questions (any two out of three) 2×10=20
- a) Define respiration. Describe the mechanisms of respiration in human body.
 - b) Define cardiac cycle. Describe the different phases of the cardiac cycle.
 - c) Name the different types of W.B.C. Describe the structure of the white blood cells with diagrams and mention their functions.
- Short essay type (any ten out of twelve) 5×10=50
- a) Discuss briefly about the transport mechanism across the cell membrane.
 - b) Define blood pressure. Discuss the long term regulation of blood pressure in the body.
 - c) Define Jaundice. Discuss briefly about the different types of Jaundice.
 - d) Define ECG. Discuss the different types of waves that are seen a normal ECG.
 - e) Define GFR. What is its normal value? Mention the factors affecting it.
 - f) Discuss briefly the functions of the thyroid hormone
 - g) Define reflex. Describe the reflex arc with diagram.
 - h) Define action potential. Discuss its ionic basis.
 - i) Discuss vital capacity. What is timed vital capacity.
 - j) Discuss Gastric Juice
 - k) Discuss Menstrual cycle

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- b) Myctalopia
- c) Functions of Placenta
- d) Hormones of Pituitary gland.
- e) Enteric Nervous system.
- f) Bohr effect.
- g) Arterial pulse

1) M.C.Q. 20 Questions (Choose the correct answer) 1×20=20

- i) Oxyntic cells secrete
 - a) Gastrin b) HCL c) Pepsin d) Mucus
- ii) The centre point of a lens is known as
 - a) Nodal point b) Principal focus
 - c) Principal axis d) Visual point.
- iii) Fat soluble vitamins are :
 - a) Vit D, Vit E, Vit K, Vit A b) Vit B₁₂
 - c) Vit A, Vit B₆ d) None of the above
- iv) ADH acts on
 - a) Bowman's capsule b) PCT
 - c) Loop of Henle d) DCT and collecting duct
- v) Myxoedema is caused by
 - a) Hypothyroidism
 - b) Hypothroidism
 - c) Hypoadrenalism
 - d) Hypopituitarism
- vi) The type of synapse which most commonly exist in the nervous system is-
 - a) Dendrodendritic b) Axo-Axonal
 - c) Axo-Somatic d) Axo-dendritic
- vii) Normal Tidal volume is-
 - a) 5 liters b) 500ml
 - c) 1200 ml d) 1 liter
- viii) In Myopia the image is formed
 - a) Behind the retina b) In front of retina
 - c) On the retina d) None
- ix) Pain sensation is carried by-
 - a) Dorsal spinothalamic tract
 - b) Ventral spinothalamic tract

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- x) Gigantism occurs because of excess secretion of
 - a) Aldosterone b) Insulin
 - c) Glucocorticoid d) Growth Hormone
- xi) Surfactant causes
 - a) Increased compliance of lung
 - b) Decreased compliance of lung
 - c) Both (a) and (b)
 - d) None
- xii) Normal platelet count of blood is-
 - a) 4000-11000/cu mm b) 1.5-4 lakh/cu mm
 - c) 5-6 millions/cu mm d) 14-17 gms/cu mm
- xiii) Bluish discolouration of skin or mucous membrane due to reduced haemoglobin is called as-
 - a) Hypoxia b) Dyspnoea
 - c) Cyanosis d) Dysbarism
- xiv) Bile is secreted from-
 - a) Salivary gland b) Stomach
 - c) Gall bladder d) Pancreas
- xv) Conjugation of Bilirubin occurs in-
 - a) Hepatocytes b) Granulocytes
 - c) Lymphocytes d) Erythrocytes
- xvi) The structural and functional unit of kidney
 - a) Neuron b) Nephron c) Glial cells d) Surfactant
- xvii) Each haemoglobin molecule carries how many molecules of oxygen
 - a) 2 b) 4 c) 6 d) 8
- xviii) Ear Ossicles are present in-
 - a) External ear b) Middle ear
 - c) Inner ear d) None of the above
- xix) Gap Junctions are present in
 - a) Skeletal muscles b) Cardiac muscles
 - c) Smooth muscles d) All of the above
- xx) The usual stimulus of Peristalsis is
 - a) Distension b) Sympathetic stimulation
 - c) Acid chyme d) Alkaline chyme