



MJ-7792

Seat No. _____

First Year B. Physiotherapy Examination

July - 2016

Physiology

Time : 3 Hours]

[Total Marks : 100

- Instructions :**
- (1) Write answers of each section in separate answer book.
 - (2) Answers should be brief and draw necessary diagrams.
 - (3) Illegible writing will not fetch any marks.
 - (4) Figures to the right indicate full marks.

SECTION - I

- 1** Describe the following : (Any Two) **20**
 - (a) Stages and factors affecting erythropoiesis
 - (b) Cardiac cycle
 - (c) Short term regulation of blood pressure

- 2** Write notes on : (Any Two) **10**
 - (a) Functions of Liver
 - (b) Juxta glomerular apparatus
 - (c) Transport of oxygen in the body

- 3** Write in brief : (Any Five) **10**
 - (a) Classification of WBC
 - (b) Functions of kidney
 - (c) Functions of surfactant
 - (d) Types of hypoxia
 - (e) Importance of mass peristalsis
 - (f) Define Hemostasis

4 Answer the following questions : (Write the correct answers) 10

- (1) The Normal blood pH is :
(A) 7.2 (B) 7.3
(C) 7.4 (D) 7.5
- (2) Almost 90% of the carbon dioxide is carried as :
(A) Dissolved form (B) Carbonic acid
(C) Carbonic anhydrase (D) Bicarbonate
- (3) Cardiac index is cardiac output per unit :
(A) Surface area (B) Body weight
(C) Body volume (D) Time
- (4) The second heart sound is mainly due to :
(A) Closure of Atrioventricular valves
(B) Closure of Semilunar valves
(C) Turbulent flow of blood in aorta
(D) Inflow of blood from ventricle to aorta
- (5) The digestive function of bile pigments :
(A) in digestion of fat
(B) in digestion of protein
(C) in digestion of carbohydrate
(D) no digestive function
- (6) Cyanosis occurs when :
(A) Deoxygenated hemoglobin increases
(B) Deoxygenated hemoglobin decreases
(C) Oxygenated hemoglobin increases
(D) Oxygenated hemoglobin decreases
- (7) Active reabsorption of glucose from the filtrate occurs in :
(A) Proximal tubules (B) Collecting ducts
(C) Loop of Henle (D) Distal tubules
- (8) Glomerular filtration rate is :
(A) 125 ml/min (B) 125 ml/sec
(C) 125 Lit/min (D) 125 Lit/hour

- (9) Cardiac output in man under basal condition would be close to :
- (A) 5.0 liters (B) 2.5 liters
(C) 4.0 liters (D) 7.5 liters
- (10) The oxygen haemoglobin dissociation curve is -
- (A) Bell shaped (B) S shaped
(C) Delta shaped (D) Normal shaped

SECTION - II

- 5** Describe the following : (Any Two) **20**
- (a) Synapse
(b) Posterior pituitary hormones
(c) Connections and functions of cerebellum
- 6** Write notes on : (Any Two) **10**
- (a) Colour vision
(b) Physiological basis of contraception
(c) Menstrual cycle.
- 7** Write in brief : (Any Five) **10**
- (a) Define all or none law
(b) Hormones secreted from pancreas
(c) Types of eye movements
(d) Name important ascending tracts of spinal cord
(e) Functions of Na - K pump
(f) Clinical importance of neuromuscular junction.
- 8** Answer the following questions : (Write the correct answers) **10**
- (1) Direct control of insulin occurs through :
- (A) Sympathetic innervation to pancreas
(B) Parasympathetic innervation to pancreas
(C) Blood glucose level
(D) Hypothalamus

- (2) Which is not an anterior pituitary hormone ?
(A) Prolactin
(B) Follicle stimulating hormone
(C) Oxytocin
(D) Luteinising hormone
- (3) The temperature regulating centre is mainly located in :
(A) Medulla (B) Pons
(C) Hypothalamus (D) Cerebellum
- (4) Which one of the following is not a part of brain stem?
(A) Medulla (B) Midbrain
(C) Pons (D) Cerebellum
- (5) The colour of eyes is due to :
(A) Sclera (B) Cornea
(C) Lens (D) Iris
- (6) A bus driver is using +3 diopters spherical lens when he is driving. He is suffering from :
(A) Myopia (B) Hyperopia
(C) Astigmatism (D) Emmetropia
- (7) The part of brain serving as a great sensory relay station is :
(A) Thalamus (B) Hypothalamus
(C) Medulla (D) Midbrain
- (8) All of the following hormones are produced by placenta except :
(A) HCG (B) Oestrogen
(C) Progesterone (D) Oxytocin
- (9) A sarcomere is a unit between two successive :
(A) Z lines (B) M lines
(C) A zones (D) I zones
- (10) The conduction velocity in a myelinated nerve fibre is directly proportional to :
(A) Branching of axon
(B) Length of the fibre
(C) Diameter of the fibre
(D) Diameter of the dendrites