



**BCD-7792**

Seat No. \_\_\_\_\_

**First Year Physiotherapy Examination**

**January – 2016**

**Physiology : Paper - I**

Time : 3 Hours]

[Total Marks : 100

- Instructions :** (i) Answer each section in separate answer book.  
(ii) Draw diagrams wherever necessary.  
(iii) Illegible answers will not carry marks.

**SECTION - I**

- 1 Discuss on any two : **20**  
(a) Explain mechanisms regulating blood pressure.  
(b) Explain mechanism of regulation of respiration.  
(c) Describe functions of T lymphocytes.
- 2 Write briefly on any two : **10**  
(a) Homeostasis.  
(b) Functions of kidney.  
(c) Composition and functions of gastric juice.
- 3 Write in short on any five : **10**  
(a) What is jaundice ?  
(b) Write functions of bile.  
(c) What is cardiac output ?  
(d) What is peristalsis ?  
(e) Write All or None Law.  
(f) What is glomerular filtration rate ?
- 4 Give the answer of the following MCQs from given options : **10**  
(1) Which bone does not contain red bone marrow ?  
(A) Vertebrae  
(B) Ribs  
(C) Sternum  
(D) Clavicle

- (2) Iron deficiency anaemia is :  
 (A) Normocytic normochromic  
 (B) Normocytic hypochromic  
 (C) Microcytic hypochromic  
 (D) Macrocytic hypochromic
- (3) Complete transection of a nerve is :  
 (A) 1° injury  
 (B) 3° injury  
 (C) 5° injury  
 (D) 7° injury
- (4) pH of gastric juice is :  
 (A) 0.20  
 (B) 0.87  
 (C) 1.20  
 (D) 1.8
- (5) The Q wave is due to :  
 (A) Atrial depolarization  
 (B) Depolarization of interventricular septum  
 (C) Depolarization of major part of both the ventricle  
 (D) Depolarization of base of ventricle
- (6) Pre load of the heart is determined by :  
 (A) End systolic volume  
 (B) End diastolic volume  
 (C) Ejection systolic volume  
 (D) Systolic vascular pressure
- (7) Eupnoea means :  
 (A) Rhythmic normal breathing at rest  
 (B) Difficulty in breathing  
 (C) Cessation of breathing  
 (D) Consciousness of breathing at rest
- (8) Cardiac output increases to about \_\_\_\_\_ times during maximum exercise.  
 (A) 2-3  
 (B) 3-4  
 (C) 4-5  
 (D) 5-6
- (9) Normal volume of urine is :  
 (A) 1-2.5 L/day  
 (B) 4-5 L/day  
 (C) 0.5-1 L/day  
 (D) Less than 500 ml/day
- (10) Which of the following moves rapidly through cell membrane ?  
 (A) CO<sub>2</sub>  
 (B) Water  
 (C) Glucose  
 (D) Urea

## SECTION - II

- 5 Discuss on any two : 20
- (a) Explain the functions of hypothalamus.
  - (b) Write in detail functions of thyroid hormones and regulation of its secretion.
  - (c) Explain mechanism of accommodation.
- 6 Write briefly on any two : 10
- (a) Menstrual cycle.
  - (b) Classification of nerve fibers.
  - (c) Difference between Upper motor and Lower motor neurons lesions.
- 7 Write in short on any five : 10
- (a) Write functions of organ of Corti.
  - (b) What is synapse ?
  - (c) What is intention tremor ?
  - (d) Write names of refractive errors.
  - (e) Name hormones secreted from pancreas.
  - (f) What is spermatogenesis ?
- 8 Give the answer of the following MCQs from given options : 10
- (1) All are the functions of thalamus except :
    - (A) a major relay station
    - (B) plays an important role in genesis of EEG
    - (C) maintain alert state
    - (D) control of circadian rhythm
  - (2) Color perception is a function of :
    - (A) Rods
    - (B) Cones
    - (C) Primary auditory cortex
    - (D) Visual association area
  - (3) Which of the following is not a primary taste sensation ?
    - (A) Sour
    - (B) Bitter
    - (C) Sweet
    - (D) Pungent

- (4) Which is not a property of synapse ?  
(A) All or none law  
(B) Law of forward conduction  
(C) Fatigue occurs at synapse  
(D) More susceptible to hypoxia than nerve fibers
- (5) Ovum fertilization usually occurs in which part of the fallopian tube ?  
(A) Fimbrial end  
(B) Infundibulum  
(C) Ampulla  
(D) Isthmus
- (6) Signs and symptoms of diabetes mellitus are mainly due to :  
(A) Hyperglycemia  
(B) Glycosuria  
(C) Dehydration  
(D) All of above
- (7) Which is not anterior pituitary hormone ?  
(A) Growth hormone  
(B) Luteinizing hormone  
(C) Follicle stimulating hormone  
(D) oxytocin
- (8) Which is secreted by adrenal medulla ?  
(A) epinephrine  
(B) oxytocin  
(C) prolactin  
(D) vasopressin
- (9) Which is not a part of limbic system ?  
(A) hypothalamus  
(B) amygdala  
(C) basal ganglia  
(D) anterior thalamic nuclei
- (10) Cerebellar nystagmus occurs with damage to :  
(A) vermis  
(B) flocculonodular lobe  
(C) anterior lobe  
(D) posterior lobe