

Date: 02-01-2015

0115 E019

## **First Year MBBS Examination**

### **I MBBS Physiology Paper 1**

Time: 3 hours Max Marks: 50

Instructions: 1. Answer to the points. 2. Use separate answer books for each section. 3. Draw diagrams wherever necessary.

#### **Section 1**

**1. Write briefly on (any two): (10)**

- a. Hypovolemic shock-definition, causes, stages and compensatory mechanism(684)
- b. Define pernicious anemi Give its causes, clinical features and management. (90)
- c. Define and classify hypoxi Describe hypoxic hypoxi (756)

**2. Write briefly on (any two): (6)**

- a. Formation of temporary hemostatic plug/platelet plug (125)
  - b. Structures and functions of IgG (111)
  - c. Catabolism/ Fate of hemoglobin (79)
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**3. Write briefly on (any on: (3)**

- a. Diffusion(31)(17)
- b.  $\text{Na}^+$ - $\text{K}^+$ -ATPase pump (34)

**4. Write briefly on (any two): (6)**

- a. Tubulo-glomerular feedback mechanism (320)
- b. Axon reflex (676)
- c. Micturition reflex(355)(432)

## Section 2

**5. Write briefly on (any two): (10)**

- a. Describe the events occurring during left ventricular systole along with changes in pressure and volume. (560)
- b. Baroreceptor reflex mechanism (633)
- c. Physiological basis of normal ECG (577)

**6. Write briefly on (any two): (6)**

- a. Chloride shift (744)
- b. Pathophysiology of Caissonâ€™s disease(775) (362)
- c. Role of surfactant in lungs (715) (296)

**7. Write briefly on (any on: (3)**

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- a. Rh incompatibility (143)
- b. Cardiovascular changes during severe exercise (695)

**8.** Write answers in two or two sentences (any six): (6)

- a. Role of albumin in maintaining plasma colloid osmotic pressure. (60)
- b. Brain bridge reflex (620)
- c. Mechanism of action of bicarbonate buffer in kidney.(336)
- d. Role of calcium influx during cardiac action potential/plateau potential (551)
- e. Vital capacity (727) (301)
- f. Windkessel effect (624)
- g. Transport maximum for glucose (325,326)
- h. Why the capillaries don't respond to the sympathetic stimulation. (312)