

---

Total number of printed pages-8

34 (1) PHYS 1.2

2020

**PHYSIOLOGY**

Full Marks : 100

Time : Three hours

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

1. Answer **any two** of the following :

10×2=20

(a) Define Anaemia. Give the etiological and morphological classification of anaemia. What is Megaloblastic anaemia ?

2+4+4=10

(b) Name the hormones secreted by Pituitary gland. Write in brief about Growth Hormone.

5+5=10

(c) Define Synapse and give its classification. Write about the properties of Synapse.

1+3+6=10

*Contd.*

2. Answer **any ten** of the following :  $5 \times 10 = 50$
- (a) Write a short note on Vital capacity.
  - (b) What is Phagocytosis ?
  - (c) Write a short note on Hyperthyroidism.
  - (d) Write about the composition and function of Saliva.
  - (e) Write a short note on the conducting system of the heart.
  - (f) What is a Neuron? Draw and label different parts of a Neuron.
  - (g) Define Shock. What are the different types and features of shock ?
  - (h) Write a short note on Neutrophil. Draw and label its parts.
  - (i) Write a short note on Surfactant.
  - (j) Myopia and Hypermetropia with diagram.
  - (k) What is artificial kidney ?
  - (l) Write a short note on skeletal muscle.

3. Answer **any five** of the following :  $2 \times 5 = 10$
- (a) Differentiate between Active and Passive Transport.
  - (b) Landsteiner's law.
  - (c) Differentiate between Cortical and Juxtamedullary nephron.
  - (d) What are the functions of Blood ?
  - (e) Differentiate between Active and Passive Immunity.
  - (f) Ovulation.
  - (g) What is Resting membrane potential ?
  - (h) Intrinsic factors.
4. Choose the correct answer :  $1 \times 20 = 20$
- (a) Most abundant cation in ICF is —
    - (i) Sodium
    - (ii) Potassium
    - (iii) Calcium
    - (iv) Magnesium

(b) Cause of Eosinophilia is

- (i) Typhoid
- (ii) Worm infestation
- (iii) Chicken pox
- (iv) Acute infection

(c) Value present between left ventricle and Aorta is

- (i) Mitral valve
- (ii) Tricuspid valve
- (iii) Aortic valve
- (iv) Pulmonary valve

(d) Lifespan of RBC is

- (i) 100 days
- (ii) 120 days
- (iii) 140 days
- (iv) 160 days

(e) Temporary cessation of breathing is called

- (i) Hyperpnea
- (ii) Apnea
- (iii) Asphyxia
- (iv) Hypoxia

(f) HCl secreted by —

- (i) Parietal cells
- (ii) Tr-cells
- (iii) Chief cells
- (iv) Muons cells

(g) Natural anticoagulant circulating in blood —

- (i) Warfarin
- (ii) Heparin
- (iii) Prothrombin
- (iv) Thromboplastin

(h) Hypercapnia is

- (i) Increased  $PCO_2$
- (ii) Decreased  $PCO_2$
- (iii) Increased  $PO_2$
- (iv) Decreased  $PO_2$

(i) Human male consists of \_\_\_\_\_ chromosomes.

- (i) 44 + XX
- (ii) 44 + XY
- (iii) 46 + XX
- (iv) 46 + XX

(j)  $\alpha$ -Amylase (Ptyalin) is present in

- (i) Pancreatic juice
- (ii) Bile
- (iii) Gastric juice
- (iv) Saliva

(k) Photoreceptor for vision is

- (i) Rods
- (ii) Cornea
- (iii) Retina
- (iv) Iris

(l) Protein synthesis occurs in

- (i) Smooth endoplasmic reticulum
- (ii) Rough endoplasmic reticulum
- (iii) Nuclear
- (iv) Golgi apparatus

(m) Pain sensation carried by

- (i) Posterior column tract
- (ii) Lateral spinothalamic tract
- (iii) Corticospinal tract
- (iv) Anterior spinothalamic tract

(n) Hemophilia is caused by deficiency of Factor

- (i) VIII
- (ii) IX
- (iii) X
- (iv) XIII

(o) Deficiency of WBC is called

- (i) Anaemia
- (ii) Leucopenia
- (iii) Thrombocytopenia
- (iv) Polycythemia

(p) Which blood group is known as Universal donor ?

- (i) A
- (ii) B
- (iii) AB
- (iv) O

(q) Justaglomerular apparatus secretes —

- (i) Renin
- (ii) Erythropoietin
- (iii) Aldosterone
- (iv) Insulin

- (r) The structure in the ear responsible for maintenance of balance is —
- (i) Cerebellum
  - (ii) Incus
  - (iii) Cochlea
  - (iv) Vestibular apparatus
- (s) The most essential element for thyroid hormone synthesis is
- (i) Calcium
  - (ii) Iron
  - (iii) Magnesium
  - (iv) Iodine
- (t) In Isotonic contraction of muscle —
- (i) Length shortens
  - (ii) Length unchanged
  - (iii) Tension increases
  - (iv) External work not done.
-