



ER20-PH-14T

8004

BOARD DIPLOMA EXAMINATION, (ER-20)

SEPTEMBER—2023

DPH - FIRST YEAR EXAMINATION

HUMAN ANATOMY AND PHYSIOLOGY

Time : 3 Hours ]

[ Total Marks : 80

**PART—A**

5×6=30

**Instructions :** (1) Answer *any* **six** questions.

(2) Each question carries **five** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not length of the answer.

1. Describe the physiology of digestion in the alimentary canal. 5
2. Write the secretions, functions and disorders of thyroid gland. 5
3. Classify and describe briefly the structure of various “connective tissues”.  
1+4=5
4. Define and classify nervous system in human body. Discuss briefly the meninges.  
1+2+2=5
5. Define blood clotting and mention the factors for blood clotting. 2+3=5
6. Describe the structure of ear with neat labeled diagram. 5
7. Write a short note on cardiac cycle. 5

**PART—B**

3×10=30

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- Instructions :** (1) Answer *any ten* questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

8. What is respiration? Discuss the functions of respiration. 1+2=3
9. Draw a well labeled diagram of cell and its organelles. 3
10. Describe in short the flow of blood through the heart. 3
11. Describe the structure and functions of salivary glands. 3
12. Write a short note on cerebrospinal fluid. 3
13. Write a note on function of bones. 3
14. Draw a neat labeled diagram of nephron. 3
15. Write a short note on the secretions of adrenal gland. 3
16. Define the term anaemia. Mention the types of anaemia. 1+2=3
17. Write short note on functions of ovary. 3
18. Write the functions of spleen. 3

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## PART—C

1×20=20

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- Instructions :** (1) Answer **all** questions.  
(2) The question carries **one** mark.  
(3) Answer should be single word or single sentence.

**19.** Power houses of the cell are

- (a) mitochondria
- (b) ribosomes
- (c) nucleus
- (d) centrioles

**20.** Which of the following are granulocytes?

- (a) Eosinophils
- (b) Basophils
- (c) Neutrophils
- (d) All of the above

**21.** Nervous tissue consists of which types of cells?

- (a) Neurons
- (b) Neuroglial cells
- (c) Muscle cells
- (d) Both (a) and (b)

**22.** \_\_\_\_\_ is the basic structural and functional unit of kidney.

**23.** The lungs are located in the

- (a) cranial cavity
- (b) thoracic cavity
- (c) abdominal cavity
- (d) pelvic cavity

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**24.** Lymphatic organs and tissues are

- \* (a) lymph
- (b) lymph vessels
- (c) lymph nodes
- (d) All of the above

**25.** The lower jaw is known as

- (a) maxilla
- (b) ethmoid bone
- (c) mandible
- (d) clavicle

**26.** The functions of the digestive system are

- (a) ingestion
- (b) Odigestion
- (c) absorption of food
- (d) All of the above

**27.** A tendon joins

- (a) muscle with bone
- (b) bone with bone
- (c) muscle
- (d) muscle with ligament

**28.** Factor essential for absorption of vitamin B12 is

- (a) pepsin
- (b) renin
- \* (c) intrinsic factor
- (d) extrinsic factor

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**29.** Bones are connected to each other by

- \* (a) ligaments
- (b) tendons
- (c) cartilage
- (d) collagen

**30.** The normal blood pressure of a healthy person is

- (a) 100/70 mm of Hg
- (b) 140/80 mm of Hg
- (c) 120/80 mm of Hg
- (d) 160/80 mm of Hg

**31.** A neuron consist(s) of

- (a) an axon
- (b) dendrites
- (c) a cell body
- (d) All of the above

**32.** The process of excretion of urine is called \_\_\_\_.

**33.** Largest part of human brain is

- (a) cerebrum
- (b) midbrain
- (c) medulla oblongata
- (d) cerebellum

**34.** Growth hormone is secreted by

- (a) anterior pituitary
- (b) thyroid gland
- \* (c) parathyroid gland
- (d) posterior pituitary

**35.** Which of the following helps sperm to enter into the ovum?

- \* (a) Tail
- (b) Acrosome
- (c) Vacuole
- (d) Fertilization

**36.** Loss of sense of smell is

- (a) anosmia
- (b) anuria
- (c) anoxia
- (d) None of the above

**37.** Deficiency of insulin leads to

- (a) hypertension
- (b) diabetes mellitus
- (c) glaucoma
- (d) goiter

**38.** The various organ(s) of respiration is/are

- (a) nasal cavity
- (b) pharynx
- (c) larynx
- (d) All of the above

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BOARD DIPLOMA EXAMINATION (Ints.), (ER-20)

AUGUST—2022

DPH – FIRST YEAR EXAMINATION

HUMAN ANATOMY AND PHYSIOLOGY

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

5×6=30

- Instructions :**
- (1) Answer *any* **six** questions.
  - (2) Each question carries **five** marks.
  - (3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

- 1. Write the structure of Innominate bone.
- 2. Write notes on (a) blood groups and (b) importance of Rh-factor.
- 3. Describe the Blood Vessels attached to the Heart.
- 4. Write the structure and functions of Liver with a neat labelled diagram.
- 5. List out the cranial nerves. Write their origin.
- 6. Why is Pituitary gland called master gland. Write the secretions and functions of anterior pituitary gland.
- 7. List out the parts of female reproductive system and explain the structure of ovary.

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## PART—B

3×10=30

- Instructions :** (1) Answer *any ten* questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Define the terms 'Anatomy and Physiology'.
9. Write the structure and function of mitochondria.
10. Draw a neat labelled diagram of neuron.
11. Write the mechanism of clotting of blood.
12. Write the composition of lymphatic fluid.
13. Draw a neat labeled diagram of heart.
14. What are the functions of respiratory system?
15. Write a note on neuromuscular junction?
16. Define and classify nervous system.
17. Define the terms 'glaucoma', 'xerophthalmia' and 'myopia'.
18. Explain the physiology of urine formation.

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## PART—C

1×20=20

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **one** marks.  
(3) Answers should be single word or single sentence.

**19.** Myology is the study of

- (a) muscles
- (b) bones
- (c) cartilage
- (d) All of the above

**20.** The term used to cell eating is

- (a) exocytosis
- (b) phagocytosis
- (c) pinocytosis
- (d) osmosis

**21.** Which of the following is/are the striated muscles?

- (a) Cardiac muscle
- (b) Smooth muscle
- (c) Skeletal muscle
- (d) Both (a) and (c)

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- 22.** Human skeleton is made up of a total of
- (a) 201 bones
  - (b) 206 bones
  - (c) 198 bones
  - (d) 105 bones
- 23.** Haemoglobin is present in which cells?
- (a) Erythrocytes
  - (b) Leucocytes
  - (c) Platelets
  - (d) None of the above
- 24.** Lymphatic fluid is rich in
- (a) iron
  - (b) antibodies
  - (c) neutrophils
  - (d) basophils
- 25.** The normal blood pressure of a healthy person is
- (a) 100/70 mm of Hg
  - (b) 140/80 mm of Hg
  - (c) 120/80 mm of Hg
  - (d) 160/80 mm of Hg

- 26.** The lungs are located in the
- (a) cranial cavity
  - (b) thoracic cavity
  - (c) abdominal cavity
  - (d) pelvic cavity
- 27.** Bile salts are essential to digest
- (a) proteins
  - (b) carbohydrates
  - (c) vitamins
  - (d) fats
- 28.** A ligament joins
- (a) bone with bone
  - (b) bone with tendon
  - (c) muscle with bone
  - (d) tendon with ligament
- 29.** Nervous system is divided into
- (a) central nervous system
  - (b) peripheral nervous system
  - (c) Both (a) and (b)
  - (d) None of the above

- 30.** Loss of sense of smell is called
- (a) anosmia
  - (b) anuria
  - (c) anoxia
  - (d) None of the above
- 31.** A high level of creatinine in blood indicates
- (a) kidney failure
  - (b) heart failure
  - (c) liver failure
  - (d) None of the above
- 32.** Anti-diuretic hormone is
- (a) oxytocin
  - (b) vasopressin
  - (c) gastrin
  - (d) None of the above
- 33.** Formation and maturation of Ovum is
- (a) spermatogenesis
  - (b) oogenesis
  - (c) ovulation
  - (d) fertilization

34. Exchange of gases in the lungs is called \_\_\_\_.
35. Small intestine contains numerous fingers like projections called \_\_\_\_.
36. Junction between neuron and effector is called \_\_\_\_.
37. Constriction of pupil is called as \_\_\_\_.
38. \_\_\_\_ gland is located at the base of the brain in the sphenoid bone.

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ER20-PH-14T

**8004**

**BOARD DIPLOMA EXAMINATION, (ER-20)**

**JANUARY—2023**

**DPH – FIRST YEAR EXAMINATION**

**HUMAN ANATOMY AND PHYSIOLOGY**

Time : 3 hours ]

[ Total Marks : 80

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**PART—A**

- Instructions :** (1) Answer *any* **six** questions.  
(2) Each question carries **five** marks.  
(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

1. Draw a neat structure of the cell and identify the various organelles. 5
2. Write about the structure of scapula. 5
3. Write about the various blood groups. Write the significance of Rh factor. 3+2=5
4. Explain the mechanism of vision. 5
5. With the help of a neat diagram, explain the structure of heart. 5
6. Write note on the physiology of respiration. 5
7. Mention the parts of large intestine. Write the functions of large intestine. 2+3=5

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## PART—B

- Instructions :** (1) Answer **ten** out of eleven questions.  
(2) Each question carries **three** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

8. Write the types of connective tissue. 3
9. Define endocrine and exocrine glands with examples.  $1\frac{1}{2}+1\frac{1}{2}=3$
10. Mention the different movements of joints. 3
11. Write about the mechanisms of blood clotting. 3
12. Write the functions of spleen. 3
13. Write short note on systemic circulation. 3
14. Define the terms (a) vital capacity and (b) total lung capacity.  $1\frac{1}{2}+1\frac{1}{2}=3$
15. Write about reflex arc. 3
16. Write about the parts of the internal ear. 3
17. Write about the secretions of thyroid gland and their functions.  $1+2=3$
18. Write the factors affecting blood pressure. 3

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## PART—C

1×20=20

- Instructions :** (1) Answer **all** questions.  
(2) Each question carries **one** mark.

**19.** Which organelles of the cell are called the 'power houses' of the cell?

- (a) Mitochondria
- (b) Golgi apparatus
- (c) Lysosomes
- (d) Nucleus

**20.** The bone which is **not** present in the upper limb is

- (a) radius
- (b) ulna
- (c) humerus
- (d) tibia

**21.** The numbers of thoracic vertebrae are

- (a) 12
- (b) 5
- (c) 33
- (d) 7

**22.** Individuals with which blood group are known as 'universal acceptors'?

- (a) O
- (b) A
- (c) AB
- (d) B

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- 23.\*** Ossification is the growth process that occurs in
- (a) muscles
  - (b) bones
  - (c) blood
  - (d) glands
- 24.** The systolic blood pressure of 120 mmHg represents
- (a) relaxation of right atrium
  - (b) relaxation of left atrium
  - (c) contraction of right atrium
  - (d) contraction of left ventricle
- 25.** Rouleaux formation is exhibited by
- (a) lymphocytes
  - (b) monocytes
  - (c) erythrocytes
  - (d) osteocytes
- 26.** How many pairs of cranial nerves are present in the nervous system?
- (a) 10
  - (b) 12
  - (c) 14
  - (d) 16
- 27.** The glands, that are called as suprarenal glands, are
- (a) salivary glands
  - (b) adrenal glands
  - (c) parathyroid glands
  - (d) None of the above

- 28.\*** The sex of the child is determined by the sex chromosomes of
- (a) father
  - (b) mother
  - (c) Both (a) and (b)
  - (d) None of the above
- 29.** Bowman's capsule is a structure that is present in
- (a) liver
  - (b) brain
  - (c) pancreas
  - (d) kidney
- 30.** The normal respiratory rate is
- (a) 6 - 8 cycles/min
  - (b) 16 - 18 cycles/min
  - (c) 26 - 28 cycles/min
  - (d) 36 - 38 cycles/min
- 31.** The structure that connects a bone with another bone is called
- (a) neuron
  - (b) tendon
  - (c) ligament
  - (d) axon
- 32.** Which of the white blood cells are more in number?
- (a) Neutrophils
  - (b) Acidophils
  - (c) Basophils
  - (d) Lymphocytes

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- 33.\*** How many salivary glands are present in the mouth?
- (a) 1 pair
  - (b) 2 pairs
  - (c) 3 pairs
  - (d) 4 pairs
- 34.** In the stomach, hydrochloric acid is secreted by
- (a) T - Cells
  - (b) B - Cells
  - (c) nerve cells
  - (d) parietal cells
- 35.** Haversian canal is present in
- (a) bones
  - (b) kidneys
  - (c) lungs
  - (d) eyes
- 36.** The foetus receives its nourishment from the mother through \_\_\_\_.
- 37.** The finger like projections in the small intestines which are responsible for absorption are called \_\_\_\_.
- 38.** The photo-sensitive pigment that is present in the retinal cell is \_\_\_\_.

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