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VIDYA SIRI COLLEGE OF PHARMACY

(A Unit of Kasipathi Educational Trust ® 157/2017-18)
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FIRST SESSIONAL EXAM Question Paper (THEORY)

2021-22

Branch: D. Pharm

Subject & Subject Code: Human Anatomy & Physiology-I | **Year: I. D. Pharm**

Date: 15/03/2022 | **Marks: 40**

Time: 90 min

Instruction to Candidates:

1) Attempt All three Sections
2) Draw neatly labeled diagrams wherever necessary.

I. Long Answers (Answer any 3 out of 4 questions) 3 X 5 marks=15 Marks.

1. Explain the structure & functions of mitochondria.
2. Describe the location & functions of epithelial, muscular, connective & nervous tissue.
3. Describe with example the different types of WBC & functions.
4. Describe the stages of cell cycle.

II. Short Answers (Answer any 5 out of 6 questions) 5 X 3 Marks= 15 Marks

5. Write a note on endoplasmic reticulum.
6. Explain the different types of cartilage tissue.
7. Enumerate the functions of blood.
8. Classify connective tissue with example & their functions.
9. Write a note on plasma membrane.
10. Draw a neat labelled diagram of cell & label it.

III. Objective Answers (Answer all 10 out of 10 questions) 10 X 1 Marks = 10 marks

11. Write the normal value of red blood cell.
12. What is the lifespan of WBC?
13. Write the composition of blood.
14. What is the normal count of platelets?
15. Write the functions of platelets.
16. Enumerate the functions of plasma.
17. Define embryology & endocrinology.
18. Write the functions of Golgi complex.
19. Lysosomes are called suicide bags of cell. why?
20. Blood is red in colour. Give reason.

SUBMIT YOUR ANSWERS ON OR BEFORE 4:00PM TODAY to anatomyphysiology20@vidyasiricop.edu.in

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1. Mitochondria :-

Mitochondria are called 'Powerhouse of the Cell".

* Structure ⇒ Length - 5-12 μm
  Diameter - 0.5 - 1 μm
* Filamentous or globular in shape.
* It have five component such as -
  i) Outer membrane
  ii) Inner "
  iii) Intermediate Space
  iv) Cristae
  v) Matrix.
* Function ⇒ i) It's power generating unit of the cell.
  ii) Important to maintain proper concentration of calcium ions within the various compartment of the cell.
  iii) Energy transduction through respiration.
  iv) Responsible for thermogenesis.

2. Epithelial ⇒ It is found covering the body and lining cavities and tubes. Also found in the entire exposed surface of the body such as skin and gland.
* This cells are closely packed without any intercellular spaces and lei on the basement membrane.

Muscular ⇒ It is mad up of muscle cells, (muscles fiber). It contracts and relaxes rhythmically.
It attached to bones or internal organs and blood vessels are responsible for movement. Nearly all movement in the body is the result of this tissue.

Connective tissue :—

This contain more collagen fibe and fewer cells than loose connective tissue. This tissue supports, protects and gives structure to other tissues and organs in the body.

Nervous tissue :—

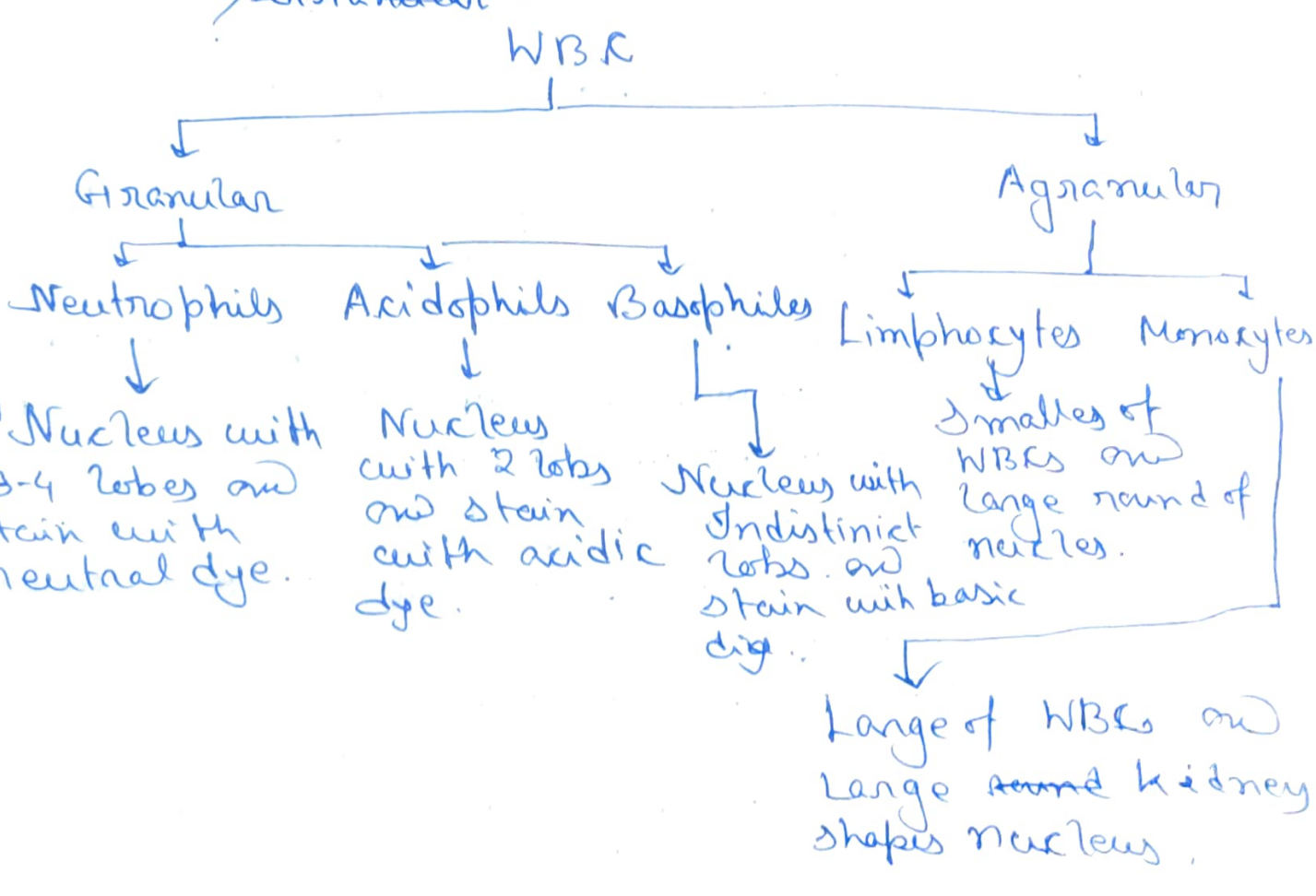
This type of tissue are found in nervous system.

Irritability - the capacity to react various physical and chemical agent.

Conductivity - the ability to transmit the resulting reaction from the point to another.

3. WBC :— This are two type like.

i) ~~Granular~~.



5. Endoplasmic Reticulum :-

Network of tubular and flat vesicular structures in the cytoplasm. An extensive network of closed, flattend membrane-bounded sacs called cisternae. Space inside the ~~tubes~~ tubules is filled with Endoplasmic Matrix.

6. Cartilage tissue :-

There are three type of cartilage tissue such as -

i) Hyaline cartilage ⇒ It's most common ~~found~~ found in the ribs, nose, larynx, etc.

ii) Fibro ⇒ It is found in invertebral discs, joint, capsules, ligaments.

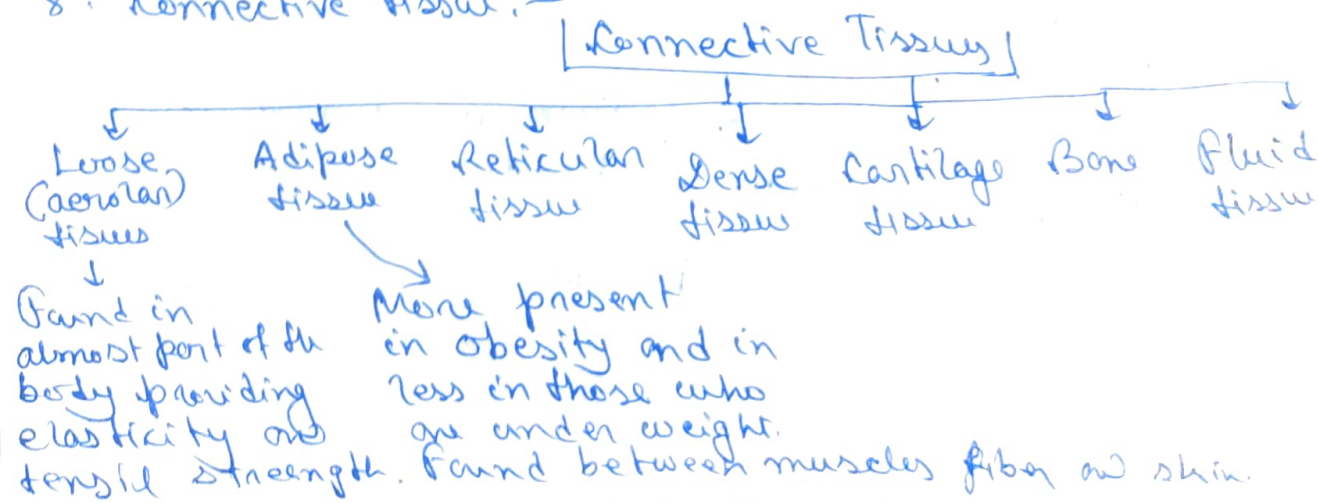
iii) Elastic ⇒ It is found in the external ear epiglottis and larynx.

7. Blood :-

Blood is a special type of fluid connective tissue derived from mesoderm.

* Its supplies essential nutrients in the cell such as glucose, fatty acid and amino acid.
* Transport Oxygen O_2 and Carbon dioxide CO_2 and hormens in the body.
* Protect from pathogens, blood loss and deseases.

8. Connective tissue :-



* Reticular tissue found in all lymph nodes and all organs of lymphatic system.

* Dense connective tissue is two types. like
Fibrous tissue ⇒ found in ligament, tendon, fascia
Elastic tissue ⇒ found in large blood vessel walls the trachea and bronchi and the lung.

9. Plasma Membrane :-
The plasma membrane also called the cell membrane, is the membrane found in all cells that separates the interior of the cell from the outside environment. In bacterial and plant cells, a cell wall is attached to the plasma membrane on its outside surface.

11. Normal value of Reb Blood cell is ~~4.7 - 6.1~~ Hal-
Men ⇒ 4.7 - 6.1 million per microlitre (mcL)
Women ⇒ 4.2 - 5.4 million / cells / mcL.

12. The life span of WBC is 13 to 20 days.

13. The main composition of Blood is
i) WBCs (White blood cells)
ii) RBCs (Red blood cells)
iii) Plasma
iv) Platelets.

14. The normal count of platlates are 150,000 - 4,50,000 platlates per microleter of blood.

15. The main function of platelate is clotting the blood.

The main function of plasma is to take the nutrients, hormones and proteins to part of the body where it is required.

17. Embryology ⇒ The branch of biology and medicine concern with the study of embryos and their development.

~~Endocrin~~
Endocrinology ⇒ Endocrinology is a field in Biology and medicine that ~~deals~~ deals with the endocrine system.

18. Golgi complex :-
It prepare proteins and Lipid fat molecules for use in the other places inside and outside the cell.

19. Lysomes are known as suicide bags of cell because they contain lytic enzymes capable of digesting cells and unwanted meterials.

20. Blood is reed colon because of ~~to~~ hemoglobin which is carried in the blood and function to transport oxygen is iron rich and red colon.