

[BUMS-0723]

Sub. Code : 1206

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

JULY 2023

KAMIL-E-TIB WA JARAHAT

FIRST PROFESSIONAL B.U.M.S. DEGREE COURSE

PAPER VI - MUNAFE-UL-AAZA (PHYSIOLOGY) UNIUG-MZ-PAPER – I

Q.P. Code : 621206

(New Regulations 2021)

Time : 30 Minutes

Maximum : 20 marks

Answer ALL questions.

Choose one correct answer in the box provided in the Answer Script.

No overwriting should be done. Choice should be given in Capital Letters.

Multiple Choice Questions:

(20 × 1 = 20)

1. Degradation of substance takes place in which part of the cell,
(A) Mitochondria (B) Nucleus
(C) Endoplasmic reticulum (D) Lysosomes
2. The antioxidant enzyme is
(A) Cytochrome oxidase (B) Xanthine oxidase
(C) Superoxidase dismutase (D) Cyclo- oxygenase
3. Iron is present in all EXCEPT
(A) Cytochrome oxidase (B) Catalase
(C) Peroxidase (D) Carbonic anhydrase
4. The structure in the cell that is concerned with synthesis of ribosomes is
(A) Nucleus (B) Endoplasmic reticulum
(C) Golgi apparatus (D) Centriole
5. Storage site of Ca^{++} inside the cell
(A) Rough endoplasmic reticulum (B) Smooth endoplasmic reticulum
(C) Golgi apparatus (D) Secretory vesicles
6. The ion that is responsible for the production of resting membrane potential is
(A) Na^+ (B) K^+
(C) Ca^{2+} (D) Cl^-

7. In smooth muscle, excitation contraction coupling is triggered by binding of Ca^{++} with
 - (A) Troponin
 - (B) Calmodulin
 - (C) Tropomyosin
 - (D) Actin
8. Chondrocytes are of cartilage as Osteocytes are to
 - (A) Blood
 - (B) Fat
 - (C) Epithelium
 - (D) Bone
9. Cells that store fat are called
 - (A) Fibroblast
 - (B) Macrophages
 - (C) Adipose Tissue
 - (D) Mast cell
10. Normal albumin/globulin ratio is
 - (A) 2:1
 - (B) 1.7:1
 - (C) 1:1.7
 - (D) 1:2
11. Plasma cells are activated
 - (A) B Lymphocytes
 - (B) T Lymphocytes
 - (C) Macrophages
 - (D) Monocytes
12. Life span of plasma cell is
 - (A) 1-2 weeks
 - (B) 2-3 days
 - (C) 1 month
 - (D) 4-5 week's
13. Maturation defect in RBC is seen in
 - (A) Folic acid and vitamin B12 deficiency
 - (B) Vitamin C deficiency
 - (C) Vitamin D deficiency
 - (D) Iron deficiency
14. The most important stimulus for erythropoietin secretion is
 - (A) Renal failure
 - (B) Hypoxia
 - (C) Hypercapnia
 - (D) Liver disease
15. The blood cell contains heparin is
 - (A) Neutrophil
 - (B) Eosinophil
 - (C) Basophil
 - (D) Monocyte
16. Pernicious anaemia is due to deficiency of
 - (A) Vitamin B6
 - (B) Folic acid
 - (C) Vitamin B12
 - (D) Iron
17. Heme synthesis requires
 - (A) Ferric ion
 - (B) Alanine
 - (C) Succinyl-CoA
 - (D) Lead

18. Thrombopoietin is produced by
(A) Liver (B) Spleen
(C) Lymph node (D) Kidney
19. Plasma cells are transformed
(A) Mast cells (B) Monocytes
(C) B- Lymphocytes (D) Polymorphism
20. Serum does not contain
(A) Calcium (B) Factor VII
(C) Factor VIII (D) Factor XI
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[BUMS 0624]

Sub. Code : 1206

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY

KAMIL-E-TIB WA JARAHAT

FIRST PROFESSIONAL B.U.M.S. DEGREE COURSE

JUNE 2024

PAPER – VI – MUNAFEUL AZA (PHYSIOLOGY) - PAPER – I UNIUG – MZ

Q.P. Code : 621206

(New Regulation)

Time : 30 Minutes

Maximum : 20 marks

Answer ALL questions.

Choose one correct answer in the box provided in the Answer Script.

No overwriting should be done.

I. Multiple Choice Questions: (20 × 1 = 20)

1. The process by which the molecules moves from higher to lower concentration are _____
(A) Phagocytosis (B) Pinocytosis
(C) Diffusion (D) Osmosis
2. Specific gravity of blood is
(A) 1.055 – 1.060 (B) 1.053 – 1.076
(C) 1.35 (D) 2.35
3. Normal bleeding time
(A) 1 to 2 minutes (B) 5 to 6 minutes
(C) 2 to 5 minutes (D) 8 to 10 minutes
4. Endoplasmic reticulum are _____ types.
(A) 2 types (B) 3 types
(C) 4 types (D) None of the above
5. Total time of Cardiac Cycle
(A) 0.8 seconds (B) 0.3 seconds
(C) 0.5 seconds (D) 0.7 seconds
6. S.A node produces cardiac rhythmic impulses per minute.
(A) 20-40/ minute (B) 40-60/ minute
(C) 70-80/ minute (D) None of the above

7. What is pH of blood?
 (A) 5.5 to 7.5 (B) 1.5 to 1.8
 (C) 6.4 to 7.4 (D) 7.4 to 7.5
8. Hexoses are_____
 (A) 3 carbon sugar molecules (B) 4 carbon sugar molecules
 (C) 5 carbon sugar molecules (D) 6 carbon sugar molecules
9. Which does not belongs to Aldose?
 (A) Glucose (B) Fructose
 (C) Galactose (D) Mannose
10. Typical ordinary tissue grow by :
 (A) Amitosis (B) Mitosis
 (C) Meiosis (D) None of the above
11. How many types of Endoplasmic reticulum are there?
 (A) 2 (B) 3
 (C) 4 (D) 5
12. In normal Adult, the blood volume will be :
 (A) 2 litres (B) 3 litres
 (C) 4 litres (D) 5 litres
13. Following are the granulocytes except :
 (A) Neutrophils
 (B) Basophils
 (C) Eosinophils
 (D) Monocytes
14. How many serum proteins are there?
 (A) 2 (B) 3
 (C) 4 (D) 5
15. Powerhouse of the cell :
 (A) Golgi body (B) Mitochondria
 (C) Endoplasmic reticulum (D) Centrosome
16. Eating of cell is called
 (A) pinocytosis (B) phagocytosis
 (C) Both (D) None
17. RBC is composed of _____% of water :
 (A) 50% (B) 65%
 (C) 80% (D) 90%

18. Plasma protein act as _____
(A) Vehicle (B) Buffers
(C) Protein reserves (D) A & B
19. Neutrophils in blood are _____ in number
(A) 60-70% (B) 1-4%
(C) 25-30% (D) 40-50%
20. Deficiency of Vit. A causes
(A) Beri Beri (B) Scurvy
(C) Xerophthalmia (D) Sterility
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Sub. Code : 1206

KAMIL-E-TIB WA JARAHAT

JANUARY 2025 (SUPPLEMENTARY EXAM)

Q.P. Code : 621206

Maximum : 20 marks

Choose one correct answer in the box provided in the Answer Script.

I. Multiple Choice Questions: (20 × 1 = 20)

1. Which of the following chambers of the heart receives oxygenated blood?

2. The rate of lymph flow is :

3. Which of the following is produced by Angiotensinogen

4. The percentage of blood that is present in capillaries is

5. Which organ shows the highest amount of blood flow (ml/100g of tissue in/min)

6. The peripheral resistance is inversely proportional to

- (A) Radium of the vessel (B) Viscosity of blood
(C) Length of the vessel (D) Elasticity of the vessel wall

7. Collateral circulation is established in
 - (A) Lungs
 - (B) Heart
 - (C) Spleen
 - (D) Kidney
8. Precapillary sphincter relaxation occurs due to
 - (A) Local chemicals
 - (B) Sympathetic circulation
 - (C) Circulatory catecholamines
 - (D) Capillary filling
9. Blood pressure in the right ventricle is
 - (A) 25/0 mmHg
 - (B) 25/8 mmHg
 - (C) 100/20 mmHg
 - (D) 120/80 mmHg
10. The vasodilation produced by carbon dioxide is maximum in
 - (A) Kidney
 - (B) Brain
 - (C) Liver
 - (D) Heart
11. One gram of haemoglobin carries what amount of oxygen
 - (A) 1.34 ml
 - (B) 3.40 ml
 - (C) 4.30 ml
 - (D) 14 ml
12. Which plasma protein has the highest molecular weight?
 - (A) Beta globulin
 - (B) Alpha globulin
 - (C) Albumin
 - (D) Fibrinogen
13. The abnormal condition where RBC'S of pathological shapes are present is
 - (A) Poikilocytosis
 - (B) Anisocytosis
 - (C) Polycythaemia
 - (D) Anaemia
14. The term for Decrease in total WBC count is :
 - (A) leucocytosis
 - (B) eucopenia
 - (C) leukemia
 - (D) all of the above
15. Neutrophil nucleus is
 - (A) Unilobed
 - (B) Bilobed
 - (C) Multilobed
 - (D) None of the above
16. The life span of erythrocytes in the circulation is
 - (A) 20 days
 - (B) 1 year
 - (C) 5 weeks
 - (D) 4 months
17. Which of the following is only found in bone marrow
 - (A) Pericytes
 - (B) Astrocytes
 - (C) Megakaryocytes
 - (D) Myocytes

18. The local fuel for hematopoiesis is :
- | | |
|---------------------|---------------------|
| (A) Reticular cells | (B) Fibroblast |
| (C) Fat cell | (D) Osteogenic cell |
19. The active bone marrow is
- | | |
|-----------|-----------------------|
| (A) Red | (B) Yellow |
| (C) White | (D) None of the above |
20. What stimulates the stem cell to form the blood cell
- | | |
|--------------------|---------------------|
| (A) Fibroblast | (B) Macrophage |
| (C) Reticular cell | (D) Osteogenic cell |
-

[BUMS 0325]

Sub. Code : 1206

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

KAMIL-E-TIB WA JARAHAT

FIRST PROFESSIONAL B.U.M.S. DEGREE COURSE

MARCH 2025

PAPER - VI - MUNAFEUL AZA (PHYSIOLOGY - PAPER - I) UNIUG-MZ

Q.P.Code : 621206

(New Regulation 2022)

Time : 30 Minutes

Maximum : 20 marks

Answer All questions.

I. Multiple Choice Questions (20 × 1 = 20)

1. The normal blood cholesterol level :

- | | |
|------------------------|------------------------|
| (A) 60-200mg /100 ml | (B) 120- 200mg /100 ml |
| (C) 150 -240mg /100 ml | (D) 200 -280mg /100 ml |

2. Biconcave discs shaped blood cells :

- | | |
|-----------------|---------------|
| (A) WBC | (B) RBC |
| (C) Lymphocytes | (D) Platelets |

3. Which WBC is known as soldiers of the body?

- | | |
|-----------------|-----------------|
| (A) Neutrophils | (B) Basophil |
| (C) Monocytes | (D) Lymphocytes |

4. An increase in RBC count is known as :

- | | |
|------------------|--------------|
| (A) Erythremia | (B) Anaemia |
| (C) Polycythemia | (D) Leukemia |

5. Who demonstrated blood groups?

- | | |
|---------------------|--------------------|
| (A) Robertkoch | (B) Robert Hooke |
| (C) Karllandsteiner | (D) William Harvey |

6. The normal albumin and globulin ratio in blood is :
(A) 2:1 (B) 1:2
(C) 1:4 (D) 1:5
7. Which of the following are agranulocytes?
(A) Eosinophils & Neutrophils (B) Monocytes & Lymphocytes
(C) Eosinophils & Lymphocytes (D) Basophils & Lymphocytes
8. Which white blood cells resist infections and also involved in allergic reactions?
(A) Lymphocytes (B) Neutrophils
(C) Monocytes (D) Eosinophils
9. Largest WBC is :
(A) Lymphocyte (B) Eosinophil
(C) Monocyte (D) Neutrophil
10. Which one of the common anticoagulant is used for preserving blood?
(A) Sodium Hydroxide (B) Sodium Chloride
(C) Sodium Oxalate (D) Sodium Bicarbonate
11. Rate of diffusion is inversely proportional to :
(A) Concentration difference across membrane
(B) Thickness of membrane
(C) Pressure difference across membrane
(D) Lipid solubility of substance
12. Which tissue regenerates the fastest?
(A) Nervous tissue (B) Skeletal muscle
(C) Epithelial tissue (D) Cartilage
13. Which cell organelle has its own DNA and can self replicate?
(A) Golgi apparatus (B) Nucleus
(C) Mitochondria (D) Endoplasmic Reticulum

14. What is necessary for Na-K pump?
- (A) It has three receptor sites for kions inside
 - (B) It has three receptor sites for kions outside
 - (C) It has three receptor sites for na ions inside
 - (D) It has three receptor sites for na ions outside
15. What type of connective tissue stores energy and insulates the body?
- (A) Cartilage
 - (B) Adipose tissue
 - (C) Bone
 - (D) Blood
16. Major source of Calcium for the contraction of skeletal muscle is :
- (A) ECF
 - (B) Cytosol
 - (C) Mitochondria
 - (D) Sarcoplasmic reticulum
17. Small packets of acetylcholine released randomly from the nerve cell membrane at rest produces
- (A) Inhibitory post synaptic potential
 - (B) Miniature end plate potential
 - (C) Action potential
 - (D) End plate potential
18. The end plate potential is characterized by :
- (A) Propagation
 - (B) All or none law
 - (C) Depolarization
 - (D) Hyper polarization
19. The resting cardiac muscle cell is most permeable to :
- (A) Na
 - (B) Cl
 - (C) K
 - (D) Ca
20. Myosin molecule contains :
- (A) Two heavy chain four light chain
 - (B) Four heavy chain, two light chain
 - (C) One heavy chain, one light chain
 - (D) Two heavy chain, three light chain
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[BUMS 0725]

Sub. Code : 1206

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

KAMIL-E-TIB WA JARAHAT

FIRST PROFESSIONAL B.U.M.S. DEGREE COURSE

JULY 2025 (SUPPLEMENTARY EXAM)

PAPER - VI - MUNAFEUL AZA (PHYSIOLOGY - PAPER - I) UNIUG-MZ

Q.P.Code : 621206

(New Regulation 2022)

Time : 30 Minutes

Maximum : 20 marks

Answer All questions.

I. Multiple Choice Questions (20 × 1 = 20)

1. What is the normal pH of blood?

- | | |
|------------------|------------------|
| (A) 5.35 to 5.45 | (B) 6.35 to 6.55 |
| (C) 7.25 to 7.35 | (D) 7.45 to 7.55 |

2. Nucleus of Eosinophils is _____

- | | |
|-------------|-------------------|
| (A) Round | (B) Spindle shape |
| (C) Bilobed | (D) Oval shape |

3. Which of the following leukocytes is called middle man WBC blood?

- | | |
|-----------------|-----------------|
| (A) Neutrophils | (B) Lymphocytes |
| (C) Eosinophils | (D) Basophils |

4. Decrease in RBC count is known as _____

- | | |
|----------------|------------------|
| (A) Erythremia | (B) Polycythemia |
| (C) Anaemia | (D) Leukemia |

5. Instrument used to measure hemoglobin is _____

- | | |
|----------------------|-------------------|
| (A) Sphygmomanometer | (B) Hemocytometer |
| (C) Hemoglobinometer | (D) Barometer |

6. Content of haemoglobin in 100mg of blood is _____
(A) 10 gram (B) 10 gram
(C) 15 gram (D) 5 gram
7. Antibodies are absent in which of the following blood group?
(A) Blood Group "A" (B) Blood Group "B"
(C) Blood Group "AB" (D) Blood Group "O"
8. Blood clot in vessels is called
(A) Clot (B) Thrombus
(C) Embolus (D) Aneurysm
9. Graveyard of RBC is _____
(A) Spleen (B) Liver
(C) Bone marrow (D) Kidney
10. Blood cell Performs an important role in blood clotting _____
(A) RBC (B) WBC
(C) Lymphocytes (D) Platelets
11. Cell membrane is made up of _____
(A) Hydrophilic phosphate and Hydrophobic fatty acid end
(B) A lipid layer between two protein layer
(C) Cholesterol and Protein bilayer
(D) Hydrophobic Phosphate and Hydrophilic fatty acid end
12. Which tissue type contains goblet cells?
(A) Connective tissue (B) Muscular tissue
(C) Epithelial tissue (D) Nervous tissue
13. Intra cellular digestion is the function of which of the following organelles?
(A) Lysosomes (B) Golgi apparatus
(C) Ribosomes (D) Mitochondria

14. At which side ATPase is present in aNa⁺K⁺ ATPase Pump?
- (A) Extracellular K⁺ side (B) Cytosolic Na⁺ side
(C) Cytosolic K⁺ side (D) Extracellular Na⁺ side
15. What is the main characteristic of skeletal muscle tissue?
- (A) Non-striated and voluntary (B) Striated and involuntary
(C) Striated and voluntary (D) Non-striated and involuntary
16. What is the function of nucleic acids?
- (A) Stores energy (B) Stores genetic information
(C) Physical structure (D) Movement
17. DNA and RNA belong to which group of biomolecule?
- (A) Proteins (B) Carbohydrates
(C) Lipids (D) Nucleic acid
18. A mutation in DNA would initially start with which biomolecules?
- (A) Carbohydrates (B) Nucleic acids
(C) Lipids (D) Proteins
19. ATPase activity of which of the following protein is altered to regulate skeletal muscle contraction?
- (A) Actin (B) Myosin
(C) Troponin (D) Tropomyosin
20. Which of the following statement regarding type II muscle fibers is incorrect?
- (A) They are called slow fibers
(B) Their myosin ATPase activity is high
(C) They contain little myoglobin
(D) They are rich in glycolytic enzymes
-

[BUMS 1025]

Sub. Code : 1206

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

KAMIL-E-TIB WA JARAHAT

FIRST PROFESSIONAL B.U.M.S. DEGREE EXAMINATION

OCTOBER 2025 (SUPPLEMENTARY EXAM)

PAPER - VI - MUNAFE-UL AZA (PHYSIOLOGY - PAPER - I) - UNIUG - MZ

Q.P.Code : 621206

(New Regulation 2021)

Time : 30 Minutes

Maximum : 20 marks

Answer All questions.

I. Multiple Choice Questions (20 × 1 = 20)

1. Lysosome is also known as _____
(A) Sac like bag (B) Suicide bag
(C) Water bag (D) Power plant
2. Blood serum is _____
(A) Viscous (B) Blue colour
(C) Straw colour (D) Solid
3. Main function of erthrocytes is _____
(A) Prevent bleeding (B) Defence action
(C) Transport nutrients (D) Transport Oxygen
4. During growth of tissue cells divide by _____
(A) Meiosis (B) Mitosis
(C) Amitosis (D) None of these
5. Average thickness of RBC is _____
(A) 3.5 μ (B) 2.5 μ
(C) 2.2 μ (D) 2.3 μ

6. Abnormal change in size and shape of the cell is called _____
- (A) Hyperplasia (B) Dysplasia
(C) Metaplasia (D) Neoplasm
7. Quantity of iron in human body is about _____
- (A) 2 g (B) 6 g
(C) 4 g (D) 8 g
8. Heparin is secreted by :
- (A) Basophil (B) Lymphocyte
(C) Macrophage (D) Eosinophil
9. Which of the following is a cell found in connective tissue?
- (A) Reticular Fibre (B) Collagen
(C) Ground substance (D) Fibro blast
10. The structural and functional unit of a muscle cell is :
- (A) Sarcolemma (B) Sacroplasm
(C) Sacromere (D) Muscle fibre
11. Mitochondria are most abundant in :
- (A) Adipose tissue (B) Muscle tissue
(C) Connective tissue (D) Epithelial tissue
12. The life span of platelets is :
- (A) 8-10 hours (B) 8-10 days
(C) 8-10 weeks (D) 8-10 months
13. At the time of birth normal haemoglobin content is :
- (A) 14 gm% (B) 15 gm%
(C) 20 gm% (D) 25 gm%

14. Which group has no agglutinins?
(A) Group Ab (B) Group - O
(C) Group B (D) Group A
15. The principle fluid medium of the cell is _____
(A) Water (B) Lymph
(C) Blood (D) Plasma
16. Rouleaux formation _____
(A) Refers to adherence of RBC's
(B) Directly proportional to size of RBCs
(C) Occurs only in pathological conditions
(D) Accelerates erythrocyte sedimentation rate
17. Lysosomes are formed by :
(A) Agranules ER (B) Granular ER
(C) Golgi complex (D) Cell membrane
18. A person with a blood group "O" will have
(A) Antigen A and B on RBC
(B) Antibody A and B on RBC
(C) Antigen A on RBC
(D) A and B antibody in plasma
19. The rate of lymph flow is :
(A) 10 ml/hr (B) 20 ml/hr
(C) 50 ml/hr (D) 120 ml/hr
20. Which blood type can be transfused to the individual whose blood type is unknown?
(A) AB Positive (B) AB Negative
(C) O Positive (D) O Negative
- _____