

KATHMANDU UNIVERSITY  
End Semester Examination  
February/March, 2019

Marks scored:

Level : B. Pharm.  
Year : II

Course : PHAR 203  
Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date FEB 25 2019

SECTION "A"

[20Q. × 1= 20 marks]

1. These are the organs of mediastinum except  
[a] Esophagus [c] Trachea  
[b] Thymus [d] Lungs
2. About 15% of body weight comprises of  
[a] Plasma [c] Intracellular fluid  
[b] Interstitial fluid [d] Extracellular fluid
3. These substances are transported through lipid bilayer except  
[a] Glucose [c] Oxygen  
[b] Alcohol [d] Carbondioxide
4. These cells shows the longest duration of action potential  
[a] Neuron [c] Cardiac muscle  
[b] Skeletal muscle [d] Smooth muscle
5. One of the followings acts by increasing cGMP in cell  
[a] Angiotensin II [c] Inhibin  
[b] Nitric oxide [d] Insulin
6. The influx of Na<sup>+</sup> ion leads to .....in the cell  
[a] Depolarization [c] Hyperpolarization  
[b] Repolarization [d] No change
7. All of the followings about T tubules are true except  
[a] Small tube run through myofibril  
[b] They contains extracellular fluid  
[c] They are important source of Ca<sup>++</sup> ions  
[d] Helps in transmission of action potential
8. AB- blood group can receive blood from one of the following blood group  
[a] O+ [b] A+ [c] B- [d] AB+
9. It is the progeny of lymphoid stem cell  
[a] RBC [c] Natural killer cells  
[b] Platelets [d] Monocytes
10. It is the fibrin stabilizing factor  
[a] Factor III [c] Factor XI  
[b] Factor VII [d] Factor XIII

11. AV valve are opened and semilunar valve are closed in this phase of cardiac cycle
  - [a] Isovolumetric ventricular relaxation
  - [b] Isovolumetric ventricular contraction
  - [c] Ventricular ejection
  - [d] Ventricular filling
  
12. It is the baroreceptor present in the arch of aorta
  - [a] Aortic bodies
  - [b] Aortic sinus
  - [c] Carotid bodies
  - [d] Carotid sinus
  
13. Resistance to the blood flow is determined by
  - [a] Viscosity of blood
  - [b] Pressure difference
  - [c] Blood volume
  - [d] Heart rate
  
14. The resting membrane potential of SA node is
  - [a] -70 mv
  - [b] -90mv
  - [c] -55mv
  - [d] -40mv
  
15. Granular pneumocytes are responsible for
  - [a] Forming primary lining of alveoli
  - [b] Producing surfactant
  - [c] Providing immunoglobulin
  - [d] Phagocytosis
  
16. Pressure that tends to collapse the lungs is called
  - [a] Pleural pressure
  - [b] Alveolar pressure
  - [c] Collapse pressure
  - [d] Transpulmonary pressure
  
17. Myenteric plexus can be located in
  - [a] Submucosa
  - [b] Serosa
  - [c] Mucosa
  - [d] Muscularis mucosa
  
18. All of the followings about GIP is true except
  - [a] Released from large intestine
  - [b] Release in response to fat in chyme
  - [c] Inhibit gastric motility
  - [d] Stimulate secretion of insulin
  
19. It is the secretion of enterochromaffin like cells
  - [a] Gastrin
  - [b] Histamine
  - [c] HCl
  - [d] Mucus
  
20. Which of the following about exocrine pancreas is true?
  - [a] Composed of islets of langerhans
  - [b] It also secrete trypsin inhibitor
  - [c] Ductal cells secretes various kinds of inactive form of enzymes
  - [d] Its content are drained to the first part of ilium

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Semester : I  
F. M. : 55

SECTION "B"

[5 Q. × 3 = 15 marks]

Answer *ANY FIVE* questions.

1. Give an account on action potential of nerve.
2. Explain how lipid soluble messengers transmit signals in the cells. List 4 lipid soluble messengers.
3. List the cranial and facial bones with their number.
4. Write notes on hemolytic anemia.
5. Give an account on cell mediated immunity.
6. Give an account on:
  - a. surfactant
  - b. alveolar ventilation
7. List all the cell organelles. Explain about cell membrane and endoplasmic reticulum.

SECTION "C"

[5 Q. × 5 = 25 marks]

Answer *ANY FIVE* questions.

8. Elaborate the mechanisms through which water soluble substances get transported across the cell membrane.
9. Elaborate intrinsic pathway of blood clot. Name all the clotting factors that are involve in this process.
10. Define cardiac output. Elaborate the factors affecting cardiac output.
11. Explain short term regulation of blood pressure with labeled diagram.
12. Explain oxygen-hemoglobin dissociation curve with factors that shifts the curve. What is Bohr's effect?
13. Explain how the difference in concentration of O<sub>2</sub> in arterial blood helps to regulate the rate of respiration.
14. Explain the functions and enterohepatic circulation of bile.

SECTION "D"  
[2 Q. × 7.5 = 15 marks]

Answer *ANY TWO* questions.

15. Draw a well labeled diagram of a stomach. List the names of the cells in the gastric pit with their secretions. Explain the mechanisms of HCl secretion in detail.
16. Explain all the events of cardiac cycle with appropriate graph.
17. Explain all the events of muscle contraction that occurs after the presynaptic nerve of neuromuscular junction gets activated.