

Marks Scored:

KATHMANDU UNIVERSITY
End Semester Examination
March/April, 2017

Level : B. Pharm.

Year : II

Course : PHAR 203

Semester : I

Exam Roll No. :

Time: 30 mins.

F. M. : 20

Registration No.:

Date : APR 10 2017

SECTION "A"

[20 Q. × 1 = 20 marks]

1. The following is an example of homeostatic event.
[a] Sweating during exam [c] Developing a headache
[b] Shivering in the cold weather [d] Muscle strain
2.section divides an organ into top and bottom
[a] Sagittal [b] Oblique [c] Coronal [d] Transverse
3. Mitral valve prolapsed is a condition, which causes blood to backflow into the
[a] Right atrium [c] Left ventricle
[b] Right ventricle [d] Left atrium
4. Which of the following is the example of gomphosis?
[a] Humerus-ulna [c] Tooth-alveolus
[b] Femur-innominate [d] Mandible-temporal
5. Most of the Ca^{++} required for contraction of smooth muscle is supplied by
[a] Sarcoplasmic reticulum [c] Calmodulin
[b] Extracellular fluid [d] T tubule
6. "c wave" of atrial pressure curve is formed due to
[a] Slow blood flow into atria
[b] Contraction of atria
[c] Bulging of AV valve
[d] Pulling of AV valve due to forceful ventricular contraction
7. These are the conditions in which high cardiac output can be seen except
[a] Anemia [c] Arteriovenous shunt
[b] Decreased skeletal muscle mass [d] Hyperthyroidism
8. Each 100 ml of RBC can accommodategrams of hemoglobin
[a] 29 [b] 34 [c] 42 [d] 10
9. Beyond the age of 20, most red cells are produced from all of the followings except
[a] Vertebra [b] Ribs [c] Iliac [d] Humeri
10. All of the followings are true about MHC except
[a] Are present on the surface of antigen-presenting cells
[b] Carries fragments of antigen protein to the surface of the cell
[c] MHC-II present antigen to T-helper cells
[d] MHC-I are concerned with product of extracellular antigen

11. This clotting factor is referred as factor XIII
 [a] Prothrombin [c] Tissue thromboplastin
 [b] Fibrin stabilizing factor [d] Hageman factor
12. Amount of air that remain in the lungs at the end of the normal expiration is called
 [a] Vital capacity [c] Functional residual capacity
 [b] Residual volume [d] Expiratory reserve volume
13. Respiratory exchange of gas cannot occur in following cases except
 [a] Normal V_A , zero Q [c] Normal V_A , normal Q
 [b] Zero V_A , normal Q [d] Zero V_A , Zero Q
14. It is the pontine respiratory center
 [a] Dorsal respiratory group of neuron [c] Pneumotaxic center
 [b] Ventral respiratory group of neuron [d] Vasomotor center
15. Which of the following has the highest pH
 [a] Gastric juice [c] Pancreatic juice
 [b] Colonic luminal content [d] Saliva
16. It moves the chyme to and fro and increase its exposure to the mucosal surface
 [a] Peristalsis [c] Haustral contraction
 [b] Segmental contraction [d] Mass movement
17. One of these factors promotes stomach emptying
 [a] Increased food volume in the stomach
 [b] Distension of duodenum
 [c] Increased acidity of the duodenum chyme
 [d] Secretion of secretin
18. When the radius of the resistance vessel is increased, which of the following is increased
 [a] Capillary blood flow [c] Systolic BP
 [b] Viscosity of blood [d] Hematocrit
19. The action potential of skeletal muscle
 [a] Has prolonged plateau phase
 [b] Spreads inward to all parts of the muscle via T-tubule
 [c] Is not essential for contraction
 [d] Is longer than that of cardiac muscle
20. Which term refers to severe chest pain evident during an attack of myocardial ischemia
 [a] Hypoxia [b] Infraction [c] Angina [d] Diaphoresis

KATHMANDU UNIVERSITY
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Level : B. Pharm.
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Time : 2 hrs. 30 mins.

Course : PHAR 203
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F. M. : 55

SECTION "B"

[5 Q. × 3 = 15 marks]

Explain with graphs and figures where ever required. Answer *ANY FIVE* questions.

1. Write notes on lung volumes with the help of spirogram.
2. Elaborate pulmonary ventilation.
3. How does signal get transmitted throughout the heart? What does the different waves of ECG signifies?
4. Differentiate among different types of muscles present in the body.
5. Explain the extrinsic mechanism of blood clotting.
6. Explain the graph of action potential of the nerve.
7. What are obstructive lung diseases?

SECTION "C"

[5 Q. × 5 = 25 marks]

Answer *ANY FIVE* questions.

8. What is cardiac output? What are the different factors that affect stroke volume?
9. Name the different cells present in the gastric pit with their secretions. Explain the detail mechanism of gastric acid secretion.
10. Illustrate neuromuscular transmission with well labeled diagram. What is myasthenia gravis?
11. Give the detail account on all the formed elements of the blood with figure.
12. How do substances get transported across the cell membrane?
13. List the different cell organelles? Explain cell membrane in detail. Write down the concentrations of major ions in ECF and ICF.
14. Write notes on:
(a) Body cavity (b) Heldane effect

SECTION "D"
[2 Q. × 7.5 = 15 marks]

Answer *ANY TWO* questions.

15. How does O₂ get transported in the body? How O₂-Hb curve is formed and mention the factors that shifts the curve? [4+3.5=7.5]
16. What is arterial blood pressure? Explain long term regulation of blood pressure. [2+5.5=7.5]
17. a. Elaborate vomiting reflex. [3.5]
b. Explain in detail on mastication reflex. [4]