KATHMANDU UNIVERSITY
End Semester Examination [C]
May/June, 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 03 JUN 2019

SECTION "A"
[20Q. × 1= 20 marks]

Choose and encircle the most appropriate answer.

1. Normal value of CO_2 in extracellular fluid is
[a] 142 mmHg [b] 40 mmHg [c] 108 mmHg [d] 85 mmHg

2. Digestion of phagocytosed vesicle are done by
[a] Lysosome [b] Centriole [c] Golgi bodies [d] Mitochondria

3. This structure does not allow interaction of actin with myosin
[a] F-actin [b] Tropomyosin [c] Troponin [d] Ca++

4. This chemical has similar action on skeletal muscle as acetylcholine
[a] Neostigmine [b] Physostigmine [c] Nicotine [d] Fluorophosphate

5. All of the followings are the multi unit smooth muscle except
[a] Ciliary muscle [b] Iris muscle
[c] Piloerector muscle [d] Detrusor muscle

6. The duration of action potential of ventricular muscle is about
[a] 0.1 sec [b] 0.2 sec [c] 0.3 sec [d] 0.4 sec

7. The 60% of end diastolic volume that is ejected is called
[a] Systolic blood volume [b] End systolic volume
[c] Ejection fraction [d] Stroke volume

8. The signal from carotid baroreceptors are transmitted to this nerve
[a] Vagus [b] Glossopharyngeal [c] Abducens [d] Trigeminal

9. All of the followings about cardiac muscle excitation is true except
[a] Spread of depolarization in atria is slow because of lack of purkinje system
[b] The first part of ventricle to depolarize is the septum
[c] The last part of ventricle to get repolarized is near the apex
[d] Left ventricle is slightly slower to depolarize than the right

10. These are the factors that decreases heart's ability to pump blood except
[a] Coronary artery blockage [b] Cardiac hypoxia
[c] Hypertrophy [c] Myocarditis

11. RBC can concentrate about ..... gms of hemoglobin in each 100 ml of cells
[a] 24 gms [b] 34 gms [c] 44 gms [d] 54 gms

12. During the middle trimester of gestation, the main organ for RBC production is
[a] Yolk Sac [b] Bone Marrow [c] Liver [d] Spleen

13. These are the stimulus for erythropoietin release except
[a] High blood volume [b] Anemia
[c] Poor blood flow [d] Pulmonary disease

14. Life span of granulocytes in circulating blood is normally
[a] 4-8 mins [b] 4-8 hours [c] 4-5 hours [d] 4-5 days

15. Factor X combines with platelet and this factor to form prothrombin activators
[a] Fibrinogen [b] Calcium [c] Stuart factor [d] Proaccelerin

16. During strenuous exercise, PO_2 can fall to as low as
[a] 5 mmHg [b] 10 mmHg [c] 15 mmHg [d] 20 mmHg

17. The switch off point of inspiratory ramp is controlled by
[a] Pneumotaxic center [b] Medulla
[c] Pons [d] Apneustic center

18. CCK is secreted by this cell in duodenum and jejunum
[a] G cells [b] S cells [c] J cells [d] I cells

19. Pepsin loses its proteolytic activity at pH
[a] 1.8 [b] 3.5 [c] 5 [d] 10

20. All of the followings are the properties of saliva except
[a] It is hypotonic in comparison to plasma
[b] Its alkaline property is important to neutralize refluxed gastric content
[c] The secretion of saliva per day is 1-1.5 L
[d] Its secretion is stimulated during sleep

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03 JUN 2019

Level : B. Pharm.
Year : II
Time : 2 hrs. 30 mins.

Course : PHAR 203
Semester : I
F. M. : 55

SECTION "B"
[5Q. × 3 = 15 marks]

Answer *ANY FIVE* questions.

1. Give an account on asthma and emphysema.
2. Explain in brief on action potential of ventricular muscle.
3. Draw a graph of cardiac cycle illustrating change in volume, pressure and electrical activity of heart.
4. What is rigor mortis? Elaborate on myasthenia gravis?
5. Give an account on anemia and leukemia.
6. Differentiate between skeletal, smooth and cardiac muscle.
7. Explain length tension relationship of cardiac muscle.

SECTION "C"
[5Q. × 5 = 25 marks]

Answer *ANY FIVE* questions.

8. Explain the mechanism of the gastric acid secretion. What are the different factors that alter its secretion?
9. What are the layers of the respiratory membrane? How does O_2 get transported in the body?
10. Elaborate on the chemical control of respiration.
11. Draw a well labeled diagram of the heart. Explain the condition "hypoxia".
12. Explain cell mediated and humoral immunity.
13. Elaborate the mechanism of muscle contraction after the release of Ca^{++} with figure.
14. Give the detail account on endocytosis.

SECTION "D"
[2Q. × 7.5 = 15 marks]

Answer *ANY TWO* questions.

15. Elaborate vomiting reflex. Explain in detail on swallowing reflex. [3 + 4 .5]
16. Explain the generation of action potential in nerves and differentiate it with the electrical activity of GI smooth muscle. Calculate the net filtration pressure if capillary hydrostatic pressure is 37mm Hg, interstitial fluid pressure is 1 mmHg, plasma colloidal osmotic pressure is 25mm Hg and interstitial colloidal osmotic pressure is 0 mmHg. [4 + 3.5]
17. Elaborate on different mechanisms of formation of blood clot. Answer using the proper names of factors involved.