KATHMANDU UNIVERSITY
End Semester Examination [C]
June 2018

Marks Scored:

Level : B.Pharm.
Year : II

Course : PHAR 203
Semester: I

Exam Roll No.:

Time: 30 mins.

F.M. : 20

Registration No.:

Date JUN 13 2018

SECTION "A"
[20 Q. × 1 = 20 marks]

1. Its concentration is very low inside the cell
[a] Na^+ [b] K^+ [c] Ca^{++} [d] Mg^{++}

2. All of the followings about Na^+-K^+ pump is true except
[a] It requires energy to operate
[b] It creates negativity outside the cell
[c] It prevents swelling of the cell
[d] It is primary active pump

3. One of the followings about smooth muscle is true
[a] Multi-unit smooth muscle is found in bile duct
[b] Unitary smooth muscle is also called syncytial smooth muscle
[c] High energy is required for sustained smooth muscle contraction
[d] All fibers of multi-unit smooth muscle are innervated by single nerve ending

4. The time in the cardiac cycle in which intraventricular pressure decreases rapidly but the volume remains same is called
[a] Isometric relaxation [c] Diastasis
[b] Isometric contraction [d] Ejection phase

5. Repolarization of heart is shown by this wave in ECG
[a] P wave [b] QRS complex [c] T wave [d] U wave

6. It occurs during plateau phase of cardiac action potential
[a] Influx of Na^+ [c] Influx of Ca^{++}
[b] Influx of K^+ [d] Efflux of Ca^{++}

7. These are the conditions which increases CO except
[a] Sleep [b] Anxiety [c] Exercise [d] Pregnancy

8. The chemosensitive area in the brain is sensitive to
[a] O2 [b] CO2 [c] HCO_3^- [d] H^+

9. Decrease in affinity of hemoglobin to O2 when pH of blood falls is called
[a] Heldane effect [c] Cyanosis
[b] Bohr's effect [d] Anemia

10. The concentration of Hemoglobin in the blood of average male is
[a] 4.5-6 million/mm^3
[b] 3.5-5 million/mm^3
[c] 4-5.5 million/mm^3
[d] 6.5-8 million/mm^3

11. The major chemicals in the granules of the basophils is
[a] Peroxide [b] Protein X [c] Histamine [d] hypochlorite

12. Antihemophilic factor B is numbered as clotting factor
[a] VIII [a] IX [b] X [c] XI

13. One of the following is the muscle for inspiration
[a] Rectus abdominis
[b] Internal oblique
[c] Scaleni
[d] Internal intercostal

14. This chemical communicates in autocrine fashion
[a] Thyroxine [b] ADH [c] Fibroblast [d] PDGF

15. This structure of thin filament has affinity with Ca^{++}
[a] Tropomyosin
[b] Troponin I
[c] Troponin C
[d] Tropinin T

16. Tissue macrophage in liver is called
[a] Histocytes
[b] Kupffer cells
[c] Payer's patch
[d] Tonsils

17. All of the following factors shifts O2-Hb curve to the right except
[a] Increase in H^+ concentration
[c] Decrease in BPG
[b] Increase in CO2 concentration
[d] Increase in temperature

18. Which of the following is not a pancreatic enzyme?
[a] Carboxypolypeptidase
[b] Proelastase
[c] α dextrinase
[d] Trypsin

19. Crypts of Lieberkuhn can be found on the entire surface of
[a] Esophagus
[b] Stomach
[c] Small intestine
[d] Large intestine

20. Carbohydrates are acted on by
[a] Peptidase,trypsin,chymotrypsin
[b] `Lipases
[c] Peptidases, lipases, galactase
[d] Amyase, maltase, sucrase

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Time : 2 hrs. 30 mins.

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F.M. : 55

SECTION "B"

[5 Q. × 3 = 15 marks]

Answer any *FIVE* questions.

1. Define homeostasis. Elaborate negative feedback mechanism with example.
2. Write notes on surfactant.
3. Explain different methods of ingestion by cell.
4. Give an account on extrinsic pathway of blood clot.
5. Differentiate between agranulocytes.
6. What is myasthenia gravis?
7. Elaborate on vomiting reflex.

SECTION "C"

[5 Q. × 5 = 25 marks]

Answer any *FIVE* questions.

8. Give the detailed anatomy of human heart with figure.
9. Elaborate the method of transport of O_2 from tissue to the lungs.
10. What is immunity? Give an account on cell mediated immunity
11. Elaborate the molecular mechanism of muscle contraction. What is rigor mortis?
12. How do water soluble substances get transported across the cell membrane?
13. Explain the mechanism of HCl secretion.
14. Explain the structure of gall bladder. What are the compositions and functions of bile?

SECTION "D"

[2 Q. × 7.5 = 15 marks]

Answer any *TWO* questions.

15. Explain in detail about the events of action potential of nerve and cardiac muscle, point out the differences between them. [6+1.5]
16. Elaborate long term regulation of BP. Give the JNC 7 classification of BP. What are the pathological conditions that alters cardiac output. [4+2+1.5]
17. Elaborate on neural and chemical regulation of respiration.