

11. Which of these blood cells play role in controlling asthma?
 - a. Basophil
 - b. Eosinophil
 - c. Both a & b
 - d. None
12. Which is the correct sequence of cells of the myelocyte series as they appear during genesis of white blood cells?
 - a. Myeloblast, promyelocyte, megakaryocyte
 - b. Megakaryocyte, myeloblast, promyelocyte
 - c. Myeloblast, megakaryocyte, promyelocyte
 - d. Promyelocyte, Megakaryocyte, myeloblast
13. If glomerular hydrostatic pressure is 55mmHg, blood colloid osmotic pressure is 30mmHg and capsular hydrostatic pressure is 10mmHg, then what is the net outward pressure?
 - a. 10 mmHg
 - b. 15 mmHg
 - c. 20 mmHg
 - d. 25 mmHg
14. The enzyme renin is produced by:
 - a. Renal pyramid
 - b. Major calyx
 - c. Distal tubule
 - d. Juxtaglomerular apparatus
15. Which of these arteries lead to afferent arteriole?
 - a. Arcuate artery
 - b. Lobar artery
 - c. Interlobular artery
 - d. Segmental artery
16. Which one of the following is not the effect of complete acclimatization?
 - a. Formation of new protein
 - b. Refolding of damaged proteins
 - c. Pulmonary ventilation improved
 - d. Increases the risk of heart injury
17. As a result of Bohr effect, oxygen dissociation curve moves:
 - a. Right
 - b. Left
 - c. Up
 - d. Down
18. Which one of the following is the effect of temperature extreme (hot/cold)?
 - a. Enzymatic reactions hampered
 - b. Sweating
 - c. Shivering
 - d. Pilorelaxation
19. What are the substances produced by bacteria present in the large intestine to fulfill our body's requirements?
 - a. Vitamins
 - b. Proteins
 - c. Starch
 - d. Lipids
20. Which one of the following enzymes converts milk to curd inside the stomach?
 - a. Pepsin
 - b. Renin
 - c. Mucin
 - d. Ptyalin

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(Descriptive)

Time : 2 hr. 30 mins.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Write how the neurons are classified. Explain the ultrastructure of a neuron. 4+6=10
2. Name the various contractile proteins present in muscle. Explain the molecular mechanism of contraction of skeletal muscle. 2+8=10
3. What is thermal stress? Discuss the neural and hormonal regulations of thermal stress. 2+8=10
4. What is glycogenolysis and gluconeogenesis? Mention the activities of insulin and glucagon. Name the hormones involved in digestion of food. 4+4+2=10
5. What is hemostasis and what are the events involved? Explain the process of blood coagulation. 4+6=10
6. Write down the organs and functions of urinary system. Discuss the formation of urine in nephron. 5+5=10
7. Describe the structure of testis. Draw a schematic diagram of testicular hormone biosynthesis. What are the main functions of testicular hormones? 4+3+3=10
8. Write short notes on *any two*: 2×5=10
 - a) Biosynthesis of estrogen and its functions.
 - b) Biosynthesis of insulin and structure of insulin receptor.
 - c) Types of hormone receptors.
 - d) Secretion and functions of posterior pituitary hormone.

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