

B. PHARM.
FIFTH SEMESTER
PHARMACOLOGY-II
BP-503T [SPECIAL REPEAT]
(USE OMR SHEET FOR OBJECTIVE PART)

SET
A

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

(Objective)

Marks : 20

Choose the correct answer from the following:

$1 \times 20 = 20$

- Palpitation in heart is a symptom of ?
 - CHF
 - Cardiac arrhythmia
 - Myocardial Infarction
 - Low blood pressure
- Which of the following categories is also known as Class III anti Arrhythmic agents ?
 - Ca²⁺ channel blockers
 - Na⁺ channel blockers
 - K⁺ Channel blockers
 - β Blockers
- During cardiac action potentiation the Na⁺ ions enters through the Na⁺ channels during which phase ?
 - Phase 2
 - Phase 0
 - Phase 3
 - Phase 4
- The resting membrane potential can be calculated using the ..
 - Nernst equation
 - Goldman Hodgkin eqn
 - Goldman Hodgkin Katz voltage eqn
 - Goldman equation
- In a electrocardiogram, the depolarization of the atria is denoted by
 - P wave
 - QT interval
 - T wave
 - ST segment
- Which of the following hyperlipidemic drug classes has an adverse effect of reducing bile acid secretion?
 - Bile acid sequestrants
 - Sulfonylureas
 - HMG CoA Reductase
 - Fibrates
- Hypovolemic shock would lead to
 - Insufficient organ perfusion
 - Haemorrhage
 - Trauma
 - Third spacing of fluid
- Which of the following classes of diuretics inhibits Aldosterone induced proteins ?
 - Osmotic diuretics
 - Carbonic anhydrase inhibitors
 - Loop diuretics
 - Potassium sparing diuretics
- Which enzyme catalyzes the following reaction $H_2CO_3 \rightleftharpoons H_2O + CO_2$ into $H_2CO_3 \rightleftharpoons HCO_3^- + H^+$.
 - Carbonic anhydrase
 - Protein kinase
 - Carbonic acid anhydrase
 - Carbohydrase

10. The plug formation is activated by a glycoprotein called
 - a. Adenosine diphosphate
 - b. Thromboxane A₂
 - c. Coagulation cascade
 - d. Von Willebrand factor
11. Why is histamine inactive orally ?
 - a. Because it gets degraded by the liver
 - b. Because it cannot get absorbed from stomach
 - c. Because there is no histamine receptor in stomach
 - d. Because action of histamine is diminished from stomach
12. During which of the following condition the metatarsal-phalangeal joint is affected most oftenly
 - a. Rheumatoid arthritis
 - b. PCOS
 - c. Gout
 - d. Parkinson's Disease
13. The analgesic activity of NSAID's are carried out by
 - a. PGE₂ synthesis
 - b. By decreasing pain sensation
 - c. By activating PGI
 - d. By deactivating PGI₂
14. Which category of NSAID's cause respiratory depression upon overdose
 - a. Propionic acid derivatives
 - b. Acetic acid derivatives
 - c. Salicylates
 - d. Selective COX₂ inhibitors
15. Which of the following prostaglandins increase gastric mucus secretion ?
 - a. PGI₂
 - b. PGE₂
 - c. PGF₂
 - d. PGF_{2α}
16. Which of the following is a function of FSH
 - a. Stimulation of lactation
 - b. Metabolism of fats in liver
 - c. Synthesis of thyroid hormone
 - d. Growth of reproductive system
17. The function of T₃ inside the nucleus is modulated by binding to
 - a. Tyrosine kinase receptor
 - b. Retinoid X receptor
 - c. Deiodinase enzyme
 - d. Thyroid peroxidase
18. Insulin receptor is a type
 - a. GPCR
 - b. Adenosine receptor
 - c. Nuclear receptor
 - d. Tyrosine kinase receptor
19. Glucose uptake inside a normal cell is regulated by which transporter system ?
 - a. GLUT₂
 - b. GLUT₄
 - c. GLUT₃
 - d. Insulin receptor
20. After its synthesis, Insulin inside the β-cells are stored in
 - a. Nucleus
 - b. Golgi apparatus
 - c. Endoplasmic reticulum
 - d. Granules

(PART-B : Descriptive)

Time : 2 hrs. 30 min.

Marks : 35

[Answer any seven(7)]

1. Explain the physiology of Renin Angiotensin Aldosterone system. Classify anti hypertensive and anti anginal drugs. (MOA not needed) 2+2+1
=5
2. Write a short note on Electrocardiogram. Describe the mechanism of action of Digoxin (with diagram). 2.5+2.5
=5
3. Write the classification of drugs used in Hyperlipidemia. Write its mechanism of action. 1+4=5
4. Write a short note on anticoagulants and the pathogenesis involved in hypovolemic shock. 2+3=5
5. Write the various processes involved in blood clotting. 5
6. Write a short note on pathophysiology involved in GOUT and Rheumatoid Arthritis. 2.5+2.5
=5
7. Write a note on the synthesis of Thyroid hormone (T3 and T4). 5
8. Write a on the biosynthesis of Prostaglandins, Thromboxanes and Leukotrienes. 3+2=5
9. Classify Oral Hypoglycemic agents. Write its mechanism of action. 1+4=5

PART-C: Long type questions

[Answer any two (2) questions]

1. Explain the processes involved in the synthesis and regulation of Insulin. 10

2. Classify Diuretics. Explain the mechanism of action with diagrammatic representation. 2+8=10

3. Explain the different types of tachycardia and bradycardia. Write a note on the different classes of drugs used in Cardiac Arrhythmia. 4+6=10