

**B. PHARM:
FIFTH SEMESTER
PHARMACOLOGY-II
BP503T [SPECIAL REPEAT]**
[USE OMR SHEET FOR OBJECTIVE PART]

**SET
A**

Duration : 3 hrs.

Full Marks : 75

Time : 30 min.

(PART-A: Objective)

Marks : 20

Choose the correct answer from the following:

1×20=20

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

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**