BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Pharm-2020/B.Pharm-2021/B.Pharm-2022
Course Name – Pharmacology II
Course Code - BP503T
(Semester V)

Full Marks : 75 **Time : 3:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 20=20

1. *Choose the correct alternative from the following :*

(i) Chocse correct option, pernicious anemia is developed due to deficiency of_____
   a) Erythropoetin b) Vitamin B12
   c) Iron d) Vitamin B6

(ii) Select which receptor histamine affects to stimulate gastric acid secretion.
   a) H1 b) H2
   c) H3 d) H4

(iii) Select the drug which increase digoxin plasma concentration by a pharmacokinetic mechanism.
   a) Captopril b) Hydrochorothiazide
   c) Lidocaine d) Quinidine

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(v) Identify the characteristic property of autacoid.
   a) They are produced by specific endocrine glands b) They act at distant target cells via the bloodstream
   c) They have prolonged effects compared to hormones d) They are produced locally and act on nearby tissues

(vi) Select the option not representing an autacoid.
   a) Histamine b) Bradykinin
   c) Serotonin d) Oxytocin

(vii) Identify the enzymatic processes involved in the synthesis of Histamine from the amino acid Histidine.

a) Oxidative deamination and decarboxylation
b) Hydrolysis and methylation
c) Decarboxylation of histidine and methylation of histamine
d) Methylation of histidine and oxidative deamination of histamine

(viii) Identify the enzyme responsible for the synthesis of Leukotrienes from Arachidonic acid.

a) Cyclooxygenase (COX)
b) Lipoxygenase (LOX)
c) Hydrolase
d) Phospholipase A

(ix) Choose the type of receptors by which Bradykinin exerts its effects.

a) G protein-coupled receptors
b) Tyrosine kinase receptors
c) Ligand-gated ion channels
d) Nuclear receptors

(x) Identify the primary active form responsible for Aspirin's pharmacological effects.

a) Acetylsalicylic acid
b) Prostaglandins
c) Salicylic acid
d) Thromboxane A2

(xi) Identify the hormone responsible for triggering ovulation in females and stimulating the production of sex hormones in both males and females.

a) Prolactin (PRL)
b) Growth Hormone (GH)
c) Luteinizing Hormone (LH)
d) Adrenocorticotropic Hormone (ACTH)

(xii) Select the single releasing factor involved in the regulation of FSH and LH secretion.

a) Estrogen
b) Progesterone
c) Testosterone
d) Gonadotropin-Releasing Hormone (GnRH)

(xiii) Choose the endocrine disorder occurred due to excess production of ACTH.

a) Cushing's syndrome
b) Hypothyroidism
c) Precocious puberty
d) Acromegaly

(xiv) Choose the enzyme primarily targeted by thioamides to inhibit the synthesis of thyroid hormone.

a) Thyroglobulinase
b) Thyroid peroxidase
c) Thyroid kinase
d) Thyroxine deiodinase

(xv) Choose the active form of vitamin D responsible for enhancing calcium absorption in the intestines.

a) Vitamin D2
b) Calcitriol
c) Vitamin D3
d) Vitamin D5

(xvi) Choose the hormone promotes bone resorption, releasing calcium and phosphate into the bloodstream.

a) Insulin
b) Calcitonin
c) Parathyroid hormone
d) Estrogen

(xvii) Identify the main forms of Vitamin D.

a) Vitamin D1 and D2
b) Vitamin D2 (ergocalciferol) and vitamin D3 (cholecalciferol)
c) Vitamin D3 and vitamin D4
d) Vitamin D5 and vitamin D6

(xviii) Select the form of vitamin D synthesized in the skin upon exposure to UV radiation.

a) Vitamin D1
b) Vitamin D2
c) Vitamin D3
d) Vitamin D4

(xix) Identify the major circulating form of vitamin D, used as a marker to assess vitamin D status.

a) Vitamin D1
b) Vitamin D2
c) Vitamin D3
d) Calcidiol (25-OH D)

(xx) Select the condition caused by Vitamin D deficiency.

a) Hypocalcemia and osteoporosis
b) Hypercalcemia and osteoporosis
c) Hypocalcemia and rickets/osteomalacia
d) Hypercalcemia and rickets/osteomalacia

Group-B

(Short Answer Type Questions) 5 x 7=35

2. Write about different drugs affecting 5-HT system. (5)
3. Explain the physiological action of leukotrienes. (5)
4. Explain the actions of bradykinin. (5)
5. Describe the plasma volume expander. (5)
6. Define and classify diuretics with suitable examples. (5)
7. Illustrate the uterine relaxants. (5)

OR

Explain about oral contraceptives. (5)

8. Illustrate the mechanism of action of acetazolamide. (5)

OR

Illustrate the mechanism of action of spironolactone. (5)

Group-C

(Long Answer Type Questions) 10 x 2=20

9. Describe the mechanism of action , pharmacokinetics , adverse effects and use of acetazolamide. (10)
10. Illustrate the bioassay of ACTH. (10)

OR

Explain the bioassay of oxytocin. (10)

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