Total No. of printed pages = 4

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2023

B.Pharm. 4th Semester End-Term Examination

PHARMACOLOGY – I THEORY

Full Marks – 75   Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer question No. 1 and any *four* from the rest.

I.   Answer ALL the questions :   (20 × 1 = 20)

1.   (i)   Majority of drugs cross biological membrane by

(a)   Filtration

(b)   Active transport

(c)   Passive diffusion

(d)   Endocytosis

(ii)   Weakly acidic drugs

(a)   Excreted faster in alkaline urine

(b)   Are highly ionized in gastric juice

(c)   Don't cross blood brain barrier

(d)   None

(iii) Therapeutic index of a drug is the measure of

(a)   Dose

(b)   Affinity

(c)   Safety

(d)   Potency

[Turn over

(iv) Effector systems of GPCR

    (a) cAMP

    (b) Phospholipase C inositor Phosphate

    (c) Ion Channels

    (d) All

(v) Following receptor is present in muscle end plate

    (a) N_N (b) N_M

    (c) M_1 (d) M_2

(vi) Action of Pilocarpine includes following **except:**

    (a) Salivation   (b) Sweating

    (c) Miosis   (d) Tachycardia.

(vii) Blood Vessel Contains following receptors

    (a) M_1 (b) N_N

    (c) α_1 and β_2 (d) None.

(viii) Atracurium can be used as

    (a) Local anesthetic

    (b) Adjuvant to General Anaesthesia

    (c) Antihypertensive.

    (d) Mydriatic

(ix) Adrenaline is administered with Local Anesthetic to

    (a) Minimize ADR

    (b) Increase the duration of action

    (c) Reverse the effect.

    (d) None of above

(x) Dissociative anesthesia is produced by

    (a) Droperidol

    (b) Propofol

    (c) Ketamine

    (d) Diazepam

(xi) Following ion channel is attached with $GABA_A$ receptor

    (a) Sodium

    (b) Calcium

    (c) Potassium

    (d) Chloride

(xii) Fluoxetine is

    (a)   Tricyclic antidepressant

    (b) SSRI

    (c)   MAO inhibitor

    (d) Atypical Antidepressant.

(xiii) Morphine can cause

    (a)   Analgesia

    (b) Miosis

    (c)   Respiratory depression

    (d) All

(xiv) An orphan drug

    (a)   Is very Cheap

    (b) Doesn't have therapeutic value

    (c)   Is required for the treatment of rare disease

    (d) Has no side effect.

(xv) Minimal alveolar concentration of an inhalation anesthetic is a measure of its

    (a)   Affinity   (b) Potency

    (c)   Diffusibility   (d) Side effects.

(xvi) Atenolol is

    (a)   Selective β 1 Blocker   (b) Selective β 2 blocker

    (c) β 1 + β 2 blocker   (d) None of above

(xvii) Following drug is used to treat Mania

    (a)   Lithium

    (b) Lorazpam

    (c)   Phenobarbitone

    (d) Selegiline

(xviii) Higher the therapeutic index

    (a)   Less absorption of drug

    (b) Drug is toxic

    (c)   Drug have no action

    (d) Safer the drug

(xix) When the body becomes less responsive to a drug's effects over time and requires higher doses to achieve the same therapeutic effect, is known as

(a) Addiction   (b) Dependence

(c) Tolerance   (d) Resistance

(xx) Following is an inhibitory neurotransmitter

(a) GABA   (b) Glycine

(c) Both (a) and (b)   (d) None of Above

II. Answer any *seven*

2. What are neuroleptics? Classify it and write the MOA of typical neuroleptics with ADR.   (5)

3. Explain in brief about the excretion of drugs through urine.   (5)

4. Classify local anesthetics and mention its MOA and ADR.   (5)

5. Classify receptors. Write a note on JAK/STAT binding receptors.   (1 +4=5)

6. Enumerate the synthesis, storage and release of acetylcholine in nerve ending. Mention its pharmacological action in different organs.   (2.5+2.5=5)

7. Write down the classification and MOA of Antiepileptic drugs.   (5)

8. Explain in brief about first order and zero order kinetics of elimination of drugs.   (2.5+2.5 =5)

9. Define Parkinson's disease. Write in brief about the rationale of using Levodopa with Carbidopa and mention their side effects.   (5)

10. Describe about the different phases of drug discovery and evaluation.   (5)

III. Answer any *two*

11. What is Adverse Drug Reactions? Classify it and write in brief about different types of ADR with examples.   (2+8=10)

12. Define sedatives and hypnotics. Classify with suitable Examples. Explain the MOA of different class with other use and ADR.   (1+2+7 =10)

13. Explain in details about various mechanism of biotransportation of drugs within human body.   (10)