

26-11-15

Sem-IV = (CBSEGS) Pharmacology - I

QP Code : 21741

(3 Hours)

[Total Marks : 70

- N.B. :** (1) All questions are **compulsory**.
(2) **Figures** to right indicate **full marks**.

1. (a) Answer the following :

- (i) Define :- (i) Bioavailability (ii) Bioequivalence
- (ii) Name the factors affecting plasma half life.
- (iii) What are enzyme linked receptors ? Classify them giving examples of each type.
- (iv) Give classification of anti-hypertensive drugs.
- (v) What are the clinical uses of skeletal muscle relaxants ?
- (vi) Give the mechanism of action of Reserpine.

12

(b) (i) Define metabolism. What purpose does it serve ?

3

(ii) Enlist factors modifying drug action.

(iii) Classify cholinergic muscarinic receptors giving examples of agonists and antagonists at these receptors.

15

2. (a) Answer any **two** of the following :

8

(i) What are phase I reactions ? Give the different types of Phase I reactions ?

(ii) What are the various routes of administration of a drug ? Write briefly on each route.

(iii) Explain the renal route of excretion

15+17

= 26

(b) Write short notes on any **one** of the following :

3

(i) Discuss nephrotoxicity. Give examples of drugs causing nephrotoxicity.

(ii) What are mutagens ? How do they differ from carcinogens ?

3. (a) Answer any **two** of the following :

8

(i) Explain the effector pathways for GPCR.

(ii) What is enzyme induction ? Give examples of drugs which are potent enzyme inducers.

(iii) What is drug potency, drug efficacy and drug selectivity ? Explain with examples.

26+17

39

(b) Answer any **one** of the following :

3

(i) Classify adrenergic alpha receptors. Give location and actions on their activation.

(ii) Write a short note on acetylcholine esterase inhibitors.

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4. (a) Answer any **two** of the following : 8
- (i) Describe synthesis, storage, release and metabolism of epinephrine and norepinephrine.
 - (ii) Explain in detail the therapeutic effects of anticholinergic drugs.
 - (iii) Classify ganglion blocking agents. Give the mechanism of action of any one drug.
- (b) Answer any **one** of the following :
- (i) Explain the mechanism of action of tyramine.
 - (ii) Classify beta adrenoceptor antagonists. Give their uses in the therapy of cardiovascular disease.
5. (a) Answer any **two** of the following : 8
- (i) Write a short note on calcium channel blockers in the management of cardiovascular disease. Classify them giving examples of each class.
 - (ii) Classify drugs used in antihyperlipidemic therapy. Write a short note on fibrates.
 - (iii) Classify anti-hypertensive drugs with examples. Write briefly about their mechanism of action.
- (b) Answer any **one** of the following : 3
- (i) What is the mechanism of action of ACE inhibitors. Give examples.
 - (ii) What is the effect of digitalis glycosides in congestive cardiac failure.
6. (a) Answer any **two** of the following : 8
- (i) Explain the use of diuretics in hypertension.
 - (ii) When will potassium sparing diuretics be administered to a patient ?
 - (iii) Give therapeutic classification of adrenergic drugs. Write a note on CNS stimulants.
- (b) Answer any **one** of the following : 3
- (i) How does age and gender affect drug action ?
 - (ii) Define TDM. What is its significance in drug therapy ?
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