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Total No. of printed pages = 6

PY 132405

Roll No. of candidate

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2017

B. Pharm. 4th Semester End-Term Examination

PHARMACOLOGY - I

Full Marks – 100 Pass Marks – 35 Time – Three hours

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

1. (A) Choose the correct word and fill in the blanks / write true or false of the following :

(1+1)×4=8

(i) (a) _____ was called father of modern pharmacology. (Francois Magendie / Claude Bernard / Oswald Schmiedeberg)

(b) Shri Ram Nath Chopra is called father of Indian Pharmacology. (True/ False)

[Turn over

- (ii) (a) Catastrophic effect is the major disadvantage of _____ route of drug administration. (Oral / IM / SC / IV).
- (b) Phase I metabolic reaction always makes the drug molecule polar for easy excretion. (True / False)
- (iii) (a) Exocytosis of acetylcholine during cholinergic transmission can be blocked by _____ (Hemicholinium / Botulinum toxin / Vesamicol).
- (b) All the autonomic nervous system effector site receptors are G-Protein coupled receptors. (True / False)
- (iv) (a) Adrenalin produce fall of blood pressure after brief rise due to action on _____ receptor. (α_2 / β_2 / M2)
- (b) Psychomimetics are used for therapy of psychoses. (True/ False)

(B) Answer any *five* questions : $2 \times 5 = 10$

- (i) Define therapeutic index and write its significance.

- (ii) Define plasma clearance with its significance.
- (iii) Write the major advantage of rectal route of drug administration.
- (iv) Distinguish true and pseudo tolerance.
- (v) Write the chemical feature of local anaesthetics.
- (vi) Orthostatic hypotension is a common side effect of alpha adrenoceptor blocker. Justify the statement.
- (vii) Why opioid analgesics are called narcotic analgesics.

(C) Answer any *four* questions : $3 \times 4 = 12$

- (i) Define the terms agonist, antagonist and inverse agonist.
- (ii) Write the major advantages of IV route of drug administration.
- (iii) Define and write significance of apparent volume of drug distribution.
- (iv) Write the biosynthetic pathway for synthesis of nor-adrenaline.

(v) Define neurotransmitter, neuromediator and neuromodulator.

(vi) Compare the action of depolarizing and non-depolarizing NMJ blocker.

2. Answer any *eight* questions : 5×8=40

(i) Discuss the factors affecting absorption after oral route of administration.

(ii) Explain the pharmacological basis of drug dependence.

(iii) Write the characteristics of cholinergic transmission.

(iv) Write the specific therapeutic utility of the following cholinergic blockers :

(a) Ipratropium (b) Tolterodine (c) Telenzipine
(d) Dicyclomine (e) Tropicamide.

(v) Write the pharmacological action of atropine.

(vi) Write the specific therapeutic utility of the following adrenergic drugs :

(a) Mephentarmine (b) Xylometazoline
(c) Dobutamine (d) Terbutaline (e) Ritodrine.

- (vii) Write the major side effects of Beta blocker and muscarinic blockers.
- (viii) Write the systemic pharmacological action of alcohol.
- (ix) What are endogenous opioids ? Write the mechanism of action of opioid analgesics.
- (x) Write the mechanism of action and therapeutic utility of local anesthetics.
- (xi) Write the clinical management of Parkinsonism.
- (xii) Write the characteristics and utility of combined effect of drugs.

3. Answer any *three* questions : 3×10=30

- (i) What do you mean by drug metabolism ? Write the significance and biochemical pathways of different phases of drug metabolism. 1+9=10
- (ii) What do you mean by sympatholytics ? Classify sympatholytics with example. Write the therapeutic utility and major side effects of each class of agents. 1+4+5=10

- (iii) Define anesthesia and general anaesthesia. Write the characteristics of different stages of general anaesthesia. Explain the factors effecting induction depth of anaesthesia. $2+4+4=10$
- (iv) What do you mean by convulsion and epilepsy ? Classify antiepileptic drugs with example. Write the mechanism of action and major side effects of Sodium valproate and Clonazepam. $2+4+4=10$
- (v) What are psycho-pharmacological agents ? Classify neuroleptics with example. Write the advantage and disadvantage classical and atypical neuroleptics. $2+4+4=10$