

ASTU (Reg) - 05.06.15 (4th Sem.)

Total No. of printed pages = 4

PY 132405

Roll No. of candidate

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2015

**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) Define the term 'MAC' in case of general anaesthetics. 2
- (b) Name one ultrashort acting barbiturate along with its use. 2
- (c) Select the drug which is not a potent inducer of microsomal enzyme. 2
  - (i) Phenytoin
  - (ii) Phenobarbitone
  - (iii) Carbamazepine
  - (iv) None of the above.
- (d) Name two anti-anxiety drug belonging to the chemical class of 'Azapirones'. 2

[Turn over

(e) The  $\beta_1$  antagonist having shortest duration of action :

esmolol, atenolol, metoprolol. 2

(f) Why codeine is not recommended in children's cough syrup ? 2

2. Answer any six questions : 6×3=18

(a) Why propranolol is not advised to patients suffering from bronchial asthma ? 3

(b) What do you mean by First Pass Metabolism of a drug ? 3

(c) Why aspirin is useful in cardiovascular diseases ? 3

(d) Define the term 'loading dose' of a drug. 3

(e) Discuss the mechanism of action of barbiturates. 3

(f) Why carbidopa is administered along with L-Dopa ? 3

(g) If volume of distribution (Vd) of a drug is very high, then what does it indicate ? 3

(h) SSRI like fluoxetine, paroxetine normally elevate plasma level of Tricyclic Antidepressant (TCA). Justify this statement with proper reasoning. 3

3. Answer any eight questions : 8×5=40

(a) Schematically represent the bio-synthesis of catecholamines (adrenaline and non-adrenaline) starting from tyrosine and also mention the name of specific enzymes involved in the above biosynthesis. 5

(b) Write a short note on selective COX-2 inhibitors. 5

(c) What do you mean by Michaelis Menten Elimination Kinetic ? 5

(d) Classify antipsychotic drugs. 5

(e) Briefly discuss the actions of acetyl-choline on heart and blood vessels. 5

(f) Write in brief about pharmacokinetics of TCA cycle. 5

(g) Briefly outline the adverse effects of L-DOPA used as an antiparkinsonian drug. 5

(h) How acute morphine poisoning can be treated ? 5

(i) Write a note on importance of protein binding of a drug. 5

(j) Briefly discuss the different stages of anaesthesia. 5

4. Answer any *three* questions :  $3 \times 10 = 30$

(a) What do you mean by Plateau Principle of drug accumulation ? Mention the therapeutic uses of muscarinic antagonist along with examples.  $5+5=10$

(b) Why aspirin is contraindicated in patients suffering from peptic ulcer ? Name two semisynthetic opiates. Write the name of a synthetic opioid, which is generally administered to patients in the form of transdermal patch.  $4+3+2+1=10$

(c) Distinguish between competitive and non-competitive enzyme inhibition. Write a note on 'preanaesthetic medication'.  $5+5=10$

(d) Define the term 'bioavailability' of a drug. What are the factors that affect G.I. absorption of drugs ? How 'age' and 'sex' affect dosing of a drug ? Explain why adrenaline is added to a local anaesthetic.  $2+3+3+2=10$

(e) Write short notes on any *two* of the following :  $5 \times 2 = 10$

(i) Uricosoric agents

(ii) NSAIDS

(iii) Renal excretion of drugs.