

UG Odd Semester (CBCS) Exam., December—2016

PHARMACEUTICAL SCIENCE

(5th Semester)

Course No. : BPH-507 (C)

(Pharmacology-I)

Full Marks : 75

Pass Marks : 30

Time : 3 hours

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

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. Answer the following in brief (any *five*) : $3 \times 5 = 15$

- (a) Define agonist and compare partial and full agonists.
- (b) Compare the feature of competitive and non-competitive antagonists.
- (c) Define and write the significance of TI, LD_{50} and ED_{50} .

- (d) Explain PD_2^1 , PA_2 and PD_2 values.
- (e) Explain plasma half-life and clearance.
- (f) Explain the terms pharmacotherapy, chemotherapy and toxicology.

2. Answer the following in short (any *three*) :

$5 \times 3 = 15$

- (a) Write the advantage and disadvantage of IV route of drug administration.
- (b) What do you mean by receptors? Give IUPHAR classification of receptors with example.
- (c) Write significance and pathways of drug metabolism.
- (d) Explain feature and pharmacological feature of drug dependence.

UNIT—II

3. (a) Write the mechanism of action and major therapeutic utility of the following drugs (any *five*) : $2 \times 5 = 10$
- (i) Bethanechol
 - (ii) Ipratropium

(3)

- (iii) Tolterodine
- (iv) Fenoterol
- (v) Ritodrine
- (vi) Xylometazoline
- (vii) Esmolol

(b) Explain the mechanism of action and characteristic feature of local anaesthetics. 5

4. (a) Write in brief about cholinergic transmission and its characteristics. 7

(b) Classify adrenergic receptors and describe functional response of these receptors in different parts/ systems of our body. 8

UNIT—III

5. (a) Describe the mechanism of action and systemic pharmacological effect of ethyl alcohol. 9

(b) Classify anti-epileptic drug with example. Explain the mechanism of action, therapeutic utility and side effects of sodium valproate or ethosuximide. 3+3=6

(4)

6. (a) Write the characteristics of different stages of general anaesthesia. Explain the factors affecting depth of anaesthesia by volatile anaesthetics. 5+4=9

(b) Compare the mechanism of action and therapeutic utility of opioid and non-steroidal analgesic antiinflammatory agents. 6

UNIT—IV

7. What do you mean by psychopharmacological agents? Classify neuroleptics with example. Discuss the therapeutic utility and side effects of typical and atypical neuroleptics. 15

8. (a) Compare among symptoms/ manifestations of schizophrenia, depression and anxiety disorders. Explain the functional and biochemical basis of depression. 6

(b) Classify antidepressants with example. Discuss efficacy and side effects of different classes of antidepressants. 3+6=9

(5)

UNIT—V

9. Write the etiology and symptoms of Parkinson's disease. Classify anti-Parkinsonian drugs with example. Discuss the efficacy and unwanted effects of levodopa. $4+3+8=15$
10. Classify CNS stimulants with example. Compare between the pharmacological action and therapeutic utility of amphetamine related drugs and methylxanthines. $5+10=15$

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