

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BPHARM
BRANCH: PHARMACY

SEMESTER : VII
SESSION : MO/18

SUBJECT: PS7405 SYNTHETIC MEDICINALS II

TIME: 3 HRS.

FULL MARKS: 60

INSTRUCTIONS:

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
 2. Candidates may attempt any 5 questions maximum of 60 marks.
 3. The missing data, if any, may be assumed suitably.
 4. Before attempting the question paper, be sure that you have got the correct question paper.
 5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What are adrenergic agents? What is the importance of Adrenaline in our body? [2]
Q.1(b) Write the SAR of Epinephrine. Why l-isomer is more active than d-isomer? [4]
Q.1(c) Write the synthesis of (i) Phenylephrine (or) synthesis of Ephedrine. [6]
- Q.2(a) Write the structure and physiological action of major neurotransmitter of cholinergic systems. [2]
Q.2(b) Describe and explain the SAR of acetylcholine. What is the importance of "Rule of 5"? [4]
Q.2(c) Write short notes on (i) Antispasmodics (ii) Cholinergic blocking agents. [6]
- Q.3(a) What are anticoagulants? Describe the mode of action of Heparin. [2]
Q.3(b) Write the mode of action and synthesis of Warfarin. [4]
Q.3(c) What are the roles of anti-hyperlipidemic agents to control obesity. Mention clinically used compound and synthesis of any one compound. [6]
- Q.4(a) What are the causes of diabetes? Classify antidiabetic agents. [6]
Q.4(b) Give the historical background for the discovery of Insulin. Mention formulations based on Insulin. [6]
Q.4(c) Write synthesis for NIDDM based compounds (i) Tolubutamide (ii) Rosiglitazone (iii) Metformin.
- Q.5(a) What are the roles of diuretics in therapy? Classify this class of compounds. Write structure of any 3 compounds of this class. [6]
Q.5(b) Describe SAR for (i) Thiazide diuretics (ii) Mercurial diuretics [6]
Q.5(c) Write synthesis of (i) Hydrochlorthiazide and (ii) Furosamide.
- Q.6(a) What is the cause and symptoms of hypertension? [6]
Q.6(b) Describe the mode of action and SAR of (i) ACE inhibitors (ii) beta-blockers. [6]
Q.6(c) Write synthesis of (i) Captopril (ii) Propranolol (iii) Verapamil.
- Q.7 Write short notes on: [3x4]
(a) Antithyroid drugs
(b) Diagnostic agents
(c) Antianginal drugs

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