

M.Sc.(Chem.) Semester - 4 (CBCS) Examination
March/April - 2024 (NEW COURSE)
Chemistry of Synthetic Drugs (Core)

Time: 02:30 Hours

Marks: 70

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Q.1 (a) Answer the following (04)**
(1) What is Chemotherapy? Discuss classification of anticancer agents with example.
- Q.1 (b) Answer any two questions out of three. (10)**
(1) What are hormone inhibitors? Discuss the mechanism of nonsteroidal Aromatase inhibitor and give synthesis of Anastrozole
(2) Discuss various causes of infectious disease and describe synthesis of Moxifloxacin.
(3) Describe chemotherapy of antiviral agents and give synthesis of Oseltamivir
- Q.2 (a) Answer the following (04)**
(1) What are lipid lowering drugs? Discuss its mechanism and give synthesis of Rosuvastatin.
- Q.2 (b) Answer any two questions out of three. (10)**
(1) Discuss the classification of antihypertensive agents giving their example with structure.
(2) What are calcium channel blockers? Give their examples with structures and provide synthesis of any one.
(3) Describe classification of diuretic drugs and give synthesis of any one carbonic anhydrase inhibitors.
- Q.3 (a) Answer the following (04)**
(1) What are neurotransmitters? Give their functions with example
- Q.3 (b) Answer any two questions out of three. (10)**
(1) Give example of antihistamine drugs with their structure and provide synthesis of Citirizine hydrochloride.
(2) What are CNS depressant agents? Give their example with structure and write synthesis of Duloxetine.
(3) Write synthesis of following drugs (A) Amphetamine (B) Gabapentin
- Q.4 (a) Answer the following (04)**
(1) What are analgesic drugs? Discuss its classification of NSAID based on their structures.
- Q.4 (b) Answer any two questions out of three. (10)**
Describe synthesis of following drugs:
(1) Ketoprofen
(2) (I) Benorilate (II) Diclofenac sodium
(3) Sulindac
- Q.5 (a) Answer the following (04)**
(1) What is Hyperglycemia? Discuss treatment option for Type 1 and 2 diabetes.
- Q.5 (b) Answer any two questions out of three. (10)**
(1) Give classification of general Anesthetics and write synthesis of any one general anesthetic drug.
(2) Discuss classification of local anesthetic drugs and provide synthesis of Benzocaine
(3) Discuss the role of insulin in diabetes and write synthesis of Pioglitazone
