



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2019

SUBJECT: PHA 3.1T: PHARMACOLOGY - 2

(2014 REGULATION)

Wednesday, July 10, 2019 (10.00 - 13.00)

Answer all the questions.

Marks: 70

Duration: 180 mins.

Long answer questions:

- 1) List different types of DNA damage and repair mechanisms. Explain nucleotide excision repair. (10)
(4+4+2 = 10 marks)
- 2) Classify cephalosporins with examples. Discuss the pharmacological actions of different generations of cephalosporins. (10)
- 3) Narrate the events of apoptosis with special emphasis on Bcl2 class of proteins and caspases. (10)

4) Short answer questions:

- 4A) Explain, with a diagram, the coagulation pathway and the action of coagulants. (5)
- 4B) Summarize the mechanism of action of cytotoxic drugs used in cancer treatment. (5)
- 4C) Explain the mechanism of action of loop and thiazide diuretics. (5)
- 4D) Discuss the mechanism of action of anthelmintic agents. (5)
- 4E) Discuss the general principles involved in the management of poisoning. (5)
- 4F) Discuss the mechanism of actions of penicillin and vancomycin. (5)

5) Give reasons for the followings:

- 5A) Third generation cephalosporins are preferred over ciprofloxacin in the treatment of typhoid. (2)
- 5B) Combination of chloroquine and primaquine is given in the management of Plasmodium malariae infection. (2)
- 5C) Proto-oncogene plays a role in carcinogenesis. (2)
- 5D) Expired tetracycline is strictly prohibited for human usage. (2)
- 5E) Aminoglycoside antibiotics are avoided during pregnancy. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D DEGREE EXAMINATION - JULY 2019

SUBJECT: PQA 3.2T: PHARMACEUTICAL ANALYSIS

(2014 REGULATION)

Friday, July 12, 2019 (10.00 - 13.00)

Answer ALL questions.

Draw chemical reactions and neatly labelled diagrams wherever necessary.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) With the help of a neatly labeled diagram, describe in detail the double beam UV-Visible spectrophotometer. (10)
- 2) Classify the stationary phases used in HPLC with examples. Explain the construction and working of UV detector used in HPLC. (10)
- 3) Describe the principle of conductometric titrations. Explain the conductometric titrations of weak acid vs weak base. (10)

4) Short Answer Questions:

- 4A) What quenching of fluorescence? Explain the physicochemical factors responsible quenching of fluorescence in brief. (5)
- 4B) Explain the liquid and gas sample handling in IR spectroscopy. (5)
- 4C) a) Name the solvents used in NMR spectroscopy. (5)
b) List various ionization methods in mass spectroscopy. (3+2 = 5 marks)
- 4D) Discuss in detail SCOT and WCOT. (5)
- 4E) Explain the concept of statistical quality control. (5)
- 4F) Write a brief note on "Good laboratory practice". (5)

5) Short Answer Questions:

- 5A) Write the limitations of flame photometry. (2)
- 5B) Write the neat labeled diagram of Halogen Cathode Lamp. (2)
- 5C) Differentiate Atomic Absorption Spectroscopy and Atomic Emission Spectroscopy. (2)
- 5D) Write a note on sample holders in thermal methods. (2)
- 5E) List the factors affecting specific optical rotation. (2)

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Question Paper

Exam Date & Time: 15-Jul-2019 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2019

SUBJECT: PPR 3.3T: PHARMACOTHERAPEUTICS - II

(2014 REGULATION)

Monday, July 15, 2019 (10.00 - 13.00)

Marks: 70

Duration: 180 mins.

Long Essay Questions:

- 1) Explain the pharmacotherapy of Tuberculosis and explain the significance of DOTS therapy for Tuberculosis. (10)
- 2) Explain the pharmacotherapy of Gonorrhoea and syphilis. (10)
- 3) Describe the complications of chronic renal failure and their management. (10)

4) Short Essay Questions:

- 4A) Explain the chemotherapy of breast cancer. (5)
- 4B) Discuss any three fungal infections and their management. (5)
- 4C) Explain the treatment for gastroenteritis. (5)
- 4D) Explain the management of complicated and uncomplicated Urinary tract infections. (5)
- 4E) Illustrate the life cycle of malarial parasite and explain the treatment plasmodium falciparum malaria. (5)
- 4F) Discuss the rational use of antibiotics and surgical prophylaxis. (5)

5) Give Reason / Short Answers Questions:

- 5A) Drug induced renal disorders. (2)
- 5B) Enlist types of spondylitis. (2)
- 5C) Enlist late and early sign and symptoms of septicemia. (2)
- 5D) Enlist different biomarkers for Rheumatoid arthritis. (2)
- 5E) Enlist types of psoriasis (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2019

SUBJECT: PCH 3.5T: MEDICINAL CHEMISTRY
(2014 REGULATION)

Friday, July 19, 2019 (10.00 - 13.00)

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1A) Classify antihyperlipidemic drugs and give examples. (4)
- 1B) How do you synthesise metformin and clofibrate? (6)
- 2A) Classify Penicillins and Cephalosporins by giving examples. Write briefly on Penicillinase inhibitors. (6)
- 2B) Write the structure and mechanism of action of any one antibiotic used in the treatment of:
a) Tuberculosis b) Fungal c) Topical d) UTI infection (4)
- 3) Classify antimetabolites as anticancer agents. What are the strategies used in their design? Outline the synthesis of any one of them. (10)

4) Short Answer Questions:

- 4A) Write the SAR for Sulphonamides. Outline the synthesis of INH. (5)
- 4B) Classify diuretics giving examples. (5)
- 4C) Write the synthesis of one aryloxy propanol amine derivative used as antihypertensive agent. How do they act? (5)
- 4D) Classify Antiamoebic agents by giving one structure under each class. Outline the synthesis of Diethyl carbamazine citrate. (5)
- 4E) Classify Antimalarial agents by giving one structure under each class. Write the salient structural features for DHFR inhibitors. (5)
- 4F) What are Antiseptics? How are they different from disinfectants. Classify them by giving examples. Write briefly on phenol coefficient and mention their significance. (5)

5) Give reasons for the following:

- 5A) Practolol is less lipophilic than propranolol. (2)
- 5B) Mephenide is antibacterial but not a competitive inhibitor of PABA. (2)
- 5C) Ribose sugar is replaced with arabinose sugar in the design of antiviral drugs. (2)
- 5D) Trans configuration stilbestrol is used as non steroidal estrogenic compound. (2)
- 5E) Organic nitrates are to be stored and supplied in moisture free containers with diluents. (2)

Question Paper

Exam Date & Time: 23-Jul-2019 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2019
SUBJECT: PCE 3.6T: PHARMACEUTICAL FORMULATIONS
(2014 REGULATIONS)
Tuesday, July 23, 2019 (10.00 - 13.00)

Answer all questions.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Enlist different raw materials used in the formulation of tablets along with examples. Briefly discuss Wet granulation method for the preparation of tablets. (10)
(4+6 = 10 marks)
- 2) Define parenteral preparations. Explain various routes of parenteral administration. (10)
(2+8 = 10 marks)
- 3) Discuss different Official quality control tests for Hard gelatin capsules. (10)

4) Short Essay Questions:

- 4A) Discuss different filling methods for Liquid Orals. (5)
- 4B) Explain the Extraction of gelatin with the help of a flow-sheet. (5)
- 4C) Discuss different tests used to differentiate types of emulsions. (5)
- 4D) Enlist different types of transdermal drug delivery systems and explain any ONE type in detail. (5)
- 4E) Mention different evaluation tests for parenteral preparations. Explain sterility testing. (5)
- 4F) Briefly write about different tableting problems. (5)

5) Give reasons for the following:

- 5A) Novel drug delivery systems are advantageous over conventional dosage forms. (2)
- 5B) In disintegration test, Enteric coated tablets are tested in acidic as well as alkaline medium. (2)
- 5C) Direct compression method is beneficial over other methods of tableting. (2)
- 5D) Base adsorption value is an important aspect in the formulation of soft gelatin capsules. Give reason(s) along with the formula. (2)
- 5E) Controlled flocculation in structured vehicle is desirable in the preparation of suspensions. (2)

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