

Exam Date & Time: 12-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2022

SUBJECT: PHA 3.1T: PHARMACOLOGY - II

(REVISED REGULATIONS 2014)

Pharmacology II [PHA 3.1T]

Marks: 70

Duration: 180 mins.

A

Answer all the questions.

Draw the neat, labeled diagram wherever necessary.

Long essays:

- 1) With neat diagrams discuss the V_1 and V_2 actions of Vasopressin. (10)
- 2) Depict the life cycle of malarial parasite with various drugs intervening the process. Explain the pharmacological actions of artemisinin derivatives. (10)
(5+5 = 10 marks)
- 3) How does calcium ion signaling contribute to physiological response? Explain with specific examples. (10)

B

Answer all the questions.

4. Short Essays:

- 4A) Explain the metabolic role of folic acid and vitamin B_{12} in the body. (5)
- 4B) Explain the antibacterial action of streptomycin. (5)
- 4C) Describe the step involved in base pair excision repair mechanisms. (5)
- 4D) Discuss the mechanism of action of anti-cancer drugs. (5)
- 4E) Write the mechanisms of anti-retroviral agents used in HAART therapy. (5)
- 4F) Write short notes on mechanism of action of first line anti-tubercular agents. (5)

C

Answer all the questions.

5. Give reasons for the following:

- 5A) Is a combination of diuretic and digitalis in the management of heart failure beneficial? (2)

- 5B) Cholinergic reactivators should be given at the earliest in the management of organophosphorus poisoning. (2)
- 5C) p53 gene is called as house-keeping gene or guardian of genome. (2)
- 5D) Azithromycin can be co-administered with terfenadine, not erythromycin. (2)
- 5E) Vinca alkaloids should not be combined with taxol drugs in the treatment of cancer. (2)

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Question Paper

Exam Date & Time: 14-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D DEGREE EXAMINATION - JULY 2022

SUBJECT: PQA 3.2T: PHARMACEUTICAL ANALYSIS

(REVISED REGULATIONS 2014)

Answer ALL questions.

Draw chemical reactions and neatly labelled diagrams wherever necessary.

Marks: 70

Duration: 180 mins.

Long Answer Questions :

- 1) Explain the instrumentation for double beam UV-Visible spectrometer (10)
- 2) Write the advantages of HPTLC as separation technique over other methods. Explain the construction and working of densitometer. (10)
- 3) Explain with graph the conductometric titration of strong acid vs strong base. Explain the construction of different types of conductivity cells. (10)

4. Short Answer Questions :

- 4A) Write the structural requirements for a molecule to exhibit fluorescence. (5)
- 4B) Explain the solid sample handling in IR spectroscopy. (5)
- 4C) What is chemical shift? List the factors affecting the same (3)
 - i)
 - ii) List ionization methods in mass spectroscopy (2)
- 4D) Write in detail about injectors of HPLC. (5)
- 4E) Explain accuracy and precision in analytical method validation as per ICH guideline. (5)
- 4F) Write a brief note on "Quality Assurance of pharmaceutical dosage forms" (5)

5. Short Answer Questions :

- 5A) List the interferences in flame photometry (2)
- 5B) Write the applications of Atomic Absorption Spectroscopy. (2)
- 5C) Differentiate Atomic Absorption Spectroscopy with Atomic Emission Spectroscopy (2)
- 5D) List the pharmaceutical applications of DSC (2)
- 5E) List the application of Polarimetry (2)

Question Paper

Exam Date & Time: 18-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2022

SUBJECT: PPR 3.3T: PHARMACOTHERAPEUTICS - 2

(REVISED REGULATIONS 2014)

Marks: 70

Duration: 180 mins.

Long Essay Questions :

- 1) Explain the interpretation of tuberculin skin test. Explain the management of pulmonary tuberculosis (10)
- 2) Explain the pharmacotherapy of Septicemia. (10)
- 3) Classify Infective Endocarditis (IE). Explain the treatment regimens for both native-valve and prosthetic-valve IE caused by: *S. Viridans* and *Enterococci*. (10)

4. Short Essay Questions :

- 4A) Explain the rational use of antibiotics and surgical prophylaxis. (5)
- 4B) Mention the newer criteria for diagnosis of rheumatoid arthritis based on American college of Rheumatology. (5)
- 4C) Explain the treatment for gastroenteritis. (5)
- 4D) Describe various complications of chronic renal failure and explain the management of any two. (5)
- 4E) Explain any five opportunistic infections associated with HIV. (5)
- 4F) Explain the basis of TNM staging in cancer. (5)

5. Give Reason / Short Answers Questions :

- 5A) Corticosteroid is used as adjuvant therapy in meningitis treatment. (2)
- 5B) Enlist types of psoriasis (2)
- 5C) Primaquine is contraindicated in G6PD deficiency patients. (2)
- 5D) Enlist types of spondylitis. (2)
- 5E) In bilateral arterial stenosis patients ACE inhibitors are contraindicated. (2)

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Question Paper

Exam Date & Time: 20-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2022
SUBJECT: PMA 3.4T: PHARMACEUTICAL JURISPRUDENCE
(REVISED REGULATIONS 2014)

Answer ALL questions.

Marks: 70

Duration: 180 mins.

Long Essay Questions:

- 1) A. What are the duties of Drug Inspector and Govt. Analysts as per Drugs and Cosmetics Act? (10)
B. Mention Schedule X, Schedule M, Schedule N, Schedule J, Schedule C.
- 2) A. Mention provisions for bonded manufactory process. (10)
B. Explain various stages of clinical trials as given under Schedule Y.
- 3) Discuss in detail amendments of Drug Price Control Order. Add a note on NPPA. (10)

4. Short Essay Questions:

- 4A) Write short notes on performance of experiments on animals as per Prevention of Cruelty to Animals Act. Enlist functions of Animal Welfare Board. (5)
- 4B) Discuss Education Regulations put forwarded by PCI. (5)
- 4C) Write short notes on SL Bhatia and Hathi Committees. (5)
- 4D) Describe categories of advertisements which are exempted conditionally as per Drugs and Magic Remedies Act? (5)
- 4E) What ethics a pharmacist need to observe in relation to trade, medical profession and his profession? (5)
- 4F) Discuss offences and penalties in relation to prepared opium and Coca plant & Coca Leaves. (5)

5. Give Reasons:

- 5A) Mention the places through which drugs may be imported in India. (2)
- 5B) Write four examples of non-prescription drugs. (2)
- 5C) Enlist steps involved in patent filing procedure in India. (2)
- 5D) What are Essential Commodities? (2)
- 5E) Give labelling requirements of Sch. X drug. (2)

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Question Paper

Exam Date & Time: 22-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D DEGREE EXAMINATION - JULY 2022
SUBJECT: PCH 3.5T: MEDICINAL CHEMISTRY
(REVISED REGULATION 2014)

Marks: 70

Duration: 180 mins.

1. Long Answer Questions :

- 1A) Classify Sulpha drugs by giving one structure under each class. Write any 4 salient features which makes them effective as antibacterial agents (6)
- 1B) How are Antiviral drugs designed? Name 3 important antiviral drugs which acts on three different target enzymes. (4)
- 2A) Write the chemistry of Azoles as Antifungal agents. Outline the synthesis of any one of them. (7)
- 2B) Classify anti tubercular agents by giving one structure under each class. Outline the synthesis of Para Amino Salicylic acid (3)
- 3A) Classify antihypertensive agents giving examples (4)
- 3B) With a schematic diagram show the chemical binding pattern of sulphonamides with carbonic anhydrase (4)
- 3C) Write the important chemical features of Insulin (2)

4. Short Answer Questions :

- 4A) Explain the structural features of fibric acid derivatives as antihyperlipidemics (5)
- 4B) Draw the structure of one belonging to the class of 1st, 2nd and 3rd generation Cephalosporins. Give the advantages of 2nd and 3rd generation Cephalosporins over 1st generation Cephalosporins. Add a note on penicillinase inhibitors. (5)
- 4C) Enlist various plant products used as anticancer agents. Write the structure of any 4 Steroids used as anticancer agents. (5)
- 4D) What are antithyroid agents? Give the structure and uses of propylthiouracil (5)
- 4E) Write the Descriptors used in QSAR and mention their applications. (5)
What is Combinatorial chemistry? Explain their principle and applications
- 4F) Write the Chemistry of Amino glycoside Antibiotics (5)

5. Give Reasons for the Following :

- 5A) Combinatorial chemistry is more apt for lead optimization rather than drug discovery (2)

- 5B) Out of cationic, anionic and non ionic surfactants, Cationic surfactants are preferred as anti bacterial agents (2)
- 5C) Cholestyramine is used as antihyperlipidemic agent (2)
- 5D) Insulin is not given orally (2)
- 5E) Augmentin is preferred to Amoxacillin (2)

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Question Paper

Exam Date & Time: 25-Jul-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD YEAR PHARM D. DEGREE EXAMINATION - JULY 2022
SUBJECT: PCE 3.6T: PHARMACEUTICAL FORMULATIONS
(REVISED REGULATIONS 2014)

Marks: 70

Duration: 180 mins.

Answer all the questions.

1. Long Answer Questions :

- 1A) Explain Wet granulation method for the preparation of tablets. (10)
Mention different Quality Control tests for tablets and explain any ONE test in detail.
(6+4 = 10 marks)
- 1B) Discuss different methods of Sterilization of parenteral products (10)
(2+8 = 10 marks)
- 1C) Explain different Official quality control tests for Soft gelatin capsules. (10)

2. Short Essay Questions :

- 2A) Discuss different tests used to differentiate types of emulsions. (5)
- 2B) Discuss different steps involved in Sugar Coating of tablets (5)
- 2C) Describe various filling methods for Liquid Orals. (5)
- 2D) What are different Ocular (Ophthalmic) drug delivery systems? Explain any ONE system (5)
- 2E) Add a note on Tableting Problems. (5)
- 2F) Mention different routes of parenteral administration and explain any TWO routes. (5)

3. Give reasons for the following :

- 3A) Oily solutions or suspensions are used for parenteral controlled delivery (2)
- 3B) Enteric coated tablets are first tested in acidic medium in disintegration test (2)
- 3C) Transdermal drug delivery systems improve bioavailability of the drugs (2)
- 3D) Pyrogens should not be present in parenteral preparations (2)
- 3E) Sterility is an important prerequisite for parenteral products (2)

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