

Reg. No.: _____



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR B. PHARM DEGREE EXAMINATION - JULY 2019

SUBJECT: PATHOPHYSIOLOGY (PPR 201T)

(Revised regulation 2014)

Thursday, July 11, 2019 (14.00 - 17.00)

Answer all the questions.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Define atherosclerosis. Explain different risk factors causing atherosclerosis. (10)
- 2) Enlist different symptoms of asthma and explain its pathogenesis. (10)
- 3) Classify hypersensitivity reaction. Explain any two. (10)

4) Short Answer Questions:

- 4A) Explain the reperfusion injury. (5)
- 4B) Explain the clinical symptoms and pathophysiology of hemorrhagic stroke. (5)
- 4C) Explain the pathogenesis of autoimmune disorders. (5)
- 4D) Explain the process of phagocytosis with help of a neat diagram. (5)
- 4E) Explain transmission, spread and clinical symptoms of tuberculosis. (5)
- 4F) Define anemia. Explain different laboratory test used in identification of anemia. (5)

5) Give reasons for the following:

- 5A) Mean corpuscular volume (MCV) value decreases in microcytic anemia. (2)
- 5B) Inflammation associated with both beneficial effect and harmful effect. (2)
- 5C) Major histocompatibility complex plays important role in recognition and elimination of foreign cells and antigen. (2)
- 5D) Malarial parasite predominantly resides in the liver of affected person during initial stages of infection. (2)
- 5E) Duodenal ulcer patients gain weight in contrast to gastric ulcer patients. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR B.PHARM DEGREE EXAMINATION - JULY 2019

SUBJECT: PHARMACEUTICAL MICROBIOLOGY (PBT 202T)

(Revised regulation 2014)

Saturday, July 13, 2019 (14.00 - 17.00)

Answer ALL questions.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) With a neat labelled diagram, explain the structure of a typical bacterial cell emphasising the (10) structures inside the cell wall.
- 2) Define disinfection and differentiate it from sterilisation. Explain the effect of following factors on the (10) course of disinfection process: Time of contact, temperature and pH.
- 3) What is multidrug resistance (MDR)? Classify and explain the different mechanisms involved in MDR. (10)

4) Short Answer Questions:

- 4A) Write a note on asexual spores of fungi. (5)
- 4B) Explain why saturated steam is an efficient sterilising agent and mention how it differs from (5) superheated steam.
- 4C) Enlist the limitations of microbiological assay of antibiotics and explain its advantage over (5) physicochemical assays in assaying antibiotics. Add a note on the type of Petri dishes used.
- 4D) Write the formulae to calculate R.W.C and C.M.C and show the necessary calculations to prepare 5% (5) V/V stock solution of phenol and 5 ml each of phenol dilutions as given below.
1 in 70, 1 in 80, 1 in 90 and 1 in 100.
Note: Sterile water is the solvent and diluent.
- 4E) Write a note on normal microbiota. (5)
- 4F) Write the causative organism, mode of transmission, important symptoms, prevention and treatment (5) of tetanus.

5) Give reasons for the following:

- 5A) Resolution of a microscope is poor without a condenser. (2)
- 5B) Viruses cannot be grown in artificial medium. (2)
- 5C) In activated sludge process, small quantity of sludge from the previous batch is added to the sewage. (2)
- 5D) Hour glass tube is a better sterilisation indicator over the witness tube. (2)
- 5E) Conventional chemotherapeutic agents are not effective in anti TB treatment. (2)

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**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B. PHARM DEGREE EXAMINATION - JULY 2019****SUBJECT: PHARMACEUTICS (PCE 203T)****(Revised regulation 2014)****Tuesday, July 16, 2019 (14.00 - 17.00)**

Answer ALL questions.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Explain the principle, construction and working of Ball mill with diagram. (10)
- 2) Define Suspension. Compare and contrast Flocculated and Deflocculated suspension. (10)
- 3) Define Suppositories. Write their advantages and disadvantages. Explain the moulding method for preparation of suppositories. (10)

4) Short Answer Questions:

- 4A) Give the construction of Krystal crystallizer with diagram. (5)
- 4B) Explain with a neat diagram, the working of Vacuum distillation. (5)
- 4C) What are Galenicals? Give the uses. Define the terms Menstruum and Marc. (5)
- 4D) Briefly explain absorbable gelatin sponge and mention the uses. (5)
- 4E) Define Liniment and give a formula for liniment mentioning use of each ingredient. (5)
- 4F) Define various modes of heat transfer with examples and give its applications in pharmaceuticals. (5)

5) Give reasons for the following:

- 5A) Rotating disc and blades are very much required in Air Separator. (2)
- 5B) Emulgents are used in preparation of Emulsions. (2)
- 5C) Milling is important in manufacturing of Powders. (2)
- 5D) Patient profile is essential in Prescription. (2)
- 5E) Kaolin is used in compounding of Eutectic mixtures. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR B. PHARM DEGREE EXAMINATION - JULY 2019

SUBJECT: PHARMACEUTICAL CHEMISTRY (PCH 204T)

(Revised regulation 2014)

Thursday, July 18, 2019 (14.00 - 17.00)

Answer ALL the questions.

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1A) What are alkaloids? Classify them with examples. (3)
- 1B) Explain the chemistry and uses of ephedrine. (5)
- 1C) Give the structure and uses of menthol. (2)
- 2A) List down two cellulose derivatives used in pharmacy. Explain the chemistry of maltose and sucrose. (6)
(2+4 = 6 marks)
- 2B) Explain the end-group analysis of peptides by Sanger's and Edman's method. (4)
- 3A) Discuss the nucleophilic and electrophilic reactions of pyridine. (8)
- 3B) Outline the method of synthesis of benzimidazole. (2)

4) Short Answer Questions:

- 4A) **Write the structure and uses of the following:** (5)
i) Chloroquine ii) Phenytoin iii) Pyrazinamide iv) Frusemide
- 4B) Discuss the stereochemistry of biphenyl compounds. (5)
- 4C) Explain the method of preparation and uses of sodium potassium tartarate and zinc stearate. (5)
- 4D) Write the preparation and uses of ammonium chloride and barium sulphate. (5)
- 4E) Explain the structural elucidation of vitamin-A. (5)
- 4F) Write the method of preparation and uses of alum and sodium bicarbonate. (5)

5) Give reasons for the following:

- 5A) Atropine on heating with barium hydroxide gives tropine and tropic acid. Justify with reaction. (2)
- 5B) Boat confirmation of cyclohexane-1, 4 diol is more stable than chair. (2)
- 5C) Pyrazole show very low reactivity towards nitration reactions. (2)
- 5D) Oils are liquid at room temperature whereas fats are solid. (2)
- 5E) Quinine reacts with two molecules of methyl iodide forming a diquarternary ammonium salt. Justify with reaction. (2)

**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B. PHARM DEGREE EXAMINATION - JULY 2019****SUBJECT: PHARMACEUTICAL MANAGEMENT (PMA 205T)****(Revised regulation 2014)****Monday, July 22, 2019 (14.00 - 17.00)**

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) What is meant by motivation? Explain Maslow's need hierarchy theory and Herzberg's two factor theory of motivation. (10)
- 2) Discuss core concepts of Marketing with suitable examples. (10)
- 3) With a specimen format, discuss methods for preparation of trial balance. Add a note on identification and rectification of errors. (10)

4) Short Answer Questions:

- 4A) Define Management. What skills a manager should possess at various levels of management? (5)
- 4B) Explain advantages and disadvantages of internal and external sources of recruitment. (5)
- 4C) Differentiate between Pharmaceutical and Consumer Marketing. (5)
- 4D) Explain law of demand with suitable examples. Explain factors that influence demand of a product. (5)
- 4E) What are the different types of costs and perspectives in pharmacoeconomics? Discuss in detail. (5)
- 4F) How many defects are permitted under six sigma? Describe DMAIC cycle of six sigma. (5)

5) Give reasons for the following:

- 5A) PDCA cycle of Total Quality Management. (2)
- 5B) Differentiate between accountancy and book-keeping. (2)
- 5C) Define Product, Brand, Me-too product and Branded Generic. (2)
- 5D) What do you mean by blanket order purchasing? Explain in brief. (2)
- 5E) ISO 14000 series of standards. (2)

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