

**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019****SUBJECT: PATHOPHYSIOLOGY (PPR 201T)****(REVISED REGULATION 2014)****Thursday, May 23, 2019 (10.00 - 13.00)**

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) With help of a neat diagram explain the mechanism of apoptosis. (10)
- 2) Enlist different symptoms of COPD and explain its pathogenesis. (10)
- 3) Define antigen. With the help of neat diagram explain role of complement system in the Immunity. (10)

4. Short Answer Questions:

- 4A) Explain the clinical symptoms and laboratory test used for chronic renal failure. (5)
- 4B) Define hypertension. Explain the role of renin - angiotensin system in hypertension. (5)
- 4C) Explain the ECG changes in myocardial infraction. (5)
- 4D) Enlist difference between benign and malignant tumor. (5)
- 4E) Explain transmission and clinical symptoms of malaria. (5)
- 4F) Enlist different causes and clinical symptoms of iron deficiency anemia. (5)

5. Give Reasons for the Following:

- 5A) Vitamin B12 deficiency anemia also called as macrocytic anemia. (2)
- 5B) In hepatic cell damage AST and ALT enzyme level will increase. (2)
- 5C) One coughing tuberculosis patient can infect many people. (2)
- 5D) Anemia develops in chronic renal failure. (2)
- 5E) Ischemic stroke is connected to number of risk factors. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019

SUBJECT: PHARMACEUTICAL MICROBIOLOGY (PBT 202T)

(REVISED REGULATION 2014)

Friday, May 24, 2019 (10.00 - 13.00)

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Discuss the stages involved in sewage treatment process with emphasis on specific methods utilised for reduction of BOD. (10)
- 2) Differentiate ionising radiations from non-ionising radiations and discuss the role of gamma radiations in sterilisation. (10)
- 3) Explain the selection criteria for choosing an ideal antibiotic for treatment of infectious diseases. (10)

4. Short Answer Questions:

- 4A) Define and classify bacteriological culture media. (5)
- 4B) Explain why saturated steam is considered as an ideal sterilising agent. (5)
- 4C) Why Chick Martin coefficient is considered superior to Rideal-Walker coefficient. Write the formulae to calculate RWC and CMC. (5)
- 4D) Write the procedure for microbiological assay of antibiotics by tube dilution method. (5)
- 4E) Define infection and explain any two microbial virulence factors in detail. (5)
- 4F) Mention the causative organism, mode of transmission, important symptoms, prevention and treatment of tetanus. (5)

5. Give reasons for the following:

- 5A) Phase contrast microscopy does not require any staining process. (2)
- 5B) Soybean casein digest medium supports the growth of both fungi and bacteria, but fluid thioglycolate medium does not support growth of fungi. (2)
- 5C) All stains are coloured organic compounds, but all coloured organic compounds are not stains. (2)
- 5D) Prolonged incubation in sterility testing is required. (2)
- 5E) Isoniazid is very effective in the anti-mycobacterial therapy but it is not effective against other bacteria. (2)

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**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019****SUBJECT: PHARMACEUTICS (PCE 203T)****(REVISED REGULATION 2014)****Saturday, May 25, 2019 (10.00 - 13.00)**

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Define Incompatibility. Discuss therapeutic incompatibility with three examples. (10)
- 2) Explain the principle, construction and working of ball mill. (10)
- 3) Discuss any two stability problems in Emulsions. (10)

4. Short Answer Questions:

- 4A) Briefly explain Reynolds experiment with standard values. (5)
- 4B) Explain various factors involved in dose selection. (5)
- 4C) What is a preservative? List out any four criteria for selection. (5)
- 4D) Explain the working of Airjet mixer with diagram. (5)
- 4E) Explain various Modes of motion in size separation. (5)
- 4F) Explain the construction of Krystal crystallizer with diagram. (5)

5. Give Reasons for the Following:

- 5A) Smaller size helps in effective extraction of drug. (2)
- 5B) Rate of evaporation will increase with the temperature. (2)
- 5C) Patients profile is essential part in prescription. (2)
- 5D) Absorbents are used commonly in Eutectic powders. (2)
- 5E) Emulsion should be triturated only in one direction. (2)

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MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019

SUBJECT: PHARMACEUTICAL CHEMISTRY (PCH 204T)

(REVISED REGULATION 2014)

Monday, May 27, 2019 (10.00 - 13.00)

Marks: 70

Duration: 180 mins.

Long Essays:

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| 1A) | How do you prove that D-glucose has a straight chain of 6 carbon atoms and five hydroxyl groups? | (2) |
| 1B) | How do you convert glucose to arabinose? Write about the structure of sucrose. | (4) |
| 1C) | Give any two important methods of synthesis of alpha amino acids. | (4) |
| 2A) | Explain in detail the general methods of structural elucidation of terpenoids. | (5) |
| 2B) | Explain the chemistry of cardiac glycosides. | (3) |
| 2C) | Explain the chemistry of quinine. | (2) |
| 3A) | Discuss the stereochemistry of biphenyl compounds. | (4) |
| 3B) | Explain the electrophilic substitution reactions of furan. | (4) |
| 3C) | Draw the structure and mention the medicinal uses of phenytoin and cycloserine. | (2) |

4. Short answer questions.

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| 4A) | Explain the synthesis and uses of silver nitrate and sodium metabisulphite. | (5) |
| 4B) | Discuss the structural elucidation of veratric acid and m-hemipinic acid. | (5) |
| 4C) | Discuss nucleophilic substitution reactions of pyridine. | (5) |
| 4D) | Write the skraup synthesis of quinoline and write the structure and use of chloroquine. | (5) |
| 4E) | Give an account of kaolin and bentonite. | (5) |
| 4F) | How do you prepare hydrogen peroxide and magnesium sulphate? Give their uses. | (5) |

5. Give reasons for the following:

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| 5A) | Chair conformation is more stable than boat conformation. | (2) |
| 5B) | Camphor on fission reaction with KOH gives campholic acid as the major product. Justify with reaction. | (2) |
| 5C). | Imidazole show less reactivity towards electrophilic reactions. | (2) |
| 5D) | Cholesterol is an important steroid molecule. Justify. | (2) |
| 5E) | Oils become rancid on storage. | (2) |

**MANIPAL ACADEMY OF HIGHER EDUCATION****SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019****SUBJECT: PHARMACEUTICAL MANAGEMENT (PMA 205T)****(REVISED REGULATION 2014)****Tuesday, May 28, 2019 (10.00 - 13.00)****Marks: 70****Duration: 180 mins.****Long Answer Questions:**

- 1) Explain in detail internal and external sources of recruitment. Add advantages and disadvantages of each. (10)
- 2) With a neat labelled diagram explain characteristics of different stages of product life cycle. (10)
- 3) Discuss all accounting concepts with suitable examples. (10)

4. Short Answer Questions:

- 4A) Write a brief note on Indian Pharmaceutical Industry. (5)
- 4B) Define planning. Write distinguishing features of strategic and tactical planning. (5)
- 4C) Discuss different pricing strategies adopted by marketing organizations. (5)
- 4D) What is production management? Write about different types of production systems. (5)
- 4E) Explain factors influencing the selection an ideal location to setup a pharmaceutical unit. (5)
- 4F) What are the functions of an entrepreneur? (5)

5. Give reasons for the following:

- 5A) ISO 9000 series of standards and its benefits. (2)
- 5B) What is Petty Cash Book? Write its specimen format. (2)
- 5C) What is AIDA principle of communication? (2)
- 5D) How do you calculate EOQ by formula method? (2)
- 5E) Schematically describe DMAIC roadmap of six sigma. (2)

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**MANIPAL ACADEMY OF HIGHER EDUCATION**

SECOND YEAR B.PHARM DEGREE EXAMINATION - MAY 2019

SUBJECT: PHARMACOGNOSY-2 (PCO 206T)

(REVISED REGULATION 2014)

Wednesday, May 29, 2019 (10.00 - 13.00)

Marks: 70

Duration: 180 mins.

Long Answer Questions:

- 1) Give the pharmacognostic report of any one drug containing Oleo-gum-resin. (10)
- 2) Give an detail account of TLC and Column Chromatography. (10)
- 3) Give the source, morphology, chemical constituents of Nutmeg and Clove. (10)

4. Short Answer Questions:

- 4A) Describe the morphology and chemical constituents of Capsicum. (5)
- 4B) Write a note on Musk and Arnica. (5)
- 4C) What are Pesticides? Add a note on Red Squill as pesticide. (5)
- 4D) Define and classify sweeteners. Add a note on Stevioside and Glycyrrhizin. (5)
- 4E) Define and classify allergens with examples. (5)
- 4F) Give morphology, chemical constituents and uses of Fennel. (5)

5. Give Reasons for the Following:

- 5A) Ajowan is recommended for sore throat and bronchitis. (2)
- 5B) Tissue culture is one of the best *Ex-situ* conservation method. (2)
- 5C) Benzoin is a pathological product. (2)
- 5D) Ecuelle method is used for the extraction of citrus oils. (2)
- 5E) Intradermal sensitivity test must not be carried out on back of the patient. (2)

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