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Total Number of Pages : 02

B.Pharm  
15PH502

5<sup>th</sup> Semester Regular / Back Examination 2018-19

**MEDICINAL CHEMISTRY-I**

**BRANCH : B.Pharma**

**Time : 3 Hours**

**Max Marks : 100**

**Q.CODE : E197**

**Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.**

**The figures in the right hand margin indicate marks.**

**Part- I**

- Q1 Short answer type Questions (Answer All-10) (2×10)**
- a) Define the term 'Parachor'.
  - b) What do you mean by Taft's steric substituent constant?
  - c) Mention postulates of Hansch analysis.
  - d) Draw the structure of pyridine containing antitubercular drug.
  - e) Mention the structure and chemical name of Mebendazole.
  - f) Define diagnostic agents with examples.
  - g) What are prostaglandins?
  - h) Mention physiological role of Histamine.
  - i) Draw the structure of one solanaceous alkaloids.
  - j) Mention the structure and chemical name of two non selective  $\beta$ -receptor blockers.

**Part- II**

- Q2 Focused-Short Answer Type Questions- (Answer Any EIGHT out of TWELVE)**
- a) Discuss stereochemical features of drug receptor interaction. (6)
  - b) Write SAR of directly acting muscarinic agonist. Outline the synthesis, mode of action and uses of one cholinesterase inhibitor. (3+3)
  - c) Write a note on neuro muscular blocking agent. (6)
  - d) Outline the synthesis of the following : (3×2)  
Diphenhydramine, Promethazine, Ranitidine
  - e) What do you mean by eicosanoids? discuss about their biosynthesis. What are the physiological role of eicosanoids? (4+2)
  - f) Classify NSAIDs. Outline the synthesis and uses of Ibuprofen and Diclofenac. (2+4)
  - g) Outline the synthesis, mechanism of action and uses of following anti TB drugs: (3×2)  
Isoniazid, Ethambutol, Pyrazinamide.
  - h) Classify antiamebic drugs with example. Discuss synthesis and mechanism of action of Metronidazole and Diloxamide furoate. (2+4)
  - i) Discuss the chemical classification of anthelmintic drugs, mentioning structure in each class. Outline the synthesis of Niclosamide. (4+2)
  - j) Discuss SAR of thiazide diuretics. Outline synthesis, mechanism of action and uses of following drugs: Acetazolamide, Furosemide. (2+4)
  - k) Write a comprehensive account on electronic parameters utilized in QSAR. (6)
  - l) Write down the SAR of Salicylates. Mention the mechanism of action and uses of Aspirin. (6)

### Part-III

- Q3** Define QSAR. Explain Hansch analysis and Free Wilson model. **(2+14)**
- Q4** Discuss the SAR and mechanism of action of sympathomimetic drugs. Outline synthesis of following drugs: Salbutamol, Propanolol. **(8+8)**
- Q5** Outline synthesis, mechanism of action and uses of following drugs: Thiabendazole, Propylidone, Mepyramine, Prazocine. **(4x4)**
- Q6** Write on  $\beta$ -adrenergic blockers used in hypertension. **(16)**

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B.Pharm  
15PH506

5<sup>th</sup> Semester Regular/Back Examination 2018-19

PHARMACEUTICAL MICROBIOLOGY

BRANCH : B.Pharma

Time : 3 Hours

Max Marks: 100

Q.CODE : E540

Answer Question No.1 (Part-1) which is compulsory, any EIGHT from Part-II and any TWO from Part-III.

The figures in the right hand margin indicate marks.

Part- I

Q1 Short Answer Type Questions (Answer All-10) (2 x 10)

- a) Give one example of Gram negative anaerobic bacteria.
- b) What is Dextran?
- c) Clostridium botulinum liberates \_\_\_\_\_ toxin.
- d) Define Pyrogen.
- e) What are dimorphic fungi?
- f) Define probiotics.
- g) Mention the function of sex pili.
- h) What are bacterial spores?
- i) Point out the pore size of membrane filter.
- j) Which strain is extensively used for the industrial production of benzyl penicillin?

Part- II

Q2 Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve) (6 x 8)

- a) Differentiate between prokaryotes and eukaryotes.
- b) What is bacterial staining? Write in brief the basic mechanism of Gram staining.
- c) What is Tyndallization? Tyndallization requires three successive days operation. Explain why?
- d) Differentiate between Gram positive and Gram negative bacteria.
- e) What is plasmid? Classify the different types of plasmid and state their functions.
- f) Write the beneficial role of microbes.
- g) Classify bacteria according to the arrangement of bacteria.
- h) Write about the clinical uses and one industrial producer organism of the following substances :
  - i) Cyanocobalamin
  - ii) Lactic acid.
- i) Write down the principle of Diffusion assay of antibiotic.
- j) Write a note on nutritional requirements of bacteria.
- k) Define bacterial mutation. Explain why deliberate mutation is required? Give example of few mutagens.
- l) Define sterile air. Write the importance of sterile air in pharma industry.

**Part-III**

**Long Answer Type Questions (Answer Any Two out of Four)**

- Q3** Define the term sterilization and sterility. What is non-thermal sterilization? Enlist some pharmaceuticals which are to be sterilized by filtration. Mention the specific media which are used for sterility testing as per I.P. guidelines. **(16)**
- Q4** Differentiate between bacteria and viruses. Write down the classification of viruses. **(16)**
- Q5** Briefly discuss the factors influencing disinfectant activity of antimicrobial agents. Define R.W. Coefficient along with its significance. **(16)**
- Q6** Discuss briefly the different methods of preservation of microbial cultures. Also state the specific advantages of each. **(16)**