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Total Number of Pages: 01 **B.Pharma**
PH7.1

7th Semester Regular/Back Examination 2017-18
Pharmaceutics - VI (Bio-Pharmaceutics And Pharmacokinetics)
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B124

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) Define 'clinical pharmacokinetics and 'bioavailability'
b) What is biological $t_{1/2}$? Mention one method to improve it.
c) Write down four factors affecting drug absorption from GIT.
d) What are 'complexing agents'? Give examples.
e) What is therapeutic window? Give a diagram to show it.
f) List four factors influencing drug distribution inside the body.
g) What are the various sites of drug metabolism in body? Which organ is considered as the major site of metabolism?
h) Define renal clearance. Mention a drug which has slow renal clearance.
i) Draw a typical plasma concentration vs. time profile curve showing various pharmacokinetic parameters after a single oral dose of drug.
j) In compartment modeling, what does the term 'open' mean?

Q2 **a)** How would the plasma protein-drug binding influence sink conditions and absorptions of a drug from GIT? **(5)**
b) Describe active transport of drug. **(5)**

Q3 **a)** What do you mean by polymorphism and amorphism?Explain with examples. **(5)**
b) Describe first-pass metabolism in details with examples. **(5)**

Q4 **a)** What are the advantages of buccal and sublingual administration of drugs? **(5)**
b) Describe the major physiological biological barriers to distribution of drugs? **(5)**

Q5 **a)** What is 'apparent' and 'absolute' volume of distributions?
b) What are the various patient related factors for protein-drug binding? Give examples **(5)**

Q6 **a)** Give a diagram illustrating the major process involved in renal clearance of drugs. **(5)**
b) Calculate the dialysis clearance if the blood flow rate to the dialyzer is 50 m/min and the concentration of drug entering and leaving the dialyzer is 100 and 20 mcg/ml respectively. **(5)**

Q7 **a)** Describe shelf-life of a drug. Give the equation for 1st order kinetic model. **(5)**

b) Discuss the factors affecting biliary clearance of drug. **(5)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Total body clearance
b) Area under the curve (AUC)
c) Zero order kinetics
d) Facilitated diffusion

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PH.7.2

7th Semester Regular/Back Examination 2017-18
Pharmacology-III
BRANCH: B.Pharma
Time: 3 Hours
Max Marks: 70
Q. Code: B125

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1. **Answer the following Questions with one example for each.** **(2X10)**
- **a)** Define Laxatives and Carminatives.
- **b)** What do understand by Antacids and Anti-secretory?
- **c)** What do you mean by Anorectics and Anti-emetics?
- **d)** Discuss the terms Mucolytics and Astringents.
- **e)** Explain Endocrine and Exocrine Hormones.
- **f)** What are Antibacterials and Antibiotics?
- **g)** What are Bacteriostatic and Bacteriocidal agents?
- **h)** Explain the term 'Antimetabolites'
- **i)** Explain the term 'Heavy metals'.
- **j)** What are Beta-lactum antibiotics?

Q2. **a)** Write about the mode of action of Macrolide antibiotics with examples. **(5)**
b) Mentioning the control of Thyroid hormones in our body, discuss about the inter-relation between Hypothalamus and Pituitary. **(5)**

Q3. **a)** Discuss about the mode of action of Tetracyclines and its drawback. **(5)**
b) Justify the use of Trimethoprim in Sulphonamide therapy. **(5)**

Q4. **a)** Define with examples – Poison, Drug-ADR and Drug-Side Effects. **(5)**
b) Write down the drug regime as per recommendation of WHO guidelines for Multi Drug Resistant Tuberculosis. **(5)**

Q5. **a)** Write a brief note on physiological manifestation and remedy for any two relevant Heavy Metal poisoning. **(5)**
b) Write a short note on the pharmacology of Vit – D. **(5)**

Q6. **a)** Mention about the clinically important adverse effects of Chloramphenicol and Aminoglycosides. **(5)**
b) Briefly highlight about the general principles for treatment against Barbiturate and Atropine poisioning. **(5)**

Q7. Write down with examples the Pharmacological classification of Anti-neoplastic drugs and Immunosuppressant agent. **(10)**

Q8. **Attempt any TWO :** **(5X2)**
- **a)** Write down the antimalarial action of Quinine along with its side effects.
- **b)** Write down the antifungal action of Amphotericin B and its drawback.
- **c)** How Acyclovir manages Herpes infection.

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PH.7.3

7th Semester Regular/Back Examination 2017-18
Pharma Chemistry-VII (Med. Chemistry-III)
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B126

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2x10)**

a) Define the term prodrugs.
b) What are the steps involved in drug metabolism?
c) Write down the structures of Mepacrine and proguanil?
d) Define the term nucleotide with example.
e) Mention two aromatic amino acids with their structures.
f) What do you mean by Immunostimulants?
g) Define the term peptide with example.
h) How many amino acids are present in Insulin?
i) Who won the noble prize for discovering the artemisinin?
j) Write down the mechanism of action of Chloramphenicol.

Q2 **a)** Define and classify anticoagulants with example **(5)**
b) Write down the synthesis of Mebendazole and Acyclovir. **(5)**

Q3 **a)** Define and classify Antiamoebic agents. Outline the SAR of Penicillins. **(5)**
b) Outline the synthesis and uses of Ketoconazole and Metronidazole. **(5)**

Q4 **a)** Outline the synthesis of Griseofulvin and pyrimethamine. **(5)**
b) Discuss the SAR and therapeutic uses of sulphonamides. **(5)**

Q5 **a)** Define and classify the oral hypoglycemic agents . **(5)**
b) Write down the synthesis of Chlorpropamide and Carbimazole. **(5)**

Q6 **a)** Describe the synthesis and uses of Dapsone. **(5)**
b) Mention the synthesis of Chlorambucil and pyrazinamide **(5)**

Q7 Write a note on antithyroid drugs. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) β-lactam Antibiotics.
b) Immunosupressive agents.
c) Diagnostic agents.
d) Antineoplastic agents

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PH.7.4

7th Semester Regular / Back Examination 2017-18

Pharma Analysis-III

BRANCH B.Pharma.

Time: 3 Hours

Max Marks: 70

QUESTION CODE: B127

Answer Question No.1 which is compulsory and any five from the rest.

The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** **(2 x 10)**

a) What is chemical shift? Mention the various factors affecting chemical shift.

b) Write the various types of degassing techniques used in HPLC.

c) Write down the working principle of PMT.

d) What is the range of R_f value? How it is helpful in drug analysis.

e) How Qualitative and Quantitative analysis performed by GC.

f) What are Parent and Base peak and its significance?

g) Write down the number of Fundamental mode of vibrations associated for Linear and Non-linear molecules in IR spectroscopy.

h) What is Vacuum UV-region? Write down the different electronic transitions involved in UV-Spectroscopy analysis.

i) Differentiate between TLC and HPTLC. Which one is superior and why?

j) What is self and chemical Quenching in Fluorimetry?

Q2 **a)** Describe the theory and principle of IR-spectroscopy. **(5)**

b) Write down the different sample preparation techniques used in IR-analysis. **(5)**

Q3 **a)** Write down the principle of EIMS. **(5)**

b) What are the different ions produced by MS during ionization? **(5)**

Q4 **a)** Explain the principle of NMR spectroscopy. What is Shielding and Deshielding proton? **(2+3)**

b) Write a short note on structural elucidation of a compound by NMR. **(5)**

Q5 Describe the principle and different steps involved in TLC method. Write a short note on applications of TLC. **(10)**

Q6 Outline the various types of HPLC technique. Describe the Instrumentation and applications of HPLC. **(10)**

Q7 **a)** Principle of UV-spectroscopy. **(5)**

b) HPTLC **(5)**

Q8 Write down the principle, Instrumentation and applications of Flame Photometry. **(10)**

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PH.7.6

7th Semester Regular/Back Examination 2017-18
Pharma Biotechnology
BRANCH: B.Pharma.
Time: 3 Hour
Max Marks: 70
Q.CODE: B128
Question No.1 which is compulsory and any five from the rest
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions:** **(2 x 10)**

a) What is hapten with example?
b) Define epitopes.
c) What do you mean by gene cloning?
d) Define Antigen and classify it.
e) What do mean by Microbial Transformation.
f) Define immunity, active immunity and passive immunity.
g) What is biotransformation process?
h) Write the application of PCR.
i) Difference between cellular and humoral immunity.
j) What do you mean by antibiotics with suitable example?

Q2 **a)** Define Immunology. "All immunogenes are antigen but all antigens are not immunogen" explain it with reason. **(5)**
b) Write about short note on different immunoglobulin. **(5)**

Q3 **a)** What are the mechanism of type-II Hypersensitivity. **(5)**
b) Write the process of Humulin synthesis by rDNA technology. **(5)**

Q4 **a)** Why Taq polymerase used in PCR. **(5)**
b) Schematically describe the fermentation process. **(5)**

Q5 **a)** Describe the development of monoclonal antibodies by Hybridoma technology. **(5)**
b) How to regulation of gene expression describe by Lac Operone? **(5)**

Q6 **a)** What is Enzyme immobilization? Describe the different Techniques of enzymes immobilization? **(5)**
b) What are the ideal requirements of PVP and Dextran for control of blood pressure as per I.P. **(5)**

Q7 what is Genetic Code? Describe the details about components of protein synthesis and inhibitor of protein synthesis. **(10)**

Q8 **Write short notes on : (Any TWO)** **(5x2)**

a) Hyaluronidase
b) Streptokinase
c) Major histocompatibilty
d) Proteases

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PH.E.7

7th Semester Regular/Back Examination 2017-18
Hospital Pharmacy Administration
BRANCH : B.Pharma.
Time: 3 Hours
Max Marks: 70
Q.CODE: B131

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

Q1 **Answer the following questions :** **(2 x 10)**

a) Define hospital pharmacy.
b) Describe about the hospital pharmacy personnel.
c) What do you mean by hospital formulary system?
d) Write the full form of AHFS, FDLS, ASHP.
e) What is non-charge floor stock drugs& charge floor stock drugs?
f) Define Shelf stripping.
g) Describe briefly about in-patient and out patient.
h) What is envelop system?
i) What is parental hyperalimentation?
j) Describe about intravenous additive program.

Q2 **a)** What are the various drug distribution systems for in-patients? **(5)**
b) Describe pre-packing of drugs in hospital pharmacy. **(5)**

Q3 **a)** Write a note on organization of hospital pharmacy. **(5)**
b) What are the advantages and disadvantages of hospital formulary system? **(5)**

Q4 **a)** Briefly discuss about the manufacturing of IV additive solutions. **(5)**
b) Illustrate the term P.T.C (Pharmacy & Therapeutic Committee) **(5)**

Q5 **a)** Mention the objectives and functions of hospital pharmacy. **(5)**
b) Write about the dispensing routine to ambulatory patients. **(5)**

Q6 **a)** What is infection control committee and what are the role of this committee in hospital pharmacy. **(5)**
b) Describe about ICU and ICCU. What are the roles of clinical pharmacist in the ICU? **(5)**

Q7 Discuss briefly about hospital committees and their roles. **(10)**

Q8 **Write short answer on any TWO :** **(5 x 2)**

a) Drug Basket method
b) Goals for Hospital Pharmacy
c) Current practice committee