To,
Exam Controller,
AIKTC, New Panvel.

Dear Sir/Madam,

Received with thanks the following Semester/Periodic question papers from your exam cell:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Subject Name</th>
<th>Subject Code</th>
<th>Format</th>
<th>No. of Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pharmaceutical Chemistry – IV</td>
<td></td>
<td>✔</td>
<td>01</td>
</tr>
<tr>
<td>2</td>
<td>Pharmaceutics – V</td>
<td></td>
<td>✔</td>
<td>01</td>
</tr>
<tr>
<td>3</td>
<td>Biopharmaceutics &amp; Pharmacokinetics</td>
<td></td>
<td>✔</td>
<td>01</td>
</tr>
<tr>
<td>4</td>
<td>Pharmacognosy &amp; Phytochemistry – III</td>
<td></td>
<td>✔</td>
<td>01</td>
</tr>
<tr>
<td>5</td>
<td>Clinical Pharmacy</td>
<td></td>
<td>✔</td>
<td>01 + Reperiod</td>
</tr>
</tbody>
</table>
Fr. Y. B. Pharm. (Semester –VIII)

Periodic Theory Examination, 2016 (CBSGS)

Date: 22.2.16
Total Marks: 15M

Subject: Pharmaceutical Chemistry-IV
Time: 10.00am -11.00am

Q1. Answer the following and Draw the structures wherever applicable (Any 2) 2M
i) Phenyl piperidine derivative with greater selectivity for serotonin reuptake inhibition.
ii) Ureide anticonvulsant drugs which binds to VGSC
iii) An adrenergic antagonist containing quinazoline ring in its structure
iv) Naturally occurring muscarinic antagonist

Q1. B. Explain with specific reason why (Any 2) 3M
i) Cheese should be avoided by the patients undergoing treatment with MAO inhibitors.
ii) 3-Hydroxy benzodiazepine are usually prescribed for sedation in elderly.
iii) Pralidoxime is ineffective if administered 36 hrs after the exposure to insecticides.

Q2. A. Explain application of bioisosteric modifications for reducing toxicity of anticonvulsants. 3M
Give an account of new class of anticonvulsants arising out of such modifications. OR
State whether the barbiturates are acids, bases or neutral. Give an approximate value of their
pKa. How does the substitution at C5 position alter the pKa.

Q2. B. Discuss the SAR of Muscarinic agonist OR 3M
Discuss the SAR of β-phenylethylamine class of sympathomimetics.

Q3. A. Outline the schematic synthesis of (Any 2) 3M
i) Nitrazepam  ii) Carbamazepine  iii) Propranolol  iv) Neostigmine

Q3. B. Show β2-adrenergic receptor binding sites as per Easson-Stedmann Hypothesis. 1M
Q. No. 1. Attempt any two (6M)

a) Write any one method to determine the in-vitro tensile strength of mucoadhesive polymer.

b) Write a note on quality control standard for purity.

c) Define microencapsulation. Explain formulation components of microencapsulation.

Q. No.2. What is SOP? Write a typical SOP for operating a try drier. (3M)

OR

Q. No.2. Show a BMR for effervescent granule formulation.

Q. No. 3. Explain any two factors influencing mucoadhesion. (2M)

OR

Q. No. 3. Write a note on personnel requirement as per CGMP.

Q. No. 4. Give an account on sampling and sampling plans. (4M)

OR

Q. No. 4. Outline the general steps in coacervation phase separation method for microencapsulation. Explain any one technique to carry out the coacervation-phase separation in detail.
1. List different types of **Passive transport**. Briefly describe passive diffusion

OR

1. Short note on **Carrier mediated** transport. [3M]

2. List different **Physiochemical factors** affecting Drug Absorption. Briefly describe any TWO?

OR

2. List different **Formulation factors** affecting Drug Absorption. Briefly describe any TWO. [4M]

3. Which are different **Physiological barriers** to Drug absorption? [2M]

4. Short note on Plasma **Protein binding** [2M]


6. Define First Pass Metabolism and Drug Clearance [2M]
Q. 1 Give detailed pharmacognostic scheme of *Clove or Cardamom*  

Q. 2 Differentiate between Cardinolides and Bufadienolide.  
Give detailed account of *Digitalis purpurea*  

Q. 3 Attempt any One  
a. Write short note on *Eucalyptus*  
b. Write Biological source, Chemical constituents and suitable method of extraction of volatile oil for *Lemon peel* or Menthol containing drug  

Q. 4 Classify Saponins and write biological source, chemical Constituents and bio potential of any one drug from following  
a. *Diosgenin containing drug*  
b. *Liquorice*  

Q. 5 Attempt ANY ONE  
a. Compare salient features of Umbelliferous fruits i.e. *Fennel and Coriander*  
b. Compare Two types of *Cinnamon*
Q1. Define any two of the followings [2]
   A. Drug Interaction
   B. Patient Compliance.
   C. Community Pharmacy

Q2. Answer any two [6]
   A. Explain the role of Pharmacist in patient counselling.
   B. Discuss the different methods of assessment of compliance.
   C. Describe in detail Type A (Augmented) adverse drug reactions

Q3. Match the followings [2]
   1. Iatrogenic disease
      A. Complexation or Chelation
   2. Tetracycline and Iron Preparation
      B. Staining of Bones
      C. Drug induced disease
      D. Disease induced due to genetic defect

Q4. Write a short note on any two [6]
   A. Pharmacokinetic drug interaction
   B. Key consideration in geriatric drug therapy
   C. Strategies to improve compliance
Q1. Define any two of the followings [2]
   A. Type I Adverse Drug reactions
   B. Patient Compliance.
   C. Hospital Pharmacy

Q2. Answer any two [6]
   A. Discuss various reasons for increase in number of Drug Interactions.
   B. Discuss the strategy for improving patient compliance.
   C. Elaborate on detection of adverse drug reactions.

Q3. Match the followings [2]
   1. Antihistaminics  A. Skin rashes, GI bleeding
   2. Salicylates    B. Drowsiness and sedation
                     C. Ataxia and hypotension

Q4. Write a short note on any two [6]
   A. Pharmacodynamic drug interaction.
   B. Pharmacokinetics consideration in geriatric drug therapy.
   C. Reasons for non compliance.