

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. Pharm. - SEMESTER-7 • EXAMINATION – SUMMER -2018**

**Subject Code: 2270003****Date: 24/5/2018****Subject Name: Pharmaceutical Chemistry – IX (Medicinal Chemistry - III)****Time: 02:30 PM TO 05:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

<b>Q.1</b>	(a)	What are Cephalosporins? Give the SAR of Cephalosporins.	<b>06</b>						
	(b)	Give the IUPAC name and synthesis of chloramphenicol.	<b>05</b>						
	(c)	Give the SAR of Tetracyclines.	<b>05</b>						
<b>Q.2</b>	(a)	Give the synthesis of sulfacetamide and ciprofloxacin.	<b>06</b>						
	(b)	What are $\beta$ -lactam antibiotics? Why penicillin is not active against penicillinase secreting microbes? Give some examples of penicillinase resistant penicillins.	<b>05</b>						
	(c)	Give the SAR of fluoroquinolones, as an antibacterial agent.	<b>05</b>						
<b>Q.3</b>	(a)	<ol style="list-style-type: none"> <li>i. What is MDR TB and XDR TB?</li> <li>ii. Give the classification of anti-tubercular drugs.</li> <li>iii. Give the synthesis of pyrazinamide.</li> </ol>	<b>06</b>						
	(b)	Give the chemical classification of antimalarial drugs with examples and give mechanism of chloroquine.	<b>05</b>						
	(c)	Give the IUPAC name, synthesis and mechanism of Albendazole, an anthelmintic agent.	<b>05</b>						
<b>Q.4</b>	(a)	Give the IUPAC name and synthesis of following drugs. <ol style="list-style-type: none"> <li>i. Chloroquine</li> <li>ii. Pyrimethamine</li> </ol>	<b>06</b>						
	(b)	Write in detail about drugs used in HIV infection.	<b>05</b>						
	(c)	Give the classification of anticancer drugs and outline the synthesis of 5-fluorouracil.	<b>05</b>						
<b>Q.5</b>	(a)	Explain in brief about azoles as antifungal agents. Give the synthesis of ketoconazole.	<b>06</b>						
	(b)	Explain the different molecular targets for antiviral agents.	<b>05</b>						
	(c)	Give the mechanism and synthesis of Chlorambucil.	<b>05</b>						
<b>Q.6</b>	(a)	What is QSAR? Give a detailed note on Hansch model.	<b>06</b>						
	(b)	What is lead? Enlist the steps to identify the leads.	<b>05</b>						
	(c)	Write in brief about CADD	<b>05</b>						
<b>Q.7</b>	(a)	Write a detailed note on combinatorial chemistry.	<b>06</b>						
	(b)	Explain the following terms. <table border="0" style="width: 100%; margin-left: 20px;"> <tbody> <tr> <td>i. Bioisoster</td> <td>iv. Chemotherapeutic agents</td> </tr> <tr> <td>ii. Schizonticide</td> <td>v. Grey baby syndrome</td> </tr> <tr> <td>iii. Sarcoma</td> <td></td> </tr> </tbody> </table>	i. Bioisoster	iv. Chemotherapeutic agents	ii. Schizonticide	v. Grey baby syndrome	iii. Sarcoma		<b>05</b>
	i. Bioisoster	iv. Chemotherapeutic agents							
ii. Schizonticide	v. Grey baby syndrome								
iii. Sarcoma									
(c)	Write a note on molecular modelling.	<b>05</b>							