## M.Sc.- II (Chemistry) CBCS Pattern Semester-III **PSCHT12.5 - Medicinal Chemistry**

	Pages : ne : Thi	2 ree Hours $\star 6 3 5 7 \star$	GUG/W/23/11346 Max. Marks : 80
	Note	e : All questions are compulsory and carry equal marks.	
1.	a)	Write a note on significance of drug metabolism in medicinal chemistry. Ga account of the use of computer's in drug design.	ive a detail 8
	b)	Give synthesis and uses of	8
		1) Methyl dopa2) Atenolol	
		OR	
	c)	Give synthesis and mode of action of amyl nitrate.	4
	d)	Write a short note on cardiovascular diseases.	4
	e)	Give the synthesis of verapamil.	4
	f)	Write a note on prodrugs. Give the different phases in prodrug action.	4
2.	a)	Explain Type-I & Type-II diabetes. Write a note on the use of Insulin and Thiazolidinediones as antidiabetic agents.	8
	b)	What are antineoplastic agents? Give their classification. Discuss following	. 8
		i) Harmones ii) Natural products.	
		OR	
	c)	Explain the synthesis and uses of Ciglitazone.	4
	d)	Write a short note on cancer chemotherapy.	4
	e)	Discuss the role of Insulin in human body.	4
	f)	Give synthesis of melphalan.	4
3.	a)	Explain the synthesis and uses of following.	8
		1) Sulphonamides 2) Phenylbutazones	
	b)	What are diuretics. Give the synthesis.	8
		1) Bumetanide 2) Quinthazone	
		OR	

	c)	What are analgesic drugs? Give the uses and mode of action of phenacetin.	4
	d)	Write down the synthetic pathway's of Griseofulvin.	4
	e)	Explain the synthesis and uses of ethacrynic acid.	4
	f)	Give the synthesis of frusemide.	4
4.	a)	<ul> <li>Write a brief note on:</li> <li>1) Heparin and it's action.</li> <li>2) Mechanism of blood coagulation.</li> </ul>	8
	b)	<ul><li>Explain the synthesis and uses of</li><li>1) Coumarin</li><li>2) Benzodiazepine</li></ul>	8
		OR	
	c)	Write down the synthesis of phenobarbital.	4
	d)	Give the synthesis of Indanediones.	4
	e)	Explain the mode of action of Barbiturate's and hydantoin as CNS depressant's.	4
	f)	Give the synthesis and uses of diazepam.	4

5.	a)	What do you understand by clinical studies with respect to drugs.
	b)	Write down the structure and use of Thiotepa.
	c)	Give the synthesis and uses of Analgin.
	d)	Write down the structure and uses of Norfloxacin.
	e)	Give the structure of Vitamin $- K_2$ .
	f)	Draw the structure and explain mode of action of Quinethazone.
	g)	Define Antipyretic with suitable example.

h) Define ideal drug.

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