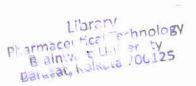




## **BRAINWARE UNIVERSITY**



## Term End Examination 2023-2024

## Programme – B.Pharm-2019/B.Pharm-2020/B.Pharm-2021 Course Name – Medicinal Chemistry III/Medicinal Chemistry III Theory Course Code - BP601T ( Semester VI )

Full Marks: 75 Time: 3:0 Hours [The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.] Group-A (Multiple Choice Type Question) 1 x 20=20 Choose the correct alternative from the following: (i) Choose the correct one-lipophilicity of tetracycline increases by esterification of - OH group at position a) C-5 b) C-10 c) C-6 d) C-12 (ii) Select the correct one-benzylpenicillin is also known as a) Penicillin- G b) Penicillin- V c) Penicillin- F d) Penicillin- K (iii) Which of the correct position of carbon of penicillin where carboxylic acid group a) C-3 b) C-2 c) C-6 d) C-7 (iv) Choose the right option-penicillins act by a) inhibiting cell wall synthesis b) inhibiting protein synthesis c) binding with nucleic acids d) inhibiting folic acid synthesis (v) When-in cephalosporins, higher resistance to hydrolysis by beta lactamases is shown a) The amino group is acylated b) Replacement of sulphur with oxygen c) Oxidation of ring sulphur to sulphoxide or d) Introduction of C-7 α x005F2methoxy group (vi) Choose the ion with tetracycline is contraindicated with a) iron b) calcium containing antacid c) magnesium containing drug d) all (vii) Select the antibiotic that is mainly used for typhoid fever. a) Ampicillin b) Gentamycin c) Chloramphenicol d) Rifampicin (viii) Recall the semi synthetic penicillin is active against penicillinase

b) cloxacillin,

a) ampicillin,

152 474	moxicillin, call the answer, semi-synthetic penicillin des	d) penicine V, cribed as bactericidal is		
	xacilline moxicillin	b) cloxacillin d) penicillin		
(x) Na	me the semi-synthetic penicillin that was con e treatment is	22.7	8	
c) A	xacilline moxicillin oose the correct option-antibiotic that was r	b) Ampicillin d) Carbenicillin eported to act against septicaemia		
a) o c) ai	xacilline, moxicillin, e full form of 6-APA is represent as	b) gentamycin, d) carbenicillin,		
c) 6-	-amino penicillanic-acid -amino penicillanic anhydride ect from the following, a central six-member	b) 6-amino penicilloic-acid d) 6-aceto penicillanic acid ring of dihydrostreptomycin called		
c) st	-deoxy streptamine reptose racyclines are characterized by	b) streptidine d) streptamine		
c) te	ecahydronaphthacenes sk <mark>eleton,</mark> etrahydronaphthacenes skeleton, erification of –OH group in a drug may lead t	b) heptahydronaphthacenes skeleton, d) octahydronaphthacenes skeleton, to	i 🌦	
c) Pi	a) Destabilization, b) Degradation, c) Prodrug formation, d) Epimerization, (xvi) In acid degradation of erythromycin the first obtained intermediate is			
c) D	piroketal, esosamine, e mode of action o <mark>f b</mark> iguanides can be explai	b) Hemiketal, d) Cladinose, ned as	("Sreny	
c) Pr	ross linking inhibition, rotein synthesis inhibition, posis's Sarcoma is associated with	<ul><li>b) dihydrofolate reductase inhibition,</li><li>d) Microtubule damaging,</li></ul>	gumee	
c) Tu	iabetes, uberculosis, pose the correct statement about fluoroquin	b) AIDS, d) Ulcer, olones.		
c) No liv	profloxacin is ineffective in the treatment f gonococcus, orfloxacin and Ciprofloxacin have long half ves (12 hours), pose the correct statement for rifampicin is	<ul> <li>b) Norfloxacin and Ciprofloxacin are predominantly faecally excreted,</li> <li>d) May damage growing cartilage in cheless than 18 years of age,</li> </ul>	i <mark>ldre</mark> n	
	hibits hepatic microsomal enzymes, actericidal for mycobacteria,	<ul><li>b) Inhibits DNA synthesis,</li><li>d) not appreciably protein bound,</li></ul>		
Group-B				
(Short Answer Type Questions)			5 x 7=35	
2. Explain the mechanism of action of trimethoprim.				
3. Discuss the pharmacological action of antitubercular antibiotics with example.				
4. Describe the nomenclature of penicillin using USP and CAS system and some of the			(5)	

semisynthetic penicillin with structural example.

5.	Express the chemical structure, application and side effects of oxytetracycline and chlorotetracycline.	(5)
6.	Write in details about the structure-activity relationship study of sulphonamides.	(5)
7.	Analyze the synthesis of ciprofloxacin as UTI.	(5)
	OR	
	Explain the structure and mechanism of action of ethionamide, ethambutol, para amino salicylic acid.	(5)
8.	Explain the steps involve in the synthesis of sulphacetamide.	(5)
	OR Establish the structure activity relationship study of antifungal antibiotics.	(5)
	Group-C (Long Answer Type Questions)	10 x 2=20
9.	Describe the chemistry of aminoglycosides antibiotics and describe the structure and mechanism of action for Neomycin and kanamycin	(10)
10	. Analyze the structure activity reationship of quinoline derivatives	(10)
	OR	
	Describe the SAR of aminoglycosides antibiotics and describe the structure and mechanism of action for streptomycin and chlorotetracycline.	m (10)
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