

BRAINWARE UNIVERSITY

Term End Examination 2021 - 22 Programme – Bachelor of Pharmacy Course Name – Medicinal Chemistry III Course Code - BP601T (Semester VI)

Time allotted: 1 Hrs.30 Min. Full Marks: 75 [The figure in the margin indicates full marks.] Group-A (Multiple Choice Type Question) 1 x 75=75 Choose the correct alternative from the following: (1) Lipophilicity of Tetracycline increases by esterification of – OH group at position a) C-5b) C - 10c) C-6d) C - 12(2) Clavulanic acid has a beta lactum ring fused with b) Thiadiazole system a) Clavulanic acid has a beta lactum ring fuse d with c) Oxazolidine system d) d.Thiazolidine (3) All of the following antibiotics bind to the 50S subunit of the ribosome thereby inhi biting proteinsynthesis EXCEPT a) Chloramphenicol b) Erythromycin c) Linezolid d) Doxycycline (4) Substitution of bulky groups on the alpha carbon of side chain of Penicillin provides a) beta lactamase resistance b) . acid resistance c) Penicillinase resistance d) both (a) and (b) (5) An electron withdrawing substituent on the alpha carbon of side chain of Penicillin provides a) beta lactamase resistance b) acid resistance

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(6) Which of the following is NOT a second generation cephalosporin?

(7) Which of the following is considered to be bacteriostatic?

d) both (a) and (b)

b) Cephalothin

d) Cefaclor

c) Penicillinase resistance

a) Ceftazidime

c) Cefotaxime

a) Penicillin	b) Chloramphenicol
c) Ciprofloxacin	d) Cefoxitin
(8) Flucloxacillin	
a) Is ineffective against streptococci	b) Is active against enterococci and anaerobes
c) Blocks transpeptidation and inhibits peptid oglycan synthesis	d) Is poorly absorbed orally
(9) Benzyl penicillin is also known as	
a) Penicillin - G	b) Penicillin - V
c) Penicillin - F	d) Penicillin - K.
(10) The penicillins have a carboxylic acid group p	placed at
a) C-3	b) C-2
c) C-6	d) C-7
(11) Demeclocycline differs from chlortetracycline	e only by
a) absence of – CH3 group on carbon 6	b) presence of – OH group on carbon 6
c) absence of – N (CH3)2 group on carbon 4	d) absence of – OH group on carbon 3
(12) Tetracycline is contraindicated with	
a) iron	b) calcium containing antacid
c) magnesium containing drug	d) all
(13) What is the full form of 6-APA?	
a) 6-amino penicillanic-acid	b) 6-amino penicilloic-acid
c) 6-amino penicillanic-anhydride	d) 6-aceto penicillanic-acid
(14) Penicillin on β-lactamase degradation produce	es
a) Transpeptidase	b) β-Lactamase
c) Penicillinase	d) peptidoglycan synthase
(15) Chloroquine act by inhibiting following enzym	me
a) DNA and RNA polymerase	b) DNA gyrase
c) Dihydro folate reductase	d) DNA
(16) Clindamycin	
a) Inhibits bacterial cell wall synthesis	b) Is often used for prophylaxis of endocarditi s in patients with Valvular disease who are undergoing dental procedures
c) Penetrates through BBB into CSF well	d) Works well against enterococci and gram n egative aerobic organisms
(17) Ribosomal resistance occurs with	
a) Sulphonamides	b) Penicillin
c) Fluoroquinolones	d) Macrolides
(18) Which of the following is an ester?	
a) aspirin	b) methadone
c) methoxyflurane	d) adrenaline
(19) Esterification of –OH group in a drug may lea	ad to
a) Destabilization	b) Degradation
c) Prodrug formation	d) Epimerization
(20) Chloramphenicol is obtained from	

a) Streptomyces capreolus	b) Streptomyces venezulae
c) Streptomyces orchidaceus	d) Streptomyces griseus
(21) Primaquine is a derivative of	
a) 4-aminoquinoline	b) 8-aminoquinoline
c) 2, 4-diaminopyrimidine	d) 8-hydroxyquinoline
(22) The structure of biguanides contain	
a) 6 nitrogen atoms	b) 5 nitrogen atoms
c) 3 nitrogen atoms	d) 7 nitrogen atoms
(23) Sugars are linked to the central moiety of mac	crolides by
a) C- glycosidic bond	b) O- glycosidic bond
c) N- glycosidic bond	d) S- glycosidic bond
(24) Modification at the primary alcoholic group o s in	n C-1 atom of Chloramphenicol result
a) Increase in activity	b) decrease in activity
c) No change in activity	d) Abolishing activity
(25) Amodiaquine comes under	
a) 6-Chloro-4-Amino Quinolines	b) Chloro-4-Amino Quinolines
c) 7-Chloro-5-Amino Quinolines	d) 6-Chloro-5-Amino Quinolines
(26) Ethambutol is used to treat	
a) hypertension	b) tuberculosis
c) poisoning	d) HIV
(27) PAS is	
a) Para-amino-sulfuric acid	b) Para-amino-sorbitol
c) Para-amino-salicylic acid	d) Para-amino-sufonamide
(28) Artemether is used in	
a) Glaucoma	b) Tuberculosis
c) malaria	d) dysentery
(29) Kaposis's Sarcoma is associated with	
a) Diabetes	b) AIDS
c) Tuberculosis	d) Ulcer
(30) Regarding resistance to antibiotics	
a) Penicillinases cannot inactivate cephalospo rins	b) Macrolides can be inactivated by transferases
c) Mutation of aminoglycoside binding site is its main mechanism of resistance	d) Tetracycline resistance is a marker for mult idrug resistance
(31) Influenza causing virus is	
a) Herpes virus	b) Orthomyxovirus
c) Retrovirus	d) Adenovirus
(32) Ciprofloxacin	
 a) Is a defluorinated analogue of nalidixic aci d 	b) Inhibits tropoisomerases 2 and 3
c) Has no gram positive cover	d) Has bioavailability of 30%
(33) The antiviral drug which is a thiazole analogu	e is

a) Nellinavir	b) Kitonovir
c) Saquinavir	d) Loviride
(34) Which of the following is not a 4-amino quino	oline
a) Amodiaquine	b) Mefloquine
c) Primaquine	d) Chloroquine
(35) Zalcitabine is an analog of	
a) cytosine	b) guanine
c) uracil	d) adenine
(36) Major metabolite of Isoniazid is	
a) N-acetyl Nicotinamide	b) N-acetyl isoniazid
c) N-methyl isoniazid	d) N-methyl Nicotinamide
(37) Ciprofloxacin is which type of drug?	
a) Antifungal antibiotics	b) Anti-tubercular antibiotics
c) . Quinolines	d) Quinolone Antibacterials
(38) Nalidixic acid is used in	
a) urinary tract infection	b) Malaria
c) Fungal infection	d) none
(39) Tuberculous meningitis involves	
a) respiratory system	b) nervous system
c) GI tract	d) none
(40) streptomycin	
a) Bactericidal	b) Bacteriostatic
c) Not an antibacterial	d) An antifungal
(41) Amikacin is a	
a) semisynthetic aminoglycoside	b) synthetic aminoglycoside
c) natural aminoglycoside	d) none
(42) Example of HIV protease inhibitors	
a) Abacavir	b) Ritonavir
c) Aciclovir	d) Ganciclovir
(43) Idoxuridine is	
a) RT inhibitors	b) DNA polymerase inhibitor
c) both	d) none
(44) Which of the following is aryl sulfonamide de	erivative?
a) Tamsulosin	b) Prazosin
c) Metaraminol	d) None
(45) Cycloguanil acts by	
a) 30 S ribosomal inhibition	b) dihydrofolate reductase inhibition
c) 50 S ribosomal inhibition	d) Protein synthesis inhibition
(46) Which sulphonamide is not used in diuretics?	
a) Tolbutamide	b) Bumetanide
c) Chlorthalidone	d) Furesemide
(47) Sulfonamides are metabolized by humans prir	ncinally by

a) Acetylation	b) Deamination	
c) Oxidation	d) Conjugation	
(48) Which is basic ring present in sulfomethoxazole?		
a) Oxazole	b) Isoxazole	
c) Thiazole	d) None of the above	
(49) Chemically Albendazole is		
a) Indole derivative	b) Benzimidazole derivative	
c) Quinoline derivative	d) Carbazole derivative	
(50) Regarding the "azole" group of antifungals		
a) Fluconazole has low water solubility	b) Ketoconazole may be given IV/PO	
c) Itraconazole undergoes renal elimination	d) They work by reduction of ergosterol synth esis by inhibition of fungal cytochrome P4 50 enzymes	
(51) Diethylcarbamazine Citrate is which class of c	Irug	
a) Antiviral	b) Antifungal	
c) Anthelmintic	d) Sulfonamide	
(52) Albendazole contains which of the following		
a) Imidazole	b) Fural	
c) Thazolidine	d) Benzimidazol	
(53) Niridazole		
a) Mono amine oxidase	b) Mono acyclic oxidase	
c) Mono aldehyde oxidase	d) none	
(54) In vivo, prontosil is converted to		
a) Sulphanilamide	b) Sulphacetamide	
c) Sulphadiazine	d) Sulphathiazole	
(55) Glibenclamide belongs to the class		
a) Thiazolidinediones	b) Sulphonyl ureas	
c) Benzoic acid derivatives	d) Biguanides	
(56) The chemical name of sulphadiazine is		
a) N 1 -2-pyrimidinylsulphanilamide	b) N 1 -5-methyl-3-isooxazolylsulphanilamid e	
c) N 1 -2-pyridylsulphanilamide	d) N 1 -acetylsulphanilamide.	
(57) Antifungal polyene macrolide that preferentially binds to fungal ergosterol which alt ers cellular permeability.		
a) amphotericin B	b) ketoconazole	
c) flucytosine	d) grisefulvin	
(58) An azole most commonly used for topical treatment of candidiasis		
a) amphotericin B	b) clotrimazole	
c) griseofulvin	d) flucytosine	
(59) What term is used to signify a preparation that appears identical to the preparation of an active drug but which has no biological activity?		
a) Dummy drug	b) Peptidomimetic	
c) Placebo	d) Gazebo	

(60) Which of the following is one of the rules in Li	pinski's rule of five?	
a) A molecular weight equal to 500	b) No more than five hydrogen bond acceptor groups	
c) No more than 10 hydrogen bond donor gro ups	d) A calculated logP value less than +5	
(61) Which of the following descriptions most accurding regions?	rately describes binding sites and bin	
a) a binding site is part of a binding region	b) a binding region is part of a binding site	
c) a binding region is the same as a binding si te	d) a binding region is on a drug whereas a bin ding site is on a macromolecular target	
(62) Which of the following statements best describes a lead compound?		
a) A compound that contains the element lead	b) A compound that contains the element lead	
c) A molecule that shows some activity or property of interest and serves as the starting point for the development of a drug.	d) The first compound of a structural class of compounds to reach the market.	
(63) What value does the regression coefficient have for a perfect fit?		
a) 0.1	b) 1	
c) 10	d) 100	
(64) What does the symbol P represent in a QSAR equation?		
a) pH	b) plasma concentration	
c) partition coefficient	d) prodrug	
(65) A measure of the steric properties for a substitu	ent	
a) Molar refractivity is a steric factor	b) Molar refractivity is an electronic factor	
c) Molar refractivity is a hydrophobic factor	d) Molar refractivity is a stereoelectronic fact or	
(66) What software programme is used to determine	the Verloop steric parameter?	
a) Alchemy	b) Chem3D	
c) Sterimol	d) ChemDraw	
(67) What does a negative value of σ signify for a su	ubstituent?	
a) It is electron donating	b) It is electron withdrawing	
c) It is neutral	d) It is hydrophobic	
(68) A Hansch analysis is being carried out in order to relate biological activity to σ and π. Which of the following substituents would best suit the study?		
a) SO2NH2, CONH2, CH3SO2, CH3CO, CN	b) NH2, OH, F, C1 CF3	
c) NO2, CO2H, F, OCH3, NMe2	d) SO2NH2, Br, NMe2, NH2, CF3SO2	
(69) Full form of QSAR		
a) Qualitative structure-activity retention	b) Quantitative structure–activity retention	
c) Qualitative structure-activity relationship	d) Quantitative structure-activity relationship	
(70) Combinatorial chemistry can be useful at various stages of the drug design / develop ment process. Which of the following is such a stage?		
a) Purifying a lead compound	b) Optimising a lead compound	
c) Structure determination	d) Pharmacological testing	
(71) Chloroquine act by inhibiting following enzyme		

a) DNA and RNA polymerase b) DNA gyrase c) Dihydro folate reductase d) DNA (72) The anti- malarial drug quinine contains a) Quinoline ring b) Quinclidine ring c) Isoquinoline ring d) Both (a) and (b) (73) Chemically Albendazole is a) Indole derivative b) Benzimidazole derivative c) Quinoline derivative d) Carbazole derivative (74) What is the term used to describe the 3-dimensional space around a molecule when it is in a target binding site? a) Stereochemical space b) Conformational space c) Configurational space d) Constitutional space (75) What is meant by a scaffold? a) The lead compound b) The carbon skeleton of a compound c) The pharmacophore d) The core structure of a molecule that is co mmon to a series of compounds