

SUB: Pharmacy

Time: 1 Hour 40 minutes

**Instructions:**

1. Ensure that all pages are printed.
2. Use Black ball pen only
3. Change in option is not allowed
4. There is no negative marking
5. Use of non-programmable scientific calculator is allowed

1.	As per IP 2018, if 5000 parts of solvent is required for dissolving 1 part of solute, the solute is considered to be			
	A	Very soluble	B	Insoluble
	C	Slightly soluble	D	Very slightly soluble
2.	Which of the following type of water is used for manufacturing of injections to be reconstituted before use?			
	A	Purified water	B	Sterile water for injection
	C	Water for injection	D	Distilled water
3.	The average weight of content of a capsule is 250 mg. In the test “uniformity of weight” for capsules as per IP 2018, the % deviation allowed for this capsule will be			
	A	5	B	7.5
	C	10	D	12.5
4.	Which of the following tests is not required for chewable tablets?			
	A	Hardness	B	Friability
	C	Disintegration	D	Uniformity of weight
5.	Chilsonator is used for tablet preparation by:			
	A	Direct compression	B	Dry granulation
	C	Wet granulation	D	Hot melt granulation
6.	Drug targeting to liver is _____ level of targeting			
	A	First	B	second
	C	Third	D	Fourth
7.	Which of the following component of transdermal patch is removed before its application?			
	A	Adhesive layer	B	Rate controlling membrane
	C	Release liner	D	Backing membrane
8.	Which of the following properties of a drug does <b>NOT</b> affect transdermal permeation?			
	A	Molecular weight	B	Log P
	C	Melting point	D	Refractive index

9.	Which of the following is an ideal candidate for gastro-retentive drug delivery system?			
	A	Drug which is predominantly absorbed from small intestine	B	Drug which gets degraded at acidic pH
	C	Drug which is predominantly absorbed from stomach	D	Drugs which metabolize in stomach
10.	The main limitation of liposomes is			
	A	Cannot entrap hydrophilic drugs	B	Cannot entrap lipophilic drugs
	C	Drug leakage from the bilayer	D	They are not biocompatible
11.	Out of the following statements related to passive diffusion of drugs, which one is false?			
	A	The driving force is the concentration gradient	B	The rate of diffusion is directly proportional to the area of membrane
	C	The rate of diffusion is inversely proportional to the thickness of the membrane	D	Energy is required for passive diffusion
12.	Active transport of drugs follows_____order kinetics			
	A	Zero	B	First
	C	Initially first and then zero	D	Second
13.	As per pH partition hypothesis, a strongly acidic drug will be absorbed from _____.			
	A	stomach	B	Intestine
	C	All parts	D	No part
14.	The highest dose of a drug which is having good permeability is 200 mg. It is having solubility of 1 mg/ml. This drug belongs to _____class in the BCS.			
	A	I	B	II
	C	III	D	IV
15.	The unit of clearance of drug is			
	A	Litres	B	Litres/hour
	C	Hour	D	Litres/KG
16.	Lanolin is used in the lipstick as			
	A	Emollient	B	Pigment
	C	Matting agent	D	Flavour
17.	Zinc Pyrithione is used in the shampoo for _____			
	A	Conditioning	B	Anti-dandruff action
	C	Removing dirt	D	Obtaining smooth and silky hair

18.	Methyl and propyl parabens are used in cosmetics as			
	A	Anti-oxidant	B	Anti-wrinkle
	C	Preservatives	D	Viscosity modifiers
19.	The most common film former for nail lacquers is			
	A	Hydroxypropyl methyl cellulose	B	Talc
	C	Lactose	D	Nitrocellulose
20.	SLS is used in the toothpaste as			
	A	Abrasive	B	Foaming agent
	C	Flavoring agent	D	Sweetening agent
21.	Using allegation method, calculate the parts of 95% alcohol and water to prepare 50% alcohol			
	A	50 parts of 95% alcohol and 45 parts of water	B	45 parts of 95% alcohol and 50% water
	C	50 parts of 95% alcohol and 0 parts of water	D	45 parts 95% alcohol and 45 parts of water
22.	The freezing point of an ophthalmic solution before adjusting isotonicity is (-0.12°C). How much sodium chloride should be added to make 100 ml of this solution isotonic?			
	A	0.9 gm	B	0.69 gm
	C	1.0 gm	D	0.12 gm
23.	Calculate the volume of 2.0 Kg of glycerin if its density is 1.25 gm/ml			
	A	2000 ml	B	1000 ml
	C	1250 ml	D	1600 ml
24.	In the Avoirdupois system, the standard unit for weight is			
	A	Pound	B	Grain
	C	Kilogram	D	Gram
25.	In India, 100° proof spirit contains _____% v/v absolute alcohol			
	A	95	B	57.1
	C	100	D	85
26.	Which antidiabetic agents is not belonging to sulphonyl urea derivatives?			
	A	Repaglinide	B	Tolbutamide
	C	Glimipiride	D	Acetohexamide
27.	A _____ non-sedative antihistaminic shows severe prolongation of QT interval and torsades de pointes.			
	A	Cetirizine	B	Astimazole
	C	Fexofenadine	D	Loratidine
28.	Acid hydrolysis of penicillin occur through C-6 side chain and produce _____ metabolite used as drug for treatment of Wilson's diseases.			
	A	Penicilloic acid	B	Penilloic acid
	C	Penilloaldehyde	D	D-Pencillamine

29.	How many membered lactone ring is present in Ivermectin?			
	A	14 membered lactone ring	B	16 membered lactone ring
	C	12 membered lactone ring	D	18 membered lactone ring
30.	Which of the following drug shows antiarrhythmic mechanism by blocking Na channel belonging to class 1C.			
	A	Moricizine	B	Quinidine
	C	Mexiletine	D	Procainamide
31.	Ezetimibe is _____ inhibitor.			
	A	HMG CO-A reductase	B	ACAT
	C	Fibrate	D	LCAT
32.	In Cardiac glycoside if lactone ring is replaced by _____ group then also it is retaining biological activity?			
	A	Nitrile	B	Methoxy
	C	Methyl	D	Hydroxy
33.	If two monosaccharide's differ from each other in their configuration around a single specific carbon is known as,			
	A	Monomer	B	Epimer
	C	Diastereomer	D	Enantiomer
34.	7-Dehydrocholesterol, an intermediate in the synthesis of cholesterol, is converted to _____ by ultraviolet rays.			
	A	Vitamin D2	B	Vitamin D1
	C	Vitamin D3	D	Vitamin D4
35.	The end product of purine metabolism in humans is _____.			
	A	Xanthine	B	Ammonia
	C	Uric acid	D	Urea
36.	Fluorescence is a result of transition of electron from,			
	A	Lower singlet excited state to singlet ground state	B	Singlet ground state to singlet excited state
	C	Triplet excited state to singlet ground state	D	Triplet ground state to singlet excited state
37.	The functional unit of the enzyme is known as _____			
	A	Isoenzyme	B	Holoenzyme
	C	Metaenzyme	D	Co-enzyme
38.	Which isomer of warfarin is most active?			
	A	E isomer	B	Z isomer
	C	R isomer	D	S isomer
39.	Which of the following antifungal agent is having triazole nucleus?			
	A	Miconazole	B	Fluconazole
	C	Ketoconazole	D	Clotrimazole

40.	How many chiral carbon is present in Ibuprofen?			
	A	One	B	Two
	C	Zero	D	Three
41.	Which of the antitubercular agent is having pyridine nucleus?			
	A	Rifampicin	B	Pyrazinamide
	C	Isoniazide	D	Ethambutol
42.	Which anticancer drug is classified as topoisomerase poison?			
	A	Cisplatin	B	Carmustine
	C	Doxorubicin	D	Dasatinib
43.	Which Prostaglandins analogue have been shown to reduce intraocular pressure by increasing the outflow of aqueous humor, found a place in the treatment of glaucoma?			
	A	Ilatanoprost	B	Carboprost tromethamine
	C	Iloprost	D	Dinoprostone (PGE <sub>2</sub> )
44.	Which antiviral drug form chelation complex with HIV integrase enzyme?			
	A	Nelfinavir	B	Raltegravir
	C	Ritonavir	D	Saquinavir
45.	The drug _____ used for treatment of diabetic neuropathic pain.			
	A	Oxycodon	B	Morphine
	C	Tramadol	D	Pregabalin
46.	Nitric oxide donor used for angina pain.			
	A	Nicorandil	B	Molsidomine
	C	Amlodipine	D	Zetabradine
47.	Which functional group shows sharp stretching at 2200 cm <sup>-1</sup> in IR spectroscopy?			
	A	Cyano	B	Carboxylic acid
	C	Primary amine	D	Carbonyl
48.	Which of hydrogens a-d in the following molecule gives a triplet signal in a normal <sup>1</sup> H NMR spectrum?			
	$\begin{array}{c} \text{O} \\ \parallel \\ \text{CH}_3 - \text{C} - \text{CH}_2\text{CH}(\text{OCH}_3)_2 \\ \text{a} \quad \text{b} \quad \text{c} \quad \text{d} \end{array}$			
	A	Hydrogen a	B	Hydrogen c
49.	Which of the following main component of mass spectroscopy deal with resolving the ions into their characteristics mass components according to their mass-to-charge ratio?			
	A	Ion source	B	Detector
	C	Tube	D	Analyzer
50.	Which of the following heterocyclic rings has greater quantum yield of fluorescence?			
	A	Quinoline	B	Pyrrole
	C	Imidazole	D	Furan

51.	Calculate the dose of a drug (Volume of distribution- 30L; Clearance of drug- 8 L/h) which is injected intravenously at every 8 h to achieve mean steady state plasma concentration of 5 mg/L			
	A	40 mg	B	80 mg
	C	160 mg	D	320 mg
52.	GPCR which activate inhibitory Gα subunit to alter the activity of adenylate cyclase to _____			
	A	Promote conversion of GTP to GDP	B	Decrease cAMP production
	C	Generate IP3 and DAG	D	Open potassium channel
53.	Which of the following is used to reduce the enteric absorption of ingested poisons?			
	A	Activated charcoal	B	Dimercaprol
	C	Pralidoxime	D	N-acetyl cysteine
54.	Which of the following adverse effect is caused by the drug which increases cGMP levels?			
	A	Constipation	B	Dry cough
	C	Headache	D	Urinary incontinence
55.	The therapeutic effect of darifenacin is attributed to its ability to			
	A	Relax bronchial smooth muscle	B	Relax urinary bladder smooth muscle
	C	Inhibit Salivary secretion	D	Inhibit peristalsis
56.	Which of the following drug is a selective agonist of the β3 adrenoceptor and relaxes the detrusor smooth muscle indicated for the treatment of overactive bladder?			
	A	Tizanidine	B	Oxymetazoline
	C	Mirabegron	D	Pseudoephedrine
57.	Which of the following antihypertensive drug is preferred for the patient with Type 2 diabetes and hypertension along with recently developed proteinuria?			
	A	Metoprolol	B	Nifedipine
	C	Lisinopril	D	Diltiazem
58.	Which of the following diuretic drug is indicated for the treatment of mountain sickness?			
	A	Furosemide	B	Hydrochlorthiazide
	C	Acetazolamide	D	Mannitol
59.	Which of the following is classified as intestinal cholesterol absorption inhibitor?			
	A	Fenofibrate	B	Colestipol
	C	Niacin	D	Ezetimibe
60.	Which of the following drug is used in the treatment of cyclic heavy menstrual bleeding?			
	A	Tranexamic acid	B	Heparin
	C	Protamine sulphate	D	alteplase
61.	Which of the following drug acts by inhibiting the neurotransmitter reuptake?			
	A	Morphine	B	Levodopa
	C	Fluoxetine	D	Donepezil
62.	Which of the following anxiolytic drug devoid of sedative action?			
	A	Hydroxyzine	B	Diazepam
	C	Oxazepam	D	Buspirone

63.	Which antiepileptic drug is also indicated for the treatment of trigeminal neuralgia and bipolar disorder?			
	A	Ethosuximide	B	Carbamazepine
	C	Zonisamide	D	Levetiracetam
64.	Which of the following property is described to assess and compare the potency of inhalation anesthetics?			
	A	Blood: gas partition	B	Minimum alveolar concentration
	C	Blood: brain partition coefficient	D	Relative analgesic potency
65.	Which of the following drug improve both positive and negative symptoms of schizophrenia?			
	A	Chlorpromazine	B	Haloperidol
	C	Flupenthixol	D	Risperidone
66.	Which of the following drug is used in the treatment of hyperprolactinemia?			
	A	Selegiline	B	Trihexyphenidyl
	C	Tolcapone	D	Cabergoline
67.	Which of the following drug is known to decrease osteoclast activation, available in once a week formulation but may cause esophageal erosion?			
	A	Teriparatide	B	Raloxifene
	C	Alendronate	D	Cinacalcet
68.	The phenomenon which describes the continued suppression of bacterial growth even after an antibiotic has been eliminated from the body:			
	A	Bacteriocidal	B	Bacteriostatic
	C	Concentration dependent killing	D	Post-antibiotic effect
69.	Which of the following drug is administered to inhibit the metabolism of imipenem by dehydropeptidase?			
	A	Cilastazole	B	Cilastatin
	C	Avibactam	D	Clavulanic acid
70.	Which of the following antibiotic is still active against Vancomycin resistant <i>E. faecium</i> ?			
	A	Doxycyclin	B	Quinupristin- dalfopristin
	C	Clindamycin	D	Azithromycin
71.	Which of the following drug is the first choice for the treatment of pneumocystitis jiroveci infection, an opportunistic infection in immunocompromised patient?			
	A	Trimethoprim- sulfamethoxazole	B	Nitrofurantoin
	C	Ciprofloxacin	D	Doxycycline
72.	Which of the following antifungal drug exerts its effect by inhibiting the cell wall synthesis through inhibition of $\beta$ -1,3- glucan synthase enzyme?			
	A	Capsosuingin	B	Amphotericin B
	C	Fluconazole	D	Terbinafine
73.	A patient experienced remission from chronic myeloid leukemia when treated by imatinib mesylate. Which enzyme is inhibited by this drug?			
	A	DNA polymerase	B	RNA polymerase
	C	BCR- ABL tyrosine kinase	D	Thymidylate synthase

74.	Which immunosuppressant drug is known to form a complex with FK- binding protein, results into inhibition of calcineurin and T lymphocyte activation?			
	A	Cyclosporine	B	Azathioprine
	C	Cyclophosphamide	D	Tacrolimus
75.	Which of the following drug is used for emergency treatment of hypertension or acute supraventricular tachycardia?			
	A	Metoprolol	B	Esmolol
	C	Dofetilide	D	Verapamil
76	Quinine is an _____ agent.			
	A	Antiobesity	B	Antimalarial
	C	Antidiarrheal	D	Antiarrhythmic
77	Procyanidins are _____			
	A	Flavan 3,4- diols	B	Flavylium cations
	C	Flavones	D	Flavan-3-ols
78	Digoxigenin possesses an additional hydroxyl group at _____ position when compared with digitoxigenin.			
	A	12 $\beta$	B	10 $\beta$
	C	17 $\beta$	D	8 $\beta$
79	The binomial system of nomenclature indicates to us the _____ and _____ names.			
	A	Genus and class	B	Class and species
	C	Class and order	D	Genus and species
80	_____ of the following natural color is insect origin and an anthraquinone.			
	A	Alain	B	Carminic acid
	C	Alizarin	D	Chrysophanic acid
81	This alkaloid is not liquid _____.			
	A	Arecoline	B	Coniine
	C	Nicotine	D	Berberine
82	_____ of the following volatile oil constituent is a phenylpropanoid.			
	A	Caryophyllene	B	Farnesol
	C	Anethole	D	Pinene
83	Ergometrine is used in the treatment of _____.			
	A	Post-partum haemorrhage	B	Breast cancer
	C	Migrane	D	Hypertension
84	_____ is a prodrug.			
	A	Piperine	B	Valine
	C	Sennoside B	D	Quercetin
85	Codeine can be differentiated from morphine by presence of _____ group.			
	A	Ethyl	B	Methyl
	C	Acetyl	D	Dihydro
86	_____ root shows Keel.			
	A	Ipecac	B	Aconite
	C	Senega	D	Rauwolfia



87	Microsphenoides a type of calcium oxalate crystals are characteristics of _____ alkaloid containing leaf drug.			
	A	Hyoscyamus	B	Lobelia
	C	Nicotiana	D	Belladonna
88	Steroidal saponins are used as starting material for the synthesis of _____.			
	A	Vitamin C	B	Vitamin D
	C	Vitamin A	D	Vitamin B
89	Colchicine is type of alkaloid _____.			
	A	True alkaloid	B	Proto alkaloid
	C	Pseudo alkaloid	D	Keto alkaloid
90	Fehes test is positive in case of_____.			
	A	Starch	B	Sucrose
	C	Honey	D	Liquid glucose
91	Idioblasts are _____.			
	A	Cells of different size, shape and content	B	Abnormal phloem
	C	Abnormal vascular bundles	D	Cells of same size, shape and content
92	Tropane alkaloids are biosynthesized from _____ of the following.			
	A	Ornithine	B	Tryptophan
	C	Tyrosine	D	None of these
93	Fatty acid biosynthesis through acetate pathway occurs in _____.			
	A	Mitochondria	B	Golgi body
	C	Nucleus	D	Cytosol
94	Iodine value is a measure of _____ of the fixed oil..			
	A	Saturation	B	Unsaturation
	C	Acidity	D	Rancidity
95	Taxol is a drug of choice in the treatment of _____.			
	A	Non-small cell lung cancer	B	Bladder cancer
	C	Ovarian cancer	D	Bone cancer
96	Diosgenin is biosynthesized from _____.			
	A	Lanosterol	B	Squalene
	C	Cyclartenol	D	Tryptophan
97	_____ is a synthetic derivative of a vinca alkaloid used to treat neurological symptoms of cerebrovascular disease.			
	A	Vinorelbine	B	Vindesine
	C	Vinpocetine	D	Vinflunine
98	----- are known to reduce the effect of warfarin and may produce excessive anticoagulation.			
	A	Clove	B	Fenugreek
	C	St. John's wort	D	Garlic

99	Cremocarp fruit is characteristic of the family _____.			
	A	Cruciferae	B	Compositae
	C	Umbelliferae	D	Solanaceae
100	----- of the following technique is used for gene transfer to produce transgenic plants.			
	A	Elicitation	B	Immobilization
	C	Electroporation	D	Induction