

Seat No. \_\_\_\_\_

SUB: PHARMACY (PY)

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. Absorption involves movement of drug from :  
A Site of Application to site of action  
B Site of Administration to site of absorption  
C Site of Absorption to site of action  
D Site of Administration to extracellular compartment
2. Aprotic solvents act as excellent solvents because of their **(Select wrong answer)**  
A High dielectric constant  
B High polarizability  
C High Dipole moment  
D High Hydrogen Bonding
3. Drugs with large Volume of Distribution have  
A High Protein binding  
B High plasma half life  
C High plasma concentration  
D High tissue distribution
4. The HLB Scale of Classification of Surfactants was devised by  
A Davies  
B Draves  
C Griffith  
D Griffin
5. For a drug obeying 2 compartment model, plasma concentration declines  
A In zero order manner  
B In First order manner  
C Exponentially  
D Bi-exponentially
6. The limit for weight variation of a tablet weighing 200 mg as per I. P. is  
A 2.5 %  
B 5%  
C 7.5%  
D 10%
7. The disintegration test of dispersible tablet as per I. P. should be carried out at  
A 36 to 38 °C  
B 25 to 35 °C  
C 15 to 25 °C  
D 28 to 32 °C
8. As per ICH guidelines, the storage conditions for Intermediate Stability Testing of Finished Pharmaceutical Product should be:  
A 30 °C / 50 % RH  
B 30 °C / 65 % RH  
C 40 °C / 75 % RH  
D 25 °C / 60 % RH
9. Ophthalmic products are said to pass the particle size test (I.P.) if it **does not contain** ANY particle above:  
A 10 µm  
B 25 µm  
C 50 µm  
D 100 µm
10. Amber colored glass can provide protection against light rays of following wavelength  
A 200 nm  
B 300 nm  
C 400 nm  
D 500 nm
11. The coating defect associated with inadequate spreading of coating solution in coated tablets is  
A cracking  
B blooming  
C orange peeling  
D blistering
12. Most commonly used plasticizer for soft gelatin capsules amongst the following is

- A Dibutyl phthalate BC PEG 200  
C Propylene Glycol D Sorbitol

13. The value of Carr's index indicating good flow should be :  
A > 30 % B < 15 %  
C between 15 to 25 % D between 20 to 30 %

14. Sodium citrate is used in Calamine lotion as:  
A buffering agent B complexing agent  
C peptizing agent D sequestering agent

15. ARE method of Urinary Excretion is also called:  
A Method of Residuals B Sigma Minus Method  
C Actual Rate of Excretion D Wagner Nelson Method

16. Rotosort is used during manufacturing and Quality control of  
A Tablets B Capsules  
C Injections D Ointments

17. A chlorinated, non-caloric Artificial sweetener is  
A Aspartame B Sucralose  
C Acesulfame D Stevia

18. According to I.P., store in Cold refers to  
A Store in freezer B Store between 0 to 4 ° C  
C Store between 2 to 8 ° C D Store between 8 to 25 ° C

19. Two surfactants with respective HLB values of A = 15 and B = 5 are to be used for preparing an O/W emulsion.  
The required ratio of the surfactants (A : B) to obtain final emulsion of HLB = 11 is  
A 1 : 2 B 2 : 1  
C 3 : 2 D 2 : 3

20. A high boiling solvent that is also used as plasticizer in nail lacquers is  
A Butyl stearate B Ethyl acetate  
C Acetic acid D Toluene

21. A Cosmetic Cream usually existing as a water in oil emulsion is  
A Make up cream B Vanishing Cream  
C Cleansing Cream D Foundation Cream

22. Aluminium Magnesium Silicate is used in Dentifrices as  
A Foaming and Wetting Agent B Wetting and Cleaning Agent  
C Cleaning and Binding agent D Binding and Abrasive agent

23. Desired Melting point of Lipstick should be between  
A 30 to 40 ° C B 40 to 50 ° C  
C 50 to 60 ° C D 60 to 70 ° C

24. Dimethicone is used in Shampoos as  
A Foam booster B Conditioner  
C Cleansing agent D Stabilizer

25. An example of directly compressible Sucrose is  
A Di-Pac B Tablettose  
C Pharmatose D Prosolv

26. The isoelectric point of Type A Gelatin is around  
A pH 4 B pH 5

C pH 7

D pH 9

27. The most appropriate labelling requirement for storage of Aluminum hydroxide Gel I.P. is  
A Store in Freezer B Store in Cold place  
C Store in Cool place D Store in Refrigerator
28. HDPE containers are sterilized by:  
A Dry heat Sterilization B Moist heat sterilization  
C Radiation sterilization D All of the above
29. The biological half life of a drug whose Volume of Distribution is 60 L and Clearance is 1.396 L/min will be  
A 30 Min B 60 min  
C 120 min D 240 min
30. If the Adult dose of a drug is 200 mg, then the dose for a child weighing 14 kg would be:  
A 10 mg B 20 mg  
C 40 mg D 50 mg
31. Xenon arc lamp is the source of light in  
A Spectrofluorimeter B Flame Photometer  
C IR spectrometer D Calorimeter
32. The chemical shift value is  
A Not proportional to field strength B Proportional to field strength  
C Proportional to the total no. of protons D Ratio of number of protons in each group
33. Cobalt is a constituent of  
A Folic acid B Vitamin B12  
C Niacin D Biotin
34. Group transferring Co-enzyme is  
A NADP<sup>+</sup> B NAD<sup>+</sup>  
C CoA D FAD<sup>+</sup>
35. Michaelis-Menten equation is used to explain the effect of substrate concentration on  
A Carbohydrate B Protein  
C Lipid D Enzyme
36. The tear secretion contains an antibacterial enzyme known as  
A Zymase B Diastase  
C Lysozyme D Lipase
37. Aspartame is a combination of  
A Phenylalanine and Aspartic acid B Tyrosine and Aspartic acid  
C Aspartic acid and Glutamic acid D Phenylalanine and methyl ester of Aspartic acid
38. Ketone bodies produced in liver include  
A Acetone B Acetoacetate  
C D-β hydroxy butyrate D All of the above
39. The main carbohydrate in blood is  
A d-fructose B Mannitol  
C d-glucose D l-glucose
40. Acetazolamide can be synthesized from one of the following intermediates

- A 5-amino-2-mercapto-1,3-thiazole      B 5-amino-2-mercapto-1,2,4-thiadiazole
- C 5-amino-2-mercapto-1,3,4-thiadiazole      D 5-amino-2-mercapto-1,3,4-tetrazole
41. Acidity of Ascorbic acid is due to the presence of  
 A Free carboxylic group      B A number of hydroxyl groups  
 C Enolic groups      D None of the above
42. Prazepam differs in structure from Diazepam  
 A N-methyl group      B N-cyclo propyl group  
 C N-cyclo propyl methyl group      D N-propyl group
43. Introduction of OH group at 3-position in benzodiazepine causes  
 A Increased activity      B Loss in activity  
 C Lowering of activity      D None of the above
44. Which of the following ring is present in Cimetidine  
 A Thiazole      B Imidazole  
 C Pyrrole      D Furan
45. Captopril contains which of the following amino acid residue  
 A Proline      B Leucine  
 C Valine      D Isoleucine
46. Naltrexone is a morphine  
 A Agonist      B Antagonist  
 C Partial antagonist      D All of the above
47. Hydralazine is related to  
 A Venous dilators      B Balanced venous dilators  
 C Arterial dilators      D  $\text{Ca}^{2+}$  channel blocker
48. Chemically Primaquine is  
 A 8-[4-amino-1-methyl butyl amino] -6-methoxy quinoline      B 8-[4-amino-1-ethyl butyl amino] -6-methoxy quinoline  
 C 8-[2-amino-1-methyl butyl amino] -6-methoxy quinoline      D 8-[2-amino-1-ethyl butyl amino] -6-methoxy quinoline
49. Metabolite of spironolactone is  
 A Aldosterone      B Canrenone  
 C Corticosteroid      D Pregnenolone
50. Atropine on hydrolysis with barium hydroxide gives  
 A Tropanol and tropic acid      B Scopine and tropic acid  
 C Ecgonine and Benzoic acid      D Benzyl ecgonine and methanol
51. Silver – silver chloride electrode consists of  
 A Silver wire coated with calomel      B Silver wire coated with potassium chloride  
 C Silver wire coated with silver chloride      D Platinum wire coated with silver chloride
52. Ion exchange capacity of a resin is dependent on  
 A The total molecular weight of resin      B The total number of ion active groups  
 C Length of the ion exchange resin      D Solubility of ion exchange resin
53. Gel chromatography separates out the solute molecules on the basis of  
 A Size of solute      B Relative affinity  
 C Chemical nature      D Their absorption power
54. Nernst glow is a mixture of

- A Zirconium, Yttrium, Thorium      B Radium, Thorium  
C Tungsten, Zirconium      D None of the above
55. Diffusion current in polarography is defined by  
A Curve      B Absorptivity  
C Electrode      D Dilution
56. The parent peak of benzene appears of m/z  
A 75      B 77  
C 78      D 51
57. Hydrogen deuterium discharge lamp is used in  
A IR spectrophotometer      B UV spectrophotometer  
C Polarometer      D Gas Liquid chromatography
58. o, m, p - isomers can be differentiated by  
A Nuclear constant      B Coupling constant  
C Bathochromic shift      D Chemical shift
59. The solvent not used in IR spectroscopy is  
A  $\text{CHCl}_3$       B  $\text{CCl}_4$   
C  $\text{CS}_2$       D  $\text{H}_2\text{O}$
60. Bragg's equation is given by  
A  $n\lambda = 2d\sin\theta$       B  $nd = 2\lambda\sin\theta$   
C  $n = 2\lambda d\sin\theta$       D None of the above
61. Rosettes of Calcium oxalate crystals are found in \_\_\_\_\_.  
A Digitalis      B Senna  
C Hyocyamus      D Vasaka
62. Mace found on seeds of *Myristica fragrans* is \_\_\_\_\_.  
A Arillus      B Caruncle  
C Strophiole      D Awn
63. Method for quantification of the anthraquinone glycoside content of drugs specified by the European Pharmacopoeia is \_\_\_\_\_.  
A Gravimetry      B Titrimetry  
C Spectrophotometry      D Gas Chromatography
64. Teniposide is anti-leukemic natural product derived from \_\_\_\_\_.  
A Lignans of *Schizandra chinensis*      B Flavanolignans of *Silybum marianum*  
C Lignans of *Podophyllum peltatum*      D Neolignans of *Piper futokadsura*
65. Pungency of ginger is destroyed by boiling with 2 % solution of \_\_\_\_\_.  
A Sodium carbonate      B Hydrochloric acid  
C Potassium hydroxide      D Acetic acid
66. Sessile glandular trichomes are seen in \_\_\_\_\_.  
A Digitalis      B Belladonna  
C Hyocyamus      D Vasaka
67. Excessive consumption of liquorice leads to \_\_\_\_\_.  
A Dryness in mouth      B Drowsiness  
C Hypokalemic myopathy      D Anorexia nervosa
68. \_\_\_\_\_ can be obtained by microbial oxidation of Eugenol.  
A Vanillin      B Vitamin  
C Thymol      D Menthol
69. Paper impregnated with turmeric extract is used for identification of \_\_\_\_\_.  
A Protocatechuic acid      B Gallic acid  
C Boric acid      D Ferulic acid

70. Lycopodium spore method is an important analytical technique for \_\_\_\_\_.  
 A Woody drugs B Powdered drugs  
 C Whole Drugs D Semisoild Drugs
71. \_\_\_\_\_ of the following plant species are steroid sources for industry.  
 A *Dioscorea composita* B *Glycyrrhiza glabra*  
 C *Ipomoea purga* D *Smilax regelii*
72. Vinpocetine (CavintonR) a semi-synthetic derivative of vincamine is used in the treatment of \_\_\_\_\_.  
 A Gout B Arthritis  
 C Senile dementia D Jaundice
73. \_\_\_\_\_ is toxalbumin found in castor seeds.  
 A Casein B Ricin  
 C Amandin D Abrin
74. The term St Antony's fire is used for \_\_\_\_\_.  
 A The production of ergot B The toxicity of ergot  
 C The toxicity of morphine D The production of poppy
75. The binomial system of classification was developed by \_\_\_\_\_.  
 A Malthus B Wallace  
 C Linnaeus D Darwin
76. \_\_\_\_\_ natural product is developed as an antimalarial.  
 A Pyrimethamine B Paludrine  
 C Halofantrine D Artemisinin
77. \_\_\_\_\_ is teratogenic.  
 A Kurchi B Ipecac  
 C Veratrum D Ephredra
78. Adulteration in Honey with Invert sugar can be detected by \_\_\_\_\_ test.  
 A Molisch's test B Fiehe's Test  
 C Seliwanoff's test D Benedict's test
79. \_\_\_\_\_ is an example of a Protoalkaloid.  
 A Ephedrine B Quinine  
 C Atropine D Aconitine
80. Polyploidy is \_\_\_\_\_.  
 A Addition of one chromosome B Multiplication of entire chromosome set  
 C Submicroscopic changes in DNA D Gross structural changes
81. In most cases the drugs that cross biological membranes are primarily by:  
 A Passive diffusion B Facilitated diffusion  
 C Active transport D Pinocytosis
82. Which of the following property of the drug is related to lower volume of distribution:  
 A. High lipid solubility B. Low ionisation at physiological pH values  
 C. High plasma protein binding D. High tissue binding
83. Which of the following undergo extensive first-pass metabolism in the liver:  
 A. Phenobarbitone B. Propranolol  
 C. Phenylbutazone D. Theophylline
84. Which of the following is true for receptor agonists:  
 A Affinity but no intrinsic activity B. Intrinsic activity but no affinity  
 C. Affinity and positive intrinsic activity D. Affinity and negative intrinsic activity.

85. Which of the following can be considered as type B (unpredictable) adverse drug reaction:  
 A. Side effect B. Toxic effect  
 C. Idiosyncrasy D. Physical dependence
86. Acetylcholine does not increase the secretion of:  
 A. Tear B. Bile  
 C. Pancreatic juice D. Sweat
87. Atropine produces the following actions **except**:  
 A. Tachycardia B. Mydriasis  
 C. Dryness of mouth D. Urinary incontinence
88. Which of following drugs is a selective  $\alpha_2$  adrenoceptor antagonist:  
 A. Prazosin B. Phentolamine  
 C. Yohimbine D. Clonidine
89. Major difference between Labetalol and Propranolol is  
 A. It has additional  $\alpha_1$  blocking property B. It is a selective  $\beta_1$  blocker  
 C. It does not undergo first pass metabolism D. All of the above
90. Which one of the following 5-HT receptor is **not** a G protein coupled receptor:  
 A. 5-HT<sub>1</sub> B. 5-HT<sub>2</sub>  
 C. 5-HT<sub>3</sub> D. 5-HT<sub>4</sub>
91. Which of the following is a selective 5HT<sub>4</sub> antagonist  
 A. Buspirone B. Sumatriptan  
 C. Cisapride D. Clozapine
92. Aspirin's anti-platelet activity is due to  
 A. Thromboxane A<sub>2</sub> B. 5-Hydroxytryptamine  
 C. Platelet activating factor D. Prostacyclin
93. Which one of the following anti-gout drug is **not** uricosuric  
 A. Probenecid B. Phenylbutazone  
 C. Sulfapyrazone D. Allopurinol
94. Which of the following is not a bronchodilator  
 A. Ipratropium bromide B. Theophylline  
 C. Formoterol D. Sodium cromoglycate
95. Octreotide is a synthetic analogue of:  
 A. Prolactin B. Growth hormone  
 C. Somatostatin D. Gonadotropin releasing hormone
96. Gynaecomastia can be reduced with which one of the following drugs:  
 A. Chlorpromazine B. Cimetidine  
 C. Bromocriptine D. Metoclopramide
97. The mechanism by which carbimazole acts is:  
 A. Iodide trapping B. Oxidation of iodide  
 C. Proteolysis of thyroglobulin D. Synthesis of thyroglobulin protein
98. The Insulin receptor belongs to which one of the following class  
 A. Ion channel regulating receptor B. Tyrosine protein kinase receptor  
 C. G-protein coupled receptor D. Nuclear Receptor
99. Mechanism of action of metformin involves  
 A. Releasing insulin from pancreas B. Suppressing gluconeogenesis and glucose output from liver  
 C. Up regulating insulin receptors D. Inhibiting degradation of insulin
100. Corticosteroids after long term therapy should be withdrawn in tapered manner because:

- A. Corticosteroids produce psychological dependence
- B. Abrupt withdrawal may reactivate the underlying disease
- C. Abrupt withdrawal produces rebound hypertension
- D. Abrupt withdrawal may result in severe respiratory depression