

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. Glucose on oxidation with bromine water forms
 - A Glucuronic acid
 - B Glucosaccharic acid
 - C Gluconic acid
 - D Mannose
2. Methadone is an analgesic drug belongs to the class of
 - A Phenylpropylamine
 - B Phenyl piperidine
 - C Benzomorphan
 - D Morphinan
3. Minimum number of carbon required for a ketose sugar to have cyclic structure is
 - A 6
 - B 5
 - C 4
 - D 3
4. Which of the following drug shows three different pK_a values?
 - A Aspirin
 - B Phenytoin
 - C Guanithidine
 - D Tetracycline
5. LDL and HDL are commonly known as _____ and _____ respectively.
 - A good cholesterol, bad cholesterol
 - B bad cholesterol, good cholesterol
 - C assimilatory cholesterol, oxidative cholesterol
 - D oxidative cholesterol, assimilatory cholesterol
6. 1,8-Naphthyridone heterocyclic nucleus is present in _____.
 - A Nalidixic acid
 - B Ciprofloxacin
 - C Oxolinic acid
 - D Moxifloxacin
7. Rancidity of lipids of lipid rich food is due to
 - A hydrogenation of unsaturated fatty acids
 - B dehydrogenation of saturated fatty acids
 - C oxidation of fatty acids
 - D reduction of fatty acids
8. 19-Nor steroids
 - A have methyl group at 18 position
 - B lack methyl group at 18 position
 - C have methyl group at 19 position
 - D lack methyl group at 19 position
9. Which of the following amino acid bears a guanidine group in the side chain?
 - A Arginine
 - B Lysine
 - C Histidine
 - D Proline
10. Which isomer of diethylstilbestrol is active?
 - A Cis
 - B Meso
 - C Trans
 - D None of the above
11. Which of the following converts PGH_2 to thromboxane A_2 ?
 - A Enoyl-ACP reductase
 - B Thromboxane synthase
 - C β -ketoacyl ACP reductase
 - D Cyclooxygenase
12. What role does the t-butyl group play in Salbutamol?
 - A It acts as steric shield to reduce metabolism
 - B It increases hydrophobicity such that the molecule can cross cell membranes

- C It introduces selectivity for α -adrenoceptors D It introduces selectivity for β -adrenoceptors
13. Pyroelectric transducers are used in
A mass spectrometer B spectrofluorometer
- C FTIR D NMR spectrometer
14. Which conformation of acetylcholine is most active?
A Anticlinal B Antiplanar
C Synplanar D Synclinal
15. A peak with highest mass to charge ratio in mass spectrum is known as
A base peak B molecular ion peak
C fragment ion peak D metastable peak
16. Morphine is best described as _____ base.
A monoacid tertiary B diacid tertiary
C monoacid secondary D diacid secondary
17. Which of the following is an official IP method for assay of sulpha drugs?
A UV-visible spectrophotometry B Acid-base titration
C HPLC D Nitrite titration
18. According to Veber rule for optimum activity for orally active drug, the number of rotatable bond in a drug should be
A ≤ 10 B ≥ 10
C > 10 D < 10
19. Which of following chromatographic technique is not based on principle of partition?
A Supercritical fluid chromatography B Liquid-liquid chromatography
C Ion-exchange chromatography D Gas liquid chromatography
20. To which class of compounds do adrenaline, noradrenaline and dopamine belong?
A Phenyl ethylamines B Catecholamines
C Diphenylethylamines D Adrenergics
21. Which of the following material is used as a stationary phase in reverse phase chromatography?
A Octadecyl silane B Magnesium oxide
C Activated silica D Calcium carbonate
22. For a molecule to exhibit antihistaminic activity, the distance between the central point of diaryl ring system and aliphatic N should be
A 3-4 Å⁰ B 4-5 Å⁰
C 5-6 Å⁰ D 6-7 Å⁰
23. In fluorimetry, the emission radiation is always
A equal to excitation radiation B more energetic than the excitation radiation

- C of a shorter wavelength than the excitation radiation D of a longer wavelength than the excitation radiation
24. Which conformer of histamine does not act on H₂ receptor site?
 A Trans B Gauche
 C Totally eclipsed D Skew eclipsed
25. Which of the following techniques is least useful for structural determination of small organic molecules?
 A UV spectroscopy B GC-MS
 C FT-IR D NMR
26. The following statements describe the chemistry of prostaglandins except
 A 1 to 3 double bonds B 5-membered ring system
 C 21-carbon skeleton D Ketone group
27. In penicillin, 2-azetidinone ring is fused with _____ ring.
 A dihydrothiazine B thiazolidine
 C pyrrolidine D oxazolidine
28. The 5 β -pregnane is said to have a _____ back bone.
 A trans-anti-cis-anti-cis B cis-syn-trans-syn-trans
 C trans-anti-trans-anti-trans D cis-anti-trans-anti-trans
29. Find out prodrug from followings.
 A Oxyphenbutazone B Piroxicam
 C Sulindac D Naproxen
30. DSC spectrum is represented as
 A % weight vs time B Heat flow vs temperature
 C ΔT vs temperature D ΔT vs volume of titrant
31. The free anthraquinones give _____ reaction positive
 A Borax test B Benedicts test
 C Borntrager's test D Barfoed's test
32. Which of the following is the source toxalbumin ricin
 A Linseed B Croton seeds
 C Abrus seeds D Castor seeds
33. Which of the following is a C-glycoside
 A Vitexin Quercetin
 C Quercitrin Kaempferol
34. Which of the following type of alkaloids derived from tryptophan?
 A Tropane B Isoquinoline
 C Indole D Phenylethylamines
35. Presence of tetra hydroisoquinoline alkaloid is a characteristic feature of _____ family.
 A Scrophulariaceae B Papaveraceae
 C Ranunculaceae D Solanaceae
36. Which of the following families is not characterized by synthesis and accumulation of essential oil?

- A Rutaceae
 C Piperaceae
- B Myrtaceae
 D Leguminosae
37. Which of the following volatile oils have a density higher than that of water?
- A Caryophylli aetheroleum
 C Thymi aetheroleum
- B Lavandulae aetheroleum
 D Cinnamomi cassiae aetheroleum
38. Pseudo alkaloids are _____.
- A Derived from amino acid
 C Not derived from amino acid
- B Amino alkaloids
 D Alkaloids with nitrogen absent in heterocyclic ring system
39. Which of the following is used as a precursor for the production of corticosteroids in the industry?
- A Nicotine
 C Diosgenin
- B Glycyrrhizin
 D Quinine
40. In which of the following ways can alkaloids be extracted from plants in salt form?
- A Warming with organic solvents
 C Boiling with aqueous ammonium hydroxide
- B Shaking with acidified water at room temperature or above
 D Warming with lead acetate and water
41. Which of the following chromatographic techniques always use forced flow?
- A Rotation planar chromatography
 C Gel-filtration chromatography
- B Ion-exchange chromatography
 D Thin-layer chromatography
42. Codeine is _____
- A Mono ethyl ether of Morphine
 C Acetyl derivative of Morphine
- B Dimethyl ether of Papaverine
 D Diethyl ether of Morphine
43. Vinflunine is a drug of choice in _____
- A Breast cancer
 C Bladder cancer
- B Lung cancer
 D Ovarian cancer
44. PVP is added to plant extract to isolate glycoside...reason
- A To remove resinous matter
 C To remove Tannins
- B To deactivate enzymes present in plants
 D To break down glycosidal linkage
45. Cremocarp fruit is characteristic of the family _____.
- A Cruciferae
 C Solanaceae
- B Compositae
 D Umbelliferae
46. Opium alkaloids occur in combination with -----.
- A Meconic acid
 C Tropic acid
- B Quinic acid
 D Lysergic acid
47. Enzyme oxidase is present in _____.
- A Sterculia
 C Tragacanth
- B Acacia
 D Agar
48. Ergot obtained from natural source is dried
- A Ovary
 C Periderm
- B Sclerenchyma
 D Sclerotium
49. The structure of hyoscyamine can be differentiated by presence of -----in hyoscine.
- A Lactone ring
 C Carbonyl group
- B Epoxy group
 D Ester group
50. In Ayurvedic system of medicine one of the following is highly valued as Medhya Rasayana drug

- A Malkangani
 C Punernava
 D Neem

51. Posology is branch of Pharmacology which mainly concern with

A Effect of medicine on body
 B Screening and evaluation of medicine
 C Effect of body on medicine
 D Dosages of medicine

52. Capability of drug to bind with the receptors is known as:

A Affinity
 B Intrinsic activity
 C Agonist
 D Antagonist

53. Mechanism of Cardiac glycoside is:

A Sodium-Magnesium ATPase pump inhibitor
 B Sodium-Potassium ATPase pump inhibitor
 C Sodium-Potassium ATPase pump inhibitor
 D Calcium-Potassium ATPase pump inhibitor

54. Adrenaline (epinephrine) is:

A a sympathomimetic agent that causes bronchodilatation
 B a sympathomimetic agent that causes bronchoconstriction
 C a parasympathomimetic agent that causes bronchodilatation
 D a parasympathomimetic agent that causes bronchoconstriction

55. Hydrochlorothiazide diuretics should usually be avoided in patients with:

A Hypertension
 B Hypernatraemia
 C Hypercalcaemia
 D Oedema

56. Abrupt cessation of which of the following agents can precipitate a hypertensive crisis?

A Hydrochlorothiazide
 B Lisinopril
 C Diltiazem
 D Clonidine

57. Mechanism of action of Streptomycin is:

A Destroy lipoprotein membrane
 B Inhibit conversion of P-aminobenzoic acid to folic acid and folinic acid
 C Bind to 30s ribosome and thereby inhibit cell protein synthesis
 D Bind to 50s ribosome and thereby inhibit cell protein synthesis

58. Crystalline aggregations in kidney is general major adverse effect of :

A Quinolones
 B Sulfonamides
 C Ampicillin
 D Cephalexin

59. Which of the following is prescribed with Isoniazide to prevent peripheral neuritis:

A Streptomycin
 B Ethambutol
 C Pyrazinamide
 D Vit B6

60. Which of the following is antimalarial agent used as suppressive prophylactic :

A Chloroquine
 B Quinidine
 C Chlorphenasin
 D Cisplatin

61. Which of the following is mechanism of action of Ziduvudin

A Inhibition of free extracellular virus
 B DNA Polymerase inhibition

- C Reverse transcriptase inhibition D Post translational event inhibition
62. Which of the following is drug of choice for treatment of febrile convulsions:
 A Phenytoin B Diazepam
 C Clozapine D Domperidone
63. Positive symptoms of schizophrenia include following, except:
 A Hallucination B Dellusion
 C Disorganized speech and behaviour D Alogia
64. Which of the following is atypical antipsychotic agent:
 A Chlorpromazine B Haloperidol
 C Clozapine D Levodopa
65. Sumatriptan is:
 A 5-HT₁ receptor agonist B 5-HT₁ receptor antagonist
 C Dopamine receptor agonist D Dopamine receptor antagonist
66. Guaifenesin is generally used as :
 A antibacterial B antiinflammatory
 C antitussive D Expectorant
67. Which of the following is used for induction of labour:
 A ofloxacin B oxytocin
 C omeprazole D olanzepine
68. Following is an oral antidiabetic agent belongs to class sulfonylurea, except:
 A glibenclamide B gliclazide
 C Metformin D glimepiride
69. Which of the following should be generally used with caution in asthma:
 A Loperamide B Amoxicillin
 C Ibuprofen D Salbutamol
70. With the chronic use of morphine less tolerance and dependence is developed in following effects, except:
 A analgesia B Constipation
 C Euphoria D Respiratory Depression
71. The type of particle diameter that is obtained by sedimentation method of evaluation is
 A Volume B Stoke's
 C Volume-surface D Projected
72. Example of the polymer exhibiting pH dependent solubility is

- | | |
|--------------------|-------------------|
| A Eudragit RS 100 | B Eudragit RL 100 |
| C Eudragit RL 30 D | D Eudragit E 100 |
73. Pharmacy act was passed in
- | | |
|--------|--------|
| A 1945 | B 1947 |
| C 1948 | D 1954 |
74. Recommended Biological Indicators for Ethylene oxide sterilization is
- | | |
|-----------------------------------|--------------------------------|
| A <i>Bacillus atrophaeus</i> | B <i>Staphylococcus aureus</i> |
| C <i>Saccharomyces cerevisiae</i> | D <i>Escherichia coli</i> |
75. Increase in aqueous solubility of iodine due to presence of higher concentration of PVP is the example of
- | | |
|------------------------------------|------------------------------|
| A Co-solvency | B Hydrotropy |
| C Reduction in the surface tension | D Reduction in particle size |
76. If Polyethylene Glycol is added in large proportions in the content to be filled in soft gelatin capsules, there is
- | | |
|------------------------------|----------------------------|
| A No effect of gelatin shell | B Shell softening effect |
| C Shell hardening effect | D Cross-linking of gelatin |
77. The cation-exchange resin used as super disintegrant in tablet formulation is
- | | |
|------------------------|---------------------------|
| A Polacrilin Potassium | B Sodium Starch Glycolate |
| C Cross Povidone | D Cross Carmellose |
78. Disintegration test must be performed on all the tablets except
- | | |
|--------------------------|----------------------------|
| A Enteric coated tablets | B Lozenges |
| C Effervescent tablets | D Fast dispersible tablets |
79. Example of synthetic biodegradable parenteral emulsifier
- | | |
|-------------|-----------|
| A Gelatin | B Acacia |
| C Poloxamer | D Albumin |
80. Suitable dosage form for the drug which exhibit high first pass metabolism is
- | | |
|-------------------------|-------------------------|
| A Floating tablet | B Colon targeted tablet |
| C Orodispersible tablet | D Buccal tablet |
81. Name of the microorganism used for the microbial assay of Erythromycin
- | | |
|-----------------------------|--------------------------------|
| A <i>Bacillus subtilis</i> | B <i>Staphylococcus aureus</i> |
| C <i>Micrococcus luteus</i> | D <i>Bacillus cereus</i> |
82. Which of the following is/are polyvalent vaccine?

- | | | | |
|---|--------------------------|---|-----------------------------------|
| A | Rate of infusion of drug | B | Elimination half life of the drug |
| C | Both A & B | D | None of the above |
93. If the dose of the drug having $V_d = 20$ liters is 200 mg, What will be the approximate C_{max} of this drug. Consider bioavailability as 100 %.
- | | | | |
|-----|----------------|-----|----------------|
| (A) | 0.37 mg/lit | (B) | 3.7 μ g/ml |
| (C) | 37 μ g/lit | (D) | 3.7 mg/ml |
94. Drug disposition do not include
- | | | | |
|---|-----------------|---|-------------------|
| A | Drug Absorption | B | Drug distribution |
| C | Drug Metabolism | D | Drug Excretion |
95. One of the following statement is not true for the protein bounded drug
- | | | | |
|---|--------------------------------|---|--------------------------------------|
| A | It is pharmacologically active | B | It cannot be metabolized |
| C | It cannot be excreted | D | It cannot undergo membrane transport |
96. Unit of Total Body Clearance is
- | | | | |
|---|--------|---|-------------|
| A | mg/ml | B | ml/ min |
| C | mg/min | D | mg/(ml*min) |
97. Liposomes are formulated from
- | | | | |
|---|--------------------------|---|---------------------------|
| A | Polyoxyalkyl derivatives | B | Glycerides of fatty acids |
| C | Glycosides | D | Phospholipids |
98. The surfactant that can be used in the shampoo are listed below except
- | | | | |
|---|------------------------|---|--------------------------------------|
| A | Sodium Lauryl Sulphate | B | Cocamidopropyl betaine |
| C | Glycol distearate | D | Polyoxyethylene sorbitan mono oleate |
99. Water soluble ointment base is
- | | | | |
|---|-----------------|---|------------------------|
| A | Carbowax® | B | Lanolin |
| C | Emulsifying Wax | D | Glyceryl mono stearate |
100. One of the following statement is not true for the microemulsion
- | | | | |
|---|--|---|--|
| A | It is optically clear | B | It consist of oil, water, emulsifier and/or stabilizer |
| C | It contains 2-10 micrometer size disperse phase globules | D | Amount of emulsifier/stabilizer is relatively higher than conventional emulsion. |