

Total No. of Printed Pages : 13

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU
ARE ASKED TO DO SO)

A

SET-Y

PG-EE-July, 2025

SUBJECT : Pharmaceutical Science

Sr. No. 10041

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) _____ (in words) _____

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(Signature of the Candidate)

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A

1. Volatile oil has huge potential to be used as perfumery. Which of the following are the pleasant-smelling compound :

(1) Terpenoids	(2) Glycosides
(3) Alkaloids	(4) Resins
2. A person is suffering from asthma. Which of the following drug help may help ease his breathing ?

(1) Ephedrine	(2) Ergotamine
(3) Strychnine	(4) Brucine
3. Which of the following formulations under ASU system are offered an infinite period of shelf life in D and C Act ?

(1) Asava & Arishta	(2) Churna
(3) Ghutika	(4) Kwatha
4. Which of the following alkaloids has hypotensive activity ?

(1) Reserpine	(2) Quinine
(3) Emetine	(4) Papaverine
5. Silica gel G contains which of the following binder ?

(1) Starch	(2) Gelatin
(3) Cellulose	(4) Gypsum
6. Plant tissue culture has potential role in all, *except* :

(1) Secondary metabolite production	(2) Biotransformation
(3) Genetic mapping	(4) Micropropagation
7. 'Candelabra' trichomes are present in :

(1) Verbascum thapsus	(2) Digitalis purpurea
(3) Senna angustifolia	(4) Helicterisora
8. Relation between ester value, saponification value and acid value is :

(1) Ester Value = Saponification Value + Acid Value
(2) Ester Value = Saponification Value – Acid Value
(3) Ester Value = Acid Value – Saponification Value
(4) Ester Value = Saponification Value /Acid Value
9. Which of the following is *not* a dicotyledonous type of stomata ?

(1) Diacytic	(2) Moss
(3) Anisocytic	(4) Rubiaceous

10. Match the following : Alkaloids Chemical Constitutes :

- | | |
|----------------|-----------------|
| (a) Cinchona | (1) Reserpine |
| (b) Opium | (2) Quinine |
| (c) Ergot | (3) Ergometrine |
| (d) Rauwolfia | (4) Morphine |
| (e) Nux vomica | (5) Strychnine |

(1) a-2, b-4, c-3, d-1, e-5

(2) a-4, b-1, c-3, d-2, e-5

(3) a-2, b-3, c-4, d-5, e-1

(4) a-2, b-4, c-3, d-5, e-1

11. Vitali morin reaction is for :

- | | |
|--------------|----------------------|
| (1) Datura | (2) Stramonium |
| (3) Duboisia | (4) All of the above |

12. Which of the following does **not** contain steroidal alkaloids ?

- | | |
|-----------------|--------------|
| (1) Ashwagandha | (2) Ephedra |
| (3) Kurchi | (4) Veratrum |

13. The characteristic odour of garlic is attributed to :

- (1) Quercetin glycoside
- (2) Furostanol glycoside
- (3) Heterogeneous sulphated polysaccharides
- (4) Diallylthiosulfinate

14. Match the following :

Alkaloids with their chemical class

- | | |
|-----------------|----------------------|
| (a) Acointe | (1) Diterpene |
| (b) Ephedrine | (2) Piperidine |
| (c) Lobeline | (3) Amino alkaloids |
| (d) Ergometrine | (4) Indole alkaloids |
| (e) Hygrine | (5) Pyrrolidine |

(1) a-1, b-3, c-2, d-4, e-5

(2) a-1, b-5, c-2, d-4, e-3

(3) a-5, b-3, c-2, d-4, e-1

(4) a-1, b-2, c-3, d-5, e-4

15. Tropane alkaloids are biosynthesized from

- | | |
|---------------|-------------------|
| (1) Ornithine | (2) Phenylalanine |
| (3) Lysine | (4) Tryptophan |

16. Chaulmoogra oil has been used since ancient times for the treatment of which disease ?
(1) Tuberculosis (2) Leprosy
(3) Malaria (4) Diabetes
17. Antioxidant used as blocking agent in sterile product is :
(1) Ascorbic acid esters (2) Sodium bisulphate
(3) Ascorbic acid (4) EDTA
18. (Weight in pounds/150)* Adult Dose = Child dose
The above formula is known as in Posology.
(1) Clark's formula (2) Dillings formula
(3) Youngs formula (4) Frieds formula
19. Type IV dissolution apparatus as per USP is :
(1) Flow through cell (2) Paddle type apparatus
(3) Reciprocating cylinder (4) Paddle over disk apparatus
20. Indicate which of the following statements is **true** :
(1) A weakly acidic drug is unionised when pH of the solution is at least 2 pH units below its pKa.
(2) Acidic drugs are non-ionized at pH 9.
(3) Acidic drugs are less soluble in alkaline solution.
(4) The higher the pKa of a weak acid, the stronger is acid.
21. Following is **not** used as a measure of flow property of powder :
(1) Compressibility index (2) Hausner's ratio
(3) Angle of repose (4) Bulk density
22. If the Carr's index of a powder is 10%, then the type of powder flow is :
(1) Poor (2) Excellent
(3) Very poor (4) Good
23. According to IP/BP very fine powder is one of which :
(1) All particles pass through 120# sieve
(2) 90% particles pass through 350# sieve
(3) All particles pass through 350 # sieve
(4) 90% particles are of size <10 μ m

24. One of the following mills works on both the principles of interparticulate attrition and impact :
- | | |
|-----------------|-----------------------|
| (1) Cutter mill | (2) Hammer mill |
| (3) Roller mill | (4) Fluid energy mill |
25. Which of the following causes sticking problem ?
- | | |
|------------------|---------------|
| (1) Stearic acid | (2) PVP |
| (3) Lactose | (4) Cellulose |
26. The following is the filling principle in the capsule-filling machine *except* :
- | | |
|-----------------------|-------------------------|
| (1) Auger filling | (2) Vibratory principle |
| (3) Dosator principle | (4) Hopper filling |
27. Tablets that after oral administration release the drug at a desired time for prolonged effect are :
- | | |
|------------------------------|------------------------------|
| (1) Multi-Compressed tablets | (2) Multilayer tablet |
| (3) Enteric-coated tablets | (4) Sustained action tablets |
28. As per IP, the percentage of sucrose in simple syrup is :
- | | |
|---------------|---------------|
| (1) 56% w/w | (2) 66.7% w/v |
| (3) 66.7% w/w | (4) 85% w/w |
29. Influence of temperature on drug decomposition is expressed by :
- | | |
|-------------------------|---------------------------|
| (1) Arrhenius equation | (2) Rutherford's equation |
| (3) Langmuir's isotherm | (4) BET equation |
30. Shelf life of a product is the time lapse during which allowed is the :
- | | |
|-------------------------------|----------------------------|
| (1) 50% drug degradation | (2) 90% of the degradation |
| (3) 90 % of the drug retained | (4) None |
31. Humectants means :
- | |
|---|
| (1) It reduces the particle size of the powder material |
| (2) It is used to increase the thickness of the ointment |
| (3) It is used to prevent the drying of the cream |
| (4) It is used to increase the spread l of the coat over tablet |
32. Zanas instrument is used for :
- | | |
|--------------------------------|---|
| (1) To determine particle size | (2) To determine the rheology of semisolids |
| (3) For tablet coating | (4) Capsule machine |

33. is widely used in chewable tablets.
- | | |
|-------------|--------------|
| (1) Starch | (2) Mannitol |
| (3) Lactose | (4) PVP |
34. Water attack test is used to identify the alkalinity in :
- | | |
|--------------------|---------------------|
| (1) Type-I glass | (2) Type-II glass |
| (3) Type-III glass | (4) All the 3 types |
35. Class 100 area means :
- | | |
|------------------|------------------|
| (1) Grade A area | (2) Grade B area |
| (3) Grade C area | (4) Grade D area |
36. Spurious drug comes under :
- | | |
|-----------------|-----------------|
| (1) Section 17 | (2) Section 17A |
| (3) Section 17B | (4) Section 3B |
37. "Kala jadu or Kavach" comes under :
- | | |
|----------------|----------------|
| (1) Schedule J | (2) Schedule K |
| (3) Schedule L | (4) Schedule P |
38. The schedule in Drug and Cosmetics Act that deals with requirement and guidelines of clinical trial, import and manufacture of new drug is :
- | | |
|----------------|----------------|
| (1) Schedule O | (2) Schedule M |
| (3) Schedule F | (4) Schedule Y |
39. As per D and C Act "Schedule N" is related with :
- | |
|---|
| (1) List of maximum equipments for efficiently running pharmacy |
| (2) Area for opening retail pharmacy |
| (3) List of minimum equipment for efficiently running pharmacy |
| (4) Area required to open wholesale drug store |
40. Which of the following is prohibited to be imported ?
- | | |
|--------------------------------|----------------------|
| (1) Toilet preparations | (2) Ayurvedic drugs |
| (3) Schedule 'C' and 'G' drugs | (4) Misbranded drugs |
41. Hatch Waxman Act is related to :
- | | |
|---------------------|----------------------------|
| (1) Banned drugs | (2) Over-the-counter-drugs |
| (3) Dangerous drugs | (4) Generic drugs |

42. Post marketing Surveillance comes under clinical trial :
(1) Phase I (2) Phase II
(3) Phase III (4) Phase V
43. A blend between Tween 20 and Span 20 form type of emulsion.
(1) O/W (2) W/O
(3) Milky (4) Multiple emulsions
44. Shrinkage of gel by extrusion of liquid is called :
(1) Syneresis (2) Dilatancy
(3) Plasticity (4) Ebullition
45. CARBOWAX is a type of :
(1) Absorption base (2) Modern ointment
(3) Water-soluble bases (4) Oleaginous and hydrocarbon
46. Match the following drugs with alteration they produce in the structural-functional of the kidney :
(1) Aminoglycoside (a) Glomerular antibiotics abnormality
(2) ACE inhibitors (b) Tubular epithelial cell damage
(3) Methotrexate (c) Hemodynamically mediated kidney injury
(4) NSAIDs (d) Obstructive nephropathy
(1) 1-b, 2-c, 3-d, 4-a (2) 1-a, 2-b, 3-c, 4-d
(3) 1-c, 2-d, 3-a, 4-b (4) 1-d, 2-a, 3-b, 4-c
47. Clavulanic acid is :
(1) Inactivates bacterial β -lactamase
(2) Potent inhibitor of peptidoglycan synthesis
(3) Specific for gram negative bacteria
(4) Inhibitor of 50S ribosomal subunit
48. Bioassays are carried out to :
(1) Measure the pharmacological activity of a drug
(2) Avoid clinical trials for new drugs
(3) Detect the impurity in a given drug
(4) Screen from pharmacogenetic influences of new drugs

49. Which of the following is CYP450 enzyme inhibitor ?
(1) Grape juice (2) Rifampicin
(3) Barbiturates (4) Carbamazepine
50. Most common Phase-II reaction is :
(1) Sulfate conjugation (2) Glucuronide conjugation
(3) α amino acid conjugation (4) Methylation
51. M2 receptor is responsible for following effects :
[P] Cardiac inhibition
[Q] Neural inhibition
[R] Gastric secretion
[S] Vasodilatation
(1) P and Q (2) P and R
(3) R and S (4) Q and R
52. Neostigmine may cause all of the following, *except* :
(1) Block accommodation reflex
(2) Reversible inhibition of acetylcholinesterase
(3) Constipation
(4) Bronchoconstriction
53. Atropine overdose may causes all of the following, *except* :
(1) Miosis (2) Increased heart rate
(3) Relaxation of GIT smooth muscle (4) Mental aberration
54. Receptors for steroid hormones can be found in the :
(1) Plasma membrane (2) Cytosol
(3) Mitochondria (4) Ribosomes
55. The binding of insulin to the insulin receptor triggers :
(1) The interaction of the receptor with protein G
(2) The activation of adenylyl cyclase
(3) The activation of phospholipase C
(4) Tyrosine Kinase activity
56. Which of the following increases the tissue sensitivity to insulin ?
(1) Acarbose (2) Gliclazide
(3) Rosiglitazone (4) Metformine

57. Mechanism of action of antithrombotic agent is :
(1) Conversion of plasminogen to plasmin
(2) Activation of clotting factors
(3) Inhibition of platelet function
(4) Agonist of vitamin K
58. Carbidopa is useful in the treatment of Parkinson's disease because it :
(1) Is a precursor of L-dopa
(2) Prevents the breakdown of dopamine
(3) Promotes the increased concentration of L-dopa in the nigrostriatal
(4) Can readily penetrate the CNS
59. Side effects of phenothiazines include all *except* :
(1) Blood dyscrasias
(2) Obstructive jaundice
(3) Orthostatic hypotension
(4) Increased GIT motility
60. The action of penicillin requires the presence of cell wall that contains :
(1) Proteoglycans
(2) Peptidoglycans
(3) N-acetyl glucosamine
(4) N-acetyl muramic acid
61. Which of the following is *true* for dapsone ?
(1) Not much used due to toxicity
(2) Inhibits folate synthesis in bacteria
(3) Is reduced by intestinal bacteria to a salicylate
(4) Is reduced by intestinal bacteria to a sulphonamide
62. BCG vaccine contains :
(1) A live-attenuated strain derived from M. Bovis
(2) A live-attenuated strain derived from M. Africanum
(3) A live-attenuated strain derived from M. Tuberculosis
(4) A dead-attenuated strain derived from M. Africanum
63. Crohn's disease affects part.
(1) Gastrointestinal tract
(2) Kidney
(3) Lung
(4) Heart
64. Which of the following antihyperlipidemic drugs inhibits the synthesis of cholesterol by blocking HMG Co-A reductase ?
(1) Clofibrate
(2) Pravastatin
(3) Probucol
(4) Nicotinic acid

A

65. An organism which has been implicated as a possible cause of chronic gastritis and peptic ulcer is :
(1) Campylobacter jejuni (2) Escherichia coli
(3) Helicobacter pylori (4) Giardia lamblia
66. The mechanism of action of rifampicin involve :
(1) Inhibition of bacterial DNA directed RNA polymerase
(2) Inhibition of mycolic acid synthesis
(3) Inhibition of protein synthesis
(4) Inhibition of transpeptidase
67. Haloperidol is a major tranquilizer. It belongs to the class of :
(1) Carbamates (2) Propanediol
(3) Butyrophenone (4) Phenothiazine
68. The neurotransmitter is released at the sympathetic nerve fiber is :
(1) Epinephrine (2) Nor-epinephrine
(3) Acetylcholine (4) Physostigmine
69. Vinblastine and Vincristine act by :
(1) Interfering with synthesis of transfer RNA
(2) Inhibition of fragmentation of DNA
(3) Binding to protein
(4) Incorporating into folic acid metabolism
70. The hypotensive effect of clonidine is due to its action on :
(1) Beta-adrenergic receptor (2) Alpha-adrenergic receptor
(3) H1-receptor (4) H2-receptor
71. All statements are correct for SN-1 reaction, *except* :
(1) Follows first-order kinetic
(2) Rearrangement is possible
(3) Inversion of configuration takes place
(4) Two-step reaction
72. Which of the following techniques is used to detect the hydrogen bonding in compounds ?
(1) UV visible spectroscopy (2) Infrared
(3) Fluorimetry (4) Colorimetry

73. Which of the following bonds would show the strongest absorption in the IR ?
(1) Carbon-hydrogen (2) Oxygen-hydrogen
(3) Nitrogen-hydrogen (4) Sulfur-hydrogen
74. Which of the following sequences is the **correct** order of C=O stretching in descending order ?
(1) Ester, ketone, acid, amide (2) Acid, amide, ketone, ester
(3) Ester, ketone, amide, acid (4) Amide, acid, ketone, ester
75. Reference compound used in NMR spectroscopy is :
(1) Silane (2) Trimethylsilane
(3) Dimethylsilane (4) Tetramethylsilane
76. Number of NMR signal generated by acetone is :
(1) 2 (2) 6
(3) 3 (4) 1
77. The reference electrode in potentiometry is
(1) Dropping mercury electrode (2) Saturated calomel electrode
(3) Platinum electrode (4) Glass electrode
78. Purity of water is determined by :
(1) Conductometer (2) HPLC
(3) Potentiometer (4) UV
79. In chromatography if column length is constant and the height of theoretical plate decreases, then :
(1) Peak width increases
(2) Column separation efficiency decreases
(3) Number of theoretical plate decreases
(4) Column separation efficiency increases
80. Bathochromic shift involves :
(1) Increase in intensity of absorption
(2) Decrease in intensity of absorption
(3) Increase in wavelength of maximum absorption
(4) Decrease in wavelength of maximum absorption
81. When a molecule is excited by the absorption of radiation it soon returns to its ground state by losing its excess of energy emitted as radiation. This phenomenon is known as :
(1) Phosphorescence (2) Bathochromic shift
(3) Electron emission (4) Fluorescence

A

82. A test to evaluate the detoxifying function of liver is :
(1) Serum albumin : globulin ratio (2) Galactose tolerance test
(3) Hippuric acid test (4) Prothrombin time
83. The deficiency of folate causes :
(1) Pernicious anaemia (2) Megaloblastic anaemia
(3) Macrocytic anaemia (4) Hemolytic anaemia
84. Glucose absorption is promoted by :
(1) Vitamin A (2) Vitamin E
(3) Ascorbic acid (4) Thiamine
85. 'Lock and key' theory was proposed by :
(1) Koshland (2) Emil Fischer
(3) Mehler (4) Sanger
86. Generation of ATP during citric acid cycle is :
(1) 8 (2) 22
(3) 24 (4) 30
87. Which of the following is a β -lactam antibiotic ?
(1) Penicillin + cephalosporin (2) Streptomycin + gentamicin
(3) Minocycline + doxycycline (4) Chloramphenicol
88. Which of the following is *not* a synthetic drug ?
(1) Isoniazid (2) Rifampin
(3) Pyrazinamide (4) Ethionamide
89. Increased risk of atherosclerosis is associated with decreased serum level of :
(1) LDL (2) HDL
(3) Triglyceride (4) VLDL
90. Milk of magnesia is :
(1) Hydrated magnesium silicate (2) Hydrated magnesium oxide
(3) Dehydrated magnesium hydroxide (4) Hydrated magnesium hydroxide
91. As per IP., limit of sulphate as impurity in the pharmaceutical substances is :
(1) 10 ppm (2) 20 ppm
(3) 25 ppm (4) 15 ppm

92. Give an example of the non-absorbable antacids :
(1) Aluminium hydroxide (2) Calcium carbonate
(3) Tribasic calcium phosphate (4) Sodium bicarbonate
93. Antiflatulent compounds are used with the antacids for which purpose ?
(1) To maintain the pH of GIT
(2) To dispense the foam
(3) To avoid the interaction with absorption of metals
(4) To minimize the effect of evolved CO_2
94. As per B.P. (British Pharmacopoeia), which reagent is used for the limit test of sulphate ?
(1) Barium chloride solution (2) Silver nitrate solution
(3) Lead acetate solution (4) Ammonium oxalate solution
95. Which of the following is an example of a local anesthetic drug ?
(1) Lidocaine (2) Ibuprofen
(3) Diazepam (4) Atropine
96. The IUPAC name of Paracetamol is :
(1) N-Acetyl-p-aminophenol (2) 4-Hydroxyacetanilide
(3) 2-Acetoxybenzoic acid (4) 4-Aminobenzoic acid
97. Which steroid ring system is present in corticosteroids ?
(1) Phenanthrene (2) Cyclopentanoperhydrophenanthrene
(3) Benzodiazepine (4) Purine
98. The chemical test used to identify barbiturates involves :
(1) Liebermann's test (2) Zwikker's test (pyridine + CuSO_4)
(3) Fehling's test (4) Ninhydrin test
99. Which functional group is responsible for the acidic property of aspirin ?
(1) Ester (2) Carboxylic acid ($-\text{COOH}$)
(3) Hydroxyl ($-\text{OH}$) (4) Amide ($-\text{CONH}_2$)
100. The lead compound for the development of sulfa drugs was :
(1) Penicillin (2) Prontosil
(3) Salvarsan (4) Quinine

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SEAL

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|------------|------------|------------|------------|

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|--------------------------------|------------------------|
| (1) Aluminium hydroxide | (2) Calcium carbonate |
| (3) Tribasic calcium phosphate | (4) Sodium bicarbonate |

13. Antiflatulent compounds are used with the antacids for which purpose ?

- (1) To maintain the pH of GIT
- (2) To dispense the foam
- (3) To avoid the interaction with absorption of metals
- (4) To minimize the effect of evolved CO₂

14. As per B.P. (British Pharmacopoeia), which reagent is used for the limit test of sulphate ?

- | | |
|------------------------------|-------------------------------|
| (1) Barium chloride solution | (2) Silver nitrate solution |
| (3) Lead acetate solution | (4) Ammonium oxalate solution |

15. Which of the following is an example of a local anesthetic drug ?

- | | | | |
|---------------|---------------|--------------|--------------|
| (1) Lidocaine | (2) Ibuprofen | (3) Diazepam | (4) Atropine |
|---------------|---------------|--------------|--------------|

16. The IUPAC name of Paracetamol is :

- | | |
|----------------------------|--------------------------|
| (1) N-Acetyl-p-aminophenol | (2) 4-Hydroxyacetanilide |
| (3) 2-Acetoxybenzoic acid | (4) 4-Aminobenzoic acid |

17. Which steroid ring system is present in corticosteroids ?

- | | |
|--------------------|--------------------------------------|
| (1) Phenanthrene | (2) Cyclopentanoperhydrophenanthrene |
| (3) Benzodiazepine | (4) Purine |

18. The chemical test used to identify barbiturates involves :
(1) Liebermann's test (2) Zwikker's test (pyridine + CuSO_4)
(3) Fehling's test (4) Ninhydrin test
19. Which functional group is responsible for the acidic property of aspirin ?
(1) Ester (2) Carboxylic acid ($-\text{COOH}$)
(3) Hydroxyl ($-\text{OH}$) (4) Amide ($-\text{CONH}_2$)
20. The lead compound for the development of sulfa drugs was :
(1) Penicillin (2) Prontosil (3) Salvarsan (4) Quinine
21. All statements are correct for $\text{SN}-1$ reaction, *except* :
(1) Follows first-order kinetic
(2) Rearrangement is possible
(3) Inversion of configuration takes place
(4) Two-step reaction
22. Which of the following techniques is used to detect the hydrogen bonding in compounds ?
(1) UV visible spectroscopy (2) Infrared
(3) Fluorimetry (4) Colorimetry
23. Which of the following bonds would show the strongest absorption in the IR ?
(1) Carbon-hydrogen (2) Oxygen-hydrogen
(3) Nitrogen-hydrogen (4) Sulfur-hydrogen
24. Which of the following sequences is the *correct* order of $\text{C}=\text{O}$ stretching in descending order ?
(1) Ester, ketone, acid, amide (2) Acid, amide, ketone, ester
(3) Ester, ketone, amide, acid (4) Amide, acid, ketone, ester
25. Reference compound used in NMR spectroscopy is :
(1) Silane (2) Trimethylsilane
(3) Dimethylsilane (4) Tetramethylsilane
26. Number of NMR signal generated by acetone is :
(1) 2 (2) 6 (3) 3 (4) 1
27. The reference electrode in potentiometry is
(1) Dropping mercury electrode (2) Saturated calomel electrode
(3) Platinum electrode (4) Glass electrode

28. Purity of water is determined by :
(1) Conductometer (2) HPLC
(3) Potentiometer (4) UV
29. In chromatography if column length is constant and the height of theoretical plate decreases, then :
(1) Peak width increases
(2) Column separation efficiency decreases
(3) Number of theoretical plate decreases
(4) Column separation efficiency increases
30. Bathochromic shift involves :
(1) Increase in intensity of absorption
(2) Decrease in intensity of absorption
(3) Increase in wavelength of maximum absorption
(4) Decrease in wavelength of maximum absorption
31. M2 receptor is responsible for following effects :
[P] Cardiac inhibition
[Q] Neural inhibition
[R] Gastric secretion
[S] Vasodilatation
(1) P and Q (2) P and R
(3) R and S (4) Q and R
32. Neostigmine may cause all of the following, *except* :
(1) Block accommodation reflex
(2) Reversible inhibition of acetylcholinesterase
(3) Constipation
(4) Bronchoconstriction
33. Atropine overdose may causes all of the following, *except* :
(1) Miosis (2) Increased heart rate
(3) Relaxation of GIT smooth muscle (4) Mental aberration
34. Receptors for steroid hormones can be found in the :
(1) Plasma membrane (2) Cytosol
(3) Mitochondria (4) Ribosomes

35. The binding of insulin to the insulin receptor triggers :
(1) The interaction of the receptor with protein G
(2) The activation of adenylyl cyclase
(3) The activation of phospholipase C
(4) Tyrosine Kinase activity
36. Which of the following increases the tissue sensitivity to insulin ?
(1) Acarbose (2) Gliclazide
(3) Rosiglitazone (4) Metformine
37. Mechanism of action of antithrombotic agent is :
(1) Conversion of plasminogen to plasmin
(2) Activation of clotting factors
(3) Inhibition of platelet function
(4) Agonist of vitamin K
38. Carbidopa is useful in the treatment of Parkinson's disease because it :
(1) Is a precursor of L-dopa
(2) Prevents the breakdown of dopamine
(3) Promotes the increased concentration of L-dopa in the nigrostriatal
(4) Can readily penetrate the CNS
39. Side effects of phenothiazines include all *except* :
(1) Blood dyscrasias (2) Obstructive jaundice
(3) Orthostatic hypotension (4) Increased GIT motility
40. The action of penicillin requires the presence of cell wall that contains :
(1) Proteoglycans (2) Peptidoglycans
(3) N-acetyl glucosamine (4) N-acetyl muramic acid
41. Humectants means :
(1) It reduces the particle size of the powder material
(2) It is used to increase the thickness of the ointment
(3) It is used to prevent the drying of the cream
(4) It is used to increase the spread 1 of the coat over tablet
42. Zanas instrument is used for :
(1) To determine particle size (2) To determine the rheology of semisolids
(3) For tablet coating (4) Capsule machine

43. is widely used in chewable tablets.
- | | |
|-------------|--------------|
| (1) Starch | (2) Mannitol |
| (3) Lactose | (4) PVP |
44. Water attack test is used to identify the alkalinity in :
- | | |
|--------------------|---------------------|
| (1) Type-I glass | (2) Type-II glass |
| (3) Type-III glass | (4) All the 3 types |
45. Class 100 area means :
- | | |
|------------------|------------------|
| (1) Grade A area | (2) Grade B area |
| (3) Grade C area | (4) Grade D area |
46. Spurious drug comes under :
- | | |
|-----------------|-----------------|
| (1) Section 17 | (2) Section 17A |
| (3) Section 17B | (4) Section 3B |
47. "Kala jadu or Kavach" comes under :
- | | |
|----------------|----------------|
| (1) Schedule J | (2) Schedule K |
| (3) Schedule L | (4) Schedule P |
48. The schedule in Drug and Cosmetics Act that deals with requirement and guidelines of clinical trial, import and manufacture of new drug is :
- | | |
|----------------|----------------|
| (1) Schedule O | (2) Schedule M |
| (3) Schedule F | (4) Schedule Y |
49. As per D and C Act "Schedule N" is related with :
- | | |
|---|--|
| (1) List of maximum equipments for efficiently running pharmacy | |
| (2) Area for opening retail pharmacy | |
| (3) List of minimum equipment for efficiently running pharmacy | |
| (4) Area required to open wholesale drug store | |
50. Which of the following is prohibited to be imported ?
- | | |
|--------------------------------|----------------------|
| (1) Toilet preparations | (2) Ayurvedic drugs |
| (3) Schedule 'C' and 'G' drugs | (4) Misbranded drugs |
51. Following is *not* used as a measure of flow property of powder :
- | | |
|---------------------------|---------------------|
| (1) Compressibility index | (2) Hausner's ratio |
| (3) Angle of repose | (4) Bulk density |

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(1) 50% drug degradation (2) 90% of the degradation
(3) 90 % of the drug retained (4) None

61. Hatch Waxman Act is related to :

- | | |
|---------------------|----------------------------|
| (1) Banned drugs | (2) Over-the-counter-drugs |
| (3) Dangerous drugs | (4) Generic drugs |

62. Post marketing Surveillance comes under clinical trial :

- | | |
|---------------|--------------|
| (1) Phase I | (2) Phase II |
| (3) Phase III | (4) Phase V |

63. A blend between Tween 20 and Span 20 form type of emulsion.

- | | |
|------------|------------------------|
| (1) O/W | (2) W/O |
| (3) Milky. | (4) Multiple emulsions |

64. Shrinkage of gel by extrusion of liquid is called :

- | | |
|----------------|----------------|
| (1) Syneresis | (2) Dilatancy |
| (3) Plasticity | (4) Ebullition |

65. CARBOWAX is a type of :

- | | |
|-------------------------|--------------------------------|
| (1) Absorption base | (2) Modern ointment |
| (3) Water-soluble bases | (4) Oleaginous and hydrocarbon |

66. Match the following drugs with alteration they produce in the structural-functional of the kidney :

- | | |
|------------------------|--|
| (1) Aminoglycoside | (a) Glomerular antibiotics abnormality |
| (2) ACE inhibitors | (b) Tubular epithelial cell damage |
| (3) Methotrexate | (c) Hemodynamically mediated kidney injury |
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| (1) 1-b, 2-c, 3-d, 4-a | (2) 1-a, 2-b, 3-c, 4-d |
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67. Clavulanic acid is :

- (1) Inactivates bacterial β -lactamase
- (2) Potent inhibitor of peptidoglycan synthesis
- (3) Specific for gram negative bacteria
- (4) Inhibitor of 50S ribosomal subunit

68. Bioassays are carried out to :
- (1) Measure the pharmacological activity of a drug
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69. Which of the following is CYP450 enzyme inhibitor ?
- (1) Grape juice
 - (2) Rifampicin
 - (3) Barbiturates
 - (4) Carbamazepine
70. Most common Phase-II reaction is :
- (1) Sulfate conjugation
 - (2) Glucuronide conjugation
 - (3) α amino acid conjugation
 - (4) Methylation
71. Which of the following is **true** for dapsone ?
- (1) Not much used due to toxicity
 - (2) Inhibits folate synthesis in bacteria
 - (3) Is reduced by intestinal bacteria to a salicylate
 - (4) Is reduced by intestinal bacteria to a sulphonamide
72. BCG vaccine contains :
- (1) A live-attenuated strain derived from M. Bovis
 - (2) A live-attenuated strain derived from M. Africanum
 - (3) A live-attenuated strain derived from M. Tuberculosis
 - (4) A dead-attenuated strain derived from M. Africanum
73. Crohn's disease affects part.
- (1) Gastrointestinal tract
 - (2) Kidney
 - (3) Lung
 - (4) Heart
74. Which of the following antihyperlipidemic drugs inhibits the synthesis of cholesterol by blocking HMG Co-A reductase ?
- (1) Clofibrate
 - (2) Pravastatin
 - (3) Probucol
 - (4) Nicotinic acid
75. An organism which has been implicated as a possible cause of chronic gastritis and peptic ulcer is :
- (1) Campylobacter jejuni
 - (2) Escherichia coli
 - (3) Helicobacter pylori
 - (4) Giardia lamblia

76. The mechanism of action of rifampicin involve :
- (1) Inhibition of bacterial DNA directed RNA polymerase
 - (2) Inhibition of mycolic acid synthesis
 - (3) Inhibition of protein synthesis
 - (4) Inhibition of transpeptidase
77. Haloperidol is a major tranquilizer. It belongs to the class of :
- (1) Carbamates
 - (2) Propanediol
 - (3) Butyrophenone
 - (4) Phenothiazine
78. The neurotransmitter is released at the sympathetic nerve fiber is :
- (1) Epinephrine
 - (2) Nor-epinephrine
 - (3) Acetylcholine
 - (4) Physostigmine
79. Vinblastine and Vincristine act by :
- (1) Interfering with synthesis of transfer RNA
 - (2) Inhibition of fragmentation of DNA
 - (3) Binding to protein
 - (4) Incorporating into folic acid metabolism
80. The hypotensive effect of clonidine is due to its action on :
- (1) Beta-adrenergic receptor
 - (2) Alpha-adrenergic receptor
 - (3) H1-receptor
 - (4) H2-receptor
81. Volatile oil has huge potential to be used as perfumery. Which of the following are the pleasant-smelling compound :
- (1) Terpenoids
 - (2) Glycosides
 - (3) Alkaloids
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82. A person is suffering from asthma. Which of the following drug help may help ease his breathing ?
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- B**
84. Which of the following alkaloids has hypotensive activity ?
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89. Which of the following is *not* a dicotyledonous type of stomata ?
 (1) Diacytic (2) Moss
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90. Match the following : Alkaloids Chemical Constitutes :

(a) Cinchona	(1) Reserpine
(b) Opium	(2) Quinine
(c) Ergot	(3) Ergometrine
(d) Rauwolfia	(4) Morphine
(e) Nux vomica	(5) Strychnine

 (1) a-2, b-4, c-3, d-1, e-5 (2) a-4, b-1, c-3, d-2, e-5
 (3) a-2, b-3, c-4, d-5, e-1 (4) a-2, b-4, c-3, d-5, e-1
91. When a molecule is excited by the absorption of radiation it soon returns to its ground state by losing its excess of energy emitted as radiation. This phenomenon is known as :
 (1) Phosphorescence (2) Bathochromic shift
 (3) Electron emission (4) Fluorescence

92. A test to evaluate the detoxifying function of liver is :
(1) Serum albumin : globulin ratio (2) Galactose tolerance test
(3) Hippuric acid test (4) Prothrombin time
93. The deficiency of folate causes :
(1) Pernicious anaemia (2) Megaloblastic anaemia
(3) Macrocytic anaemia (4) Hemolytic anaemia
94. Glucose absorption is promoted by :
(1) Vitamin A (2) Vitamin E
(3) Ascorbic acid (4) Thiamine
95. 'Lock and key' theory was proposed by :
(1) Koshland (2) Emil Fischer
(3) Mehler (4) Sanger
96. Generation of ATP during citric acid cycle is :
(1) 8 (2) 22
(3) 24 (4) 30
97. Which of the following is a β -lactam antibiotic ?
(1) Penicillin + cephalosporin (2) Streptomycin + gentamicin
(3) Minocycline + doxycycline (4) Chloramphenicol
98. Which of the following is **not** a synthetic drug ?
(1) Isoniazid (2) Rifampin
(3) Pyrazinamide (4) Ethionamide
99. Increased risk of atherosclerosis is associated with decreased serum level of :
(1) LDL (2) HDL
(3) Triglyceride (4) VLDL
100. Milk of magnesia is :
(1) Hydrated magnesium silicate (2) Hydrated magnesium oxide
(3) Dehydrated magnesium hydroxide (4) Hydrated magnesium hydroxide

(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU
ARE ASKED TO DO SO)

C

SET-Y

PG-EE-July, 2025

SUBJECT : Pharmaceutical Science

10035

Sr. No.

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) _____ (in words) _____

Name _____ Date of Birth _____

Father's Name _____ Mother's Name _____

Date of Examination _____

(Signature of the Candidate)

(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE
STARTING THE QUESTION PAPER.**

1. **All questions are compulsory.**
2. The candidates **must return** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.
5. The candidate **must not** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers **must not** be ticked in the question booklet.
6. **There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.**
7. Use only **Black or Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
8. **Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.**

PG-EE-July, 2025/(Pharmaceutical Science)(SET-Y)/(C)

SEAL

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31. As per IP., limit of sulphate as impurity in the pharmaceutical substances is :
- (1) 10 ppm
 - (2) 20 ppm
 - (3) 25 ppm
 - (4) 15 ppm
32. Give an example of the non-absorbable antacids :
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 (1) Lidocaine (2) Ibuprofen
 (3) Diazepam (4) Atropine
- 36.** The IUPAC name of Paracetamol is :
 (1) N-Acetyl-p-aminophenol (2) 4-Hydroxyacetanilide
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- 39.** Which functional group is responsible for the acidic property of aspirin ?
 (1) Ester (2) Carboxylic acid ($-\text{COOH}$)
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- 40.** The lead compound for the development of sulfa drugs was :
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- 41.** Which of the following is **true** for dapsone ?
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- 42.** BCG vaccine contains :
 (1) A live-attenuated strain derived from M. Bovis
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 - (2) Bathochromic shift
 - (3) Electron emission
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- (1) Serum albumin : globulin ratio
 - (2) Galactose tolerance test
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- 73.** The deficiency of folate causes :
- (1) Pernicious anaemia
 - (2) Megaloblastic anaemia
 - (3) Macrocytic anaemia
 - (4) Hemolytic anaemia
- 74.** Glucose absorption is promoted by :
- (1) Vitamin A
 - (2) Vitamin E
 - (3) Ascorbic acid
 - (4) Thiamine
- 75.** 'Lock and key' theory was proposed by :
- (1) Koshland
 - (2) Emil Fischer
 - (3) Mehler
 - (4) Sanger
- 76.** Generation of ATP during citric acid cycle is :
- (1) 8
 - (2) 22
 - (3) 24
 - (4) 30
- 77.** Which of the following is a β -lactam antibiotic ?
- (1) Penicillin + cephalosporin
 - (2) Streptomycin + gentamicin
 - (3) Minocycline + doxycycline
 - (4) Chloramphenicol
- 78.** Which of the following is *not* a synthetic drug ?
- (1) Isoniazid
 - (2) Rifampin
 - (3) Pyrazinamide
 - (4) Ethionamide

79. Increased risk of atherosclerosis is associated with decreased serum level of :
 (1) LDL (2) HDL
 (3) Triglyceride (4) VLDL
80. Milk of magnesia is :
 (1) Hydrated magnesium silicate (2) Hydrated magnesium oxide
 (3) Dehydrated magnesium hydroxide (4) Hydrated magnesium hydroxide
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 (1) Datura (2) Stramonium
 (3) Duboisia (4) All of the above
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83. The characteristic odour of garlic is attributed to :
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 (2) Furostanol glycoside
 (3) Heterogeneous sulphated polysaccharides
 (4) Diallylthiosulfinate
84. Match the following :
 Alkaloids with their chemical class

(a) Acoite	(1) Diterpene
(b) Ephedrine	(2) Piperidine
(c) Lobeline	(3) Amino alkaloids
(d) Ergometrine	(4) Indole alkaloids
(e) Hygrine	(5) Pyrrolidine

(1) a-1, b-3, c-2, d-4, e-5	(2) a-1, b-5, c-2, d-4, e-3
(3) a-5, b-3, c-2, d-4, e-1	(4) a-1, b-2, c-3, d-5, e-4
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 (1) Ornithine (2) Phenylalanine
 (3) Lysine (4) Tryptophan
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 (1) Tuberculosis (2) Leprosy
 (3) Malaria (4) Diabetes

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88. (Weight in pounds/150)* Adult Dose = Child dose
 The above formula is known as in Posology.
 (1) Clark's formula (2) Dillings formula
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89. Type IV dissolution apparatus as per USP is :
 (1) Flow through cell (2) Paddle type apparatus
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90. Indicate which of the following statements is *true* :
 (1) A weakly acidic drug is unionised when pH of the solution is at least 2 pH units below its pKa.
 (2) Acidic drugs are non-ionized at pH 9.
 (3) Acidic drugs are less soluble in alkaline solution.
 (4) The higher the pKa of a weak acid, the stronger is acid.

91. M2 receptor is responsible for following effects :
 [P] Cardiac inhibition
 [Q] Neural inhibition
 [R] Gastric secretion
 [S] Vasodilatation
 (1) P and Q (2) P and R
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92. Neostigmine may cause all of the following, *except* :
 (1) Block accommodation reflex
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94. Receptors for steroid hormones can be found in the :
(1) Plasma membrane (2) Cytosol
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95. The binding of insulin to the insulin receptor triggers :
(1) The interaction of the receptor with protein G
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96. Which of the following increases the tissue sensitivity to insulin ?
(1) Acarbose (2) Gliclazide
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97. Mechanism of action of antithrombotic agent is :
(1) Conversion of plasminogen to plasmin
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98. Carbidopa is useful in the treatment of Parkinson's disease because it :
(1) Is a precursor of L-dopa
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99. Side effects of phenothiazines include all *except* :
(1) Blood dyscrasias (2) Obstructive jaundice
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100. The action of penicillin requires the presence of cell wall that contains :
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(DO NOT OPEN THIS QUESTION BOOKLET BEFORE TIME OR UNTIL YOU
ARE ASKED TO DO SO)

D

SET-Y

PG-EE-July, 2025

SUBJECT : Pharmaceutical Science 10032

Sr. No.

Time : 1¼ Hours

Max. Marks : 100

Total Questions : 100

Roll No. (in figures) _____ (in words) _____

Name _____ Date of Birth _____

Father's Name _____ Mother's Name _____

Date of Examination _____

(Signature of the Candidate)

(Signature of the Invigilator)

**CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE
STARTING THE QUESTION PAPER.**

- 1. All questions are compulsory.**
- 2. The candidates *must return* the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.**
- 3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.**
- 4. Question Booklet along with answer key of all the A, B, C & D code shall be got uploaded on the University Website immediately after the conduct of Entrance Examination. Candidates may raise valid objection/complaint if any, with regard to discrepancy in the question booklet/answer key within 24 hours of uploading the same on the University Website. The complaint be sent by the students to the Controller of Examinations by hand or through email. Thereafter, no complaint in any case, will be considered.**
- 5. The candidate *must not* do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers *must not* be ticked in the question booklet.**
- 6. *There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.***
- 7. Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.**
- 8. *Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained 30 minutes after starting of the examination.***

PG-EE-July, 2025/(Pharmaceutical Science)(SET-Y)/(D)

SEAL

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(1) 10 ppm (2) 20 ppm (3) 25 ppm (4) 15 ppm
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(3) Tribasic calcium phosphate (4) Sodium bicarbonate
43. Antiflatulent compounds are used with the antacids for which purpose ?
(1) To maintain the pH of GIT
(2) To dispense the foam
(3) To avoid the interaction with absorption of metals
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63. The deficiency of folate causes :
- (1) Pernicious anaemia
 - (2) Megaloblastic anaemia
 - (3) Macrocytic anaemia
 - (4) Hemolytic anaemia
64. Glucose absorption is promoted by :
- (1) Vitamin A
 - (2) Vitamin E
 - (3) Ascorbic acid
 - (4) Thiamine
65. 'Lock and key' theory was proposed by :
- (1) Koshland
 - (2) Emil Fischer
 - (3) Mehler
 - (4) Sanger
66. Generation of ATP during citric acid cycle is :
- (1) 8
 - (2) 22
 - (3) 24
 - (4) 30
67. Which of the following is a β -lactam antibiotic ?
- (1) Penicillin + cephalosporin
 - (2) Streptomycin + gentamicin
 - (3) Minocycline + doxycycline
 - (4) Chloramphenicol

- 68.** Which of the following is **not** a synthetic drug ?
 (1) Isoniazid (2) Rifampin (3) Pyrazinamide (4) Ethionamide
- 69.** Increased risk of atherosclerosis is associated with decreased serum level of :
 (1) LDL (2) HDL
 (3) Triglyceride (4) VLDL
- 70.** Milk of magnesia is :
 (1) Hydrated magnesium silicate (2) Hydrated magnesium oxide
 (3) Dehydrated magnesium hydroxide (4) Hydrated magnesium hydroxide
- 71.** Hatch Waxman Act is related to :
 (1) Banned drugs (2) Over-the-counter-drugs
 (3) Dangerous drugs (4) Generic drugs
- 72.** Post marketing Surveillance comes under clinical trial :
 (1) Phase I (2) Phase II
 (3) Phase III (4) Phase V
- 73.** A blend between Tween 20 and Span 20 form type of emulsion.
 (1) O/W (2) W/O
 (3) Milky (4) Multiple emulsions
- 74.** Shrinkage of gel by extrusion of liquid is called :
 (1) Syneresis (2) Dilatancy (3) Plasticity (4) Ebullition
- 75.** CARBOWAX is a type of :
 (1) Absorption base (2) Modern ointment
 (3) Water-soluble bases (4) Oleaginous and hydrocarbon
- 76.** Match the following drugs with alteration they produce in the structural-functional of the kidney :
 (1) Aminoglycoside (a) Glomerular antibiotics abnormality
 (2) ACE inhibitors (b) Tubular epithelial cell damage
 (3) Methotrexate (c) Hemodynamically mediated kidney injury
 (4) NSAIDs (d) Obstructive nephropathy
 (1) 1-b, 2-c, 3-d, 4-a (2) 1-a, 2-b, 3-c, 4-d
 (3) 1-c, 2-d, 3-a, 4-b (4) 1-d, 2-a, 3-b, 4-c

77. Clavulanic acid is :
- (1) Inactivates bacterial β -lactamase
 - (2) Potent inhibitor of peptidoglycan synthesis
 - (3) Specific for gram negative bacteria
 - (4) Inhibitor of 50S ribosomal subunit
78. Bioassays are carried out to :
- (1) Measure the pharmacological activity of a drug
 - (2) Avoid clinical trials for new drugs
 - (3) Detect the impurity in a given drug
 - (4) Screen from pharmacogenetic influences of new drugs
79. Which of the following is CYP450 enzyme inhibitor ?
- (1) Grape juice
 - (2) Rifampicin
 - (3) Barbiturates
 - (4) Carbamazepine
80. Most common Phase-II reaction is :
- (1) Sulfate conjugation
 - (2) Glucuronide conjugation
 - (3) α amino acid conjugation
 - (4) Methylation
81. Following is **not** used as a measure of flow property of powder :
- (1) Compressibility index
 - (2) Hausner's ratio
 - (3) Angle of repose
 - (4) Bulk density
82. If the Carr's index of a powder is 10%, then the type of powder flow is :
- (1) Poor
 - (2) Excellent
 - (3) Very poor
 - (4) Good
83. According to IP/BP very fine powder is one of which :
- (1) All particles pass through 120# sieve
 - (2) 90% particles pass through 350# sieve
 - (3) All particles pass through 350 # sieve
 - (4) 90% particles are of size $<10 \mu\text{m}$
84. One of the following mills works on both the principles of interparticulate attrition and impact :
- (1) Cutter mill
 - (2) Hammer mill
 - (3) Roller mill
 - (4) Fluid energy mill

85. Which of the following causes sticking problem ?
(1) Stearic acid (2) PVP
(3) Lactose (4) Cellulose
86. The following is the filling principle in the capsule-filling machine *except* :
(1) Auger filling (2) Vibratory principle
(3) Dosator principle (4) Hopper filling
87. Tablets that after oral administration release the drug at a desired time for prolonged effect are :
(1) Multi-Compressed tablets (2) Multilayer tablet
(3) Enteric-coated tablets (4) Sustained action tablets
88. As per IP, the percentage of sucrose in simple syrup is :
(1) 56% w/w (2) 66.7% w/v
(3) 66.7% w/w (4) 85% w/w
89. Influence of temperature on drug decomposition is expressed by :
(1) Arrhenius equation (2) Rutherford's equation
(3) Langmuir's isotherm (4) BET equation
90. Shelf life of a product is the time lapse during which allowed is the :
(1) 50% drug degradation (2) 90% of the degradation
(3) 90 % of the drug retained (4) None
91. Volatile oil has huge potential to be used as perfumery. Which of the following are the pleasant-smelling compound :
(1) Terpenoids (2) Glycosides
(3) Alkaloids (4) Resins
92. A person is suffering from asthma. Which of the following drug help may help ease his breathing ?
(1) Ephedrine (2) Ergotamine
(3) Strychnine (4) Brucine
93. Which of the following formulations under ASU system are offered an infinite period of shelf life in D and C Act ?
(1) Asava & Arishta (2) Churna
(3) Ghutika (4) Kwatha

94. Which of the following alkaloids has hypotensive activity ?
(1) Reserpine (2) Quinine
(3) Emetine (4) Papaverine
95. Silica gel G contains which of the following binder ?
(1) Starch (2) Gelatin
(3) Cellulose (4) Gypsum
96. Plant tissue culture has potential role in all, *except* :
(1) Secondary metabolite production (2) Biotransformation
(3) Genetic mapping (4) Micropropagation
97. 'Candelabra' trichomes are present in :
(1) Verbascum thapsus (2) Digitalis purpurea
(3) Senna angustifolia (4) Helicteris isora
98. Relation between ester value, saponification value and acid value is :
(1) Ester Value = Saponification Value + Acid Value
(2) Ester Value = Saponification Value – Acid Value
(3) Ester Value = Acid Value – Saponification Value
(4) Ester Value = Saponification Value / Acid Value
99. Which of the following is *not* a dicotyledonous type of stomata ?
(1) Diacytic (2) Moss
(3) Anisocytic (4) Rubiaceous
100. Match the following : Alkaloids Chemical Constitutes :
(a) Cinchona (1) Reserpine
(b) Opium (2) Quinine
(c) Ergot (3) Ergometrine
(d) Rauwolfia (4) Morphine
(e) Nux vomica (5) Strychnine
(1) a-2, b-4, c-3, d-1, e-5 (2) a-4, b-1, c-3, d-2, e-5
(3) a-2, b-3, c-4, d-5, e-1 (4) a-2, b-4, c-3, d-5, e-1

**Answer keys of M.Pharm. under Department of Pharmaceutical Sciences entrance exam dated
19.07.2025**

Q. NO.	A	B	C	D
1	1	4	4	2
2	1	2	4	2
3	1	4	2	2
4	1	1	1	2
5	4	1	3	4
6	3	2	1	4
7	1	2	1	2
8	2	1	1	1
9	2	1	1	4
10	1	1	2	3
11	4	2	4	1
12	2	1	2	3
13	4	4	3	1
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43	2	2	1	4
44	1	1	2	1
45	3	1	3	1
46	1	1	1	2
47	1	1	3	2
48	1	4	1	2
49	1	3	2	2

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**Answer keys of M.Pharm. under Department of Pharmaceutical Sciences entrance exam dated
19.07.2025**

Q. NO.	A	B	C	D
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93	4	2	1	1
94	1	4	2	1
95	1	2	4	4
96	2	4	3	3
97	2	1	3	1
98	2	2	3	2
99	2	2	4	2
100	2	4	2	1

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