

PHDET-Pharmaceutical Sciences

- Q1. The most recent edition of Indian Pharmacopoeia is
- 2010 Edition
 - 2018 Edition
 - 2017 Edition
 - 2014 Edition
- Q2. In which of the following techniques the sample is kept below triple point?
- Lyophilization
 - Spray Drying
 - Spray Congealing
 - Centrifugation
- Q3. Konowaloff's rule is related to
- Steam distillation
 - Simple distillation
 - Azeotropic distillation
 - Rectification
- Q4. The vitamin essential for tissue culture is
- Pyridoxine
 - Thiamine
 - Nicotinic Acid
 - Inositol
- Q5. The amount of Barbaloin present in *Aloe vera* is
- $\leq 1\%$
 - 3.5-4%
 - 1-1.5%
 - 2-2.5%
- Q6. Gingkgo biloba is used for its
- Expectorant activity
 - Lipid Lowering activity
 - PAF antagonistic activity
 - Antidepressant activity
- Q7. Eugenol is present in
- Fennel
 - Tulsi
 - Cardamom
 - Coriander
- Q8. The sweet taste and odour of fennel is due to
- Anethole
 - Fenchone
 - Eugenol
 - Phellandrene

Q9. Charaka, a physician belonged to which system of medicine?

- a) Ayurveda
- b) Unani
- c) Siddha
- d) Homeopathy

Q10. Catechu is used in medicine as

- a) Antidiabetic
- b) Anti cancer
- c) Antipyretic
- d) Astringent

Q11. Which of the following drugs is prescribed for the treatment of Philadelphia chromosome positive patients with chronic myeloid leukemia?

- a) Pentostatin
- b) Methotrexate
- c) Imatinib
- d) L-Asparaginase

Q12. Identify the drug which is not used in the treatment of malaria caused by Plasmodium falciparum:

- a) Artemisinin
- b) Primaquine
- c) Quinine
- d) Mefloquine

Q13. Which one of the following drugs is most effective in preventing transmission of HIV from mother to the foetus?

- a) Lamivudine
- b) Zidovudine
- c) Indinavir
- d) Ribavirin

Q14. Which one of the following non opioid analgesics is a prodrug?

- a) Piroxicam
- b) Celecoxib
- c) Nabumetone
- d) Ketorolac

Q15. Which one of the following is a plasminogen activator?

- a) Tranexamic acid
- b) Streptokinase
- c) Aminocaproic acid
- d) None of the above

Q16. Which one of the following drugs specifically inhibits calcineurin in the activated T lymphocytes?

- a) Daclizumab
- b) Prednisone
- c) Sirolimus
- d) Tacrolimus

Q17. Which one of the following is used as a mood stabilizer for bipolar disorder and also in certain epileptic convulsions?

- a) Phenytoin
- b) Lithium
- c) Sodium Valproate
- d) Fluoxetine

Q18. The given antibiotic is an example of ansamycins

- a) Roxythromycin
- b) Adriamycin
- c) Aureomycin
- d) Rifamycin

Q19. The effects observed following systemic administration of levodopa in the treatment of Parkinsonism have attributed to its catabolism to dopamine. Carbidopa, can markedly increase the proportion of levodopa that crosses the blood brain barrier by

- a) Increasing penetration of levodopa through BBB by complexation with it
- b) Decreasing peripheral metabolism of levodopa
- c) Decreasing metabolism of levodopa in CNS
- d) Decreasing clearance of levodopa from CNS

Q20. A compound will be sensitive towards IR radiation only when one of the following properties undergo transition on irradiation

- a) Polarizability
- b) Dielectric Constant
- c) Dipole moment
- d) Refractivity

Q21. Aminotransferases usually require the following for their activity

- a) Niacinamide
- b) Vitamin B₁₂
- c) Pyridoxal phosphate
- d) Thiamine

Q22. Purity of water can be assessed by determining one of its following properties instrumentally:

- a) pH
- b) Refractivity
- c) Viscosity
- d) Conductivity

Q23. Which one of the following statements is WRONG?

- a) A singlet or triplet state may result when one of the electrons from the HOMO is excited to higher energy levels
- b) In an excited singlet state, the spin of the electron in the higher energy orbital is paired with the electron in the ground state orbital
- c) Triplet excited state is more stable than the singlet excited state
- d) When the electron from the singlet excited state returns to ground state, the molecule always shows fluorescence phenomenon

Q24. Which one of the following statements is WRONG?

- a) Carbon NMR is less sensitive than proton NMR
- b) ^{12}C nucleus is not magnetically active
- c) Both ^{13}C and ^1H have same spin quantum numbers
- d) The gyromagnetic ratio of ^1H is lesser than that of ^{13}C

Q25. In the TCA cycle, at which of the following enzyme-catalyzed steps, incorporation of elements of water into an intermediate of the cycle takes place:

- a) Citrate synthase
- b) Maleate dehydrogenase
- c) Aconitase
- d) Succinyl Co-A synthase

Q26. In the mixing of thymol and menthol the following type of incompatibility occurs:

- a) Therapeutic incompatibility
- b) Tolerance incompatibility
- c) Physical incompatibility
- d) Chemical incompatibility

Q27. Bloom strength is used to check the quality of

- a) Lactose
- b) Ampoules
- c) Hardness of tablets
- d) Gelatin

Q28. The characteristic of non-linear pharmacokinetics include:

- a) Area under the curve is proportional to the dose
- b) Elimination half-life remains constant
- c) Area under the curve is not proportional to the dose
- d) Amount of drug excreted through remains constant

Q29. Thioglycolic acid-like compounds have applications in following type of cosmetic formulations:

- a) Depilatory preparations
- b) Epilatory preparations
- c) Vanishing creams
- d) Skin tan preparations

Q30. The healing agent used in hand creams is

- a) Soft paraffin
- b) Beeswax
- c) Urea
- d) Stearyl alcohol

Q31. The applicability of Noyes-Whitney equation is to describe

- a) First order kinetics
- b) Zero order kinetics
- c) Mixed order kinetics
- d) Dissolution rate

Q32. Alkaloids are NOT precipitated by

- a) Mayer's reagent
- b) Dragendorff's reagent
- c) Picric acid
- d) Millon's reagent

Q33. What quantities of 95 % v/v and 45 % v/v alcohols are to be mixed to make 800 mL of 65 % v/v alcohol?

- a) 480 mL of 95 % and 320 mL of 45 % alcohol
- b) 320 mL of 95 % and 480 mL of 45 % alcohol
- c) 440 mL of 95 % and 360 mL of 45 % alcohol
- d) 360 mL of 95 % and 440 mL of 45 % alcohol

Q34. Choose the right combination:

- a) Quinine, antimalarial, isoquinolone alkaloid
- b) Reserpine, antihypertensive, indole alkaloid
- c) Quantitative microscopy, stomatal number, myrrh
- d) Palmitic acid, salicylic acid, fatty- acids

Q35. Which filler can NOT be used for the preparation of tablets for amine containing basic drugs to avoid discoloration of the tablets?

- a) Dicalcium phosphate
- b) Microcrystalline cellulose
- c) Starch
- d) Lactose

Q36. Proton pump inhibitors like omeprazole and lansoprazole contain the following ring system:

- a) Pyrimidine
- b) Benzimidazole
- c) Benzothiazole
- d) Oxindole

Q37. Barbiturates with substitution at the following position possess acceptable hypnotic activity:

- a) 1,3-Disubstitution
- b) 5,5-Disubstitution
- c) 1,5-Disubstitution
- d) 3,3-Disubstitution

Q38. Indicate the HPLC detector that is most sensitive to change in temperature:

- a) PDA detector
- b) Refractive Index detector
- c) Electrochemical detector
- d) Fluorescence detector

Q39. In thiazides following substituent is essential for diuretic activity:

- a) Chloro group at position 6
- b) Methyl group at position 2
- c) Sulphamoyl group at position 7
- d) Hydrophobic group at position 3

Q40. Which one of the following is NOT an ex-officio member of Pharmacy Council of India?

- a) The Director General of Health Services
- b) The Director of Central Drugs Laboratory
- c) The Drugs Controller General of India
- d) The Director of Pharmacopoeia Laboratory

Q41. In nail polish, following polymer is used as a film-former:

- a) Nitrocellulose
- b) Polylactic acid
- c) Hydroxypropyl methylcellulose
- d) Cellulose acetate phthalate

Q42. Amitriptyline is synthesized from the following starting material:

- a) Phthalic anhydride
- b) Terephthalic acid
- c) Phthalamic acid
- d) Phthalimide

Q43. The common structural feature amongst the three categories of anticonvulsant drugs barbiturates, succinimides and hydantoins is

- a) ureide
- b) imidazolidinone
- c) dihydropyrimidine
- d) tetrahydropyrimidine

Q44. Selective serotonin reuptake inhibitor is

- a) Imipramine
- b) Iproniazide
- c) Fluoxetine
- d) Naphazoline

Q45. Cyclophosphamide as anticancer agent acts as

- a) alkylating agent before metabolism
- b) alkylating agent after metabolism
- c) phosphorylating agent after metabolism
- d) DNA intercalating agent

Q46. Anisocytic stomata are present in

- a) Senna
- b) Digitalis
- c) Belladonna
- d) Coca

Q47. Tropane alkaloids are not present in

- a) *Datura stramonium*
- b) *Erythroxylum coca*
- c) *Duboisia myoporoides*
- d) *Lobelia inflata*

Q48. Guggul lipids are obtained from

- a) *Commiphora molmol*
- b) *Commiphora wightii*
- c) *Boswellia serrata*
- d) *Commiphora abyssinica*

Q49. An example of N-glycoside is

- a) Adenosine
- b) Sinigrin
- c) Rhein-8-glucoside
- d) Aloin

Q50. In Drugs and Cosmetics Act and Rules, the Schedule relating to GMP is

- a) Schedule M
- b) Schedule C
- c) Schedule Y
- d) Schedule H

51. _____ refers to inferring about the whole population based on the observations made on a small part

- a. Deductive inference
- b. Inductive inference
- c. Pseudo-inference
- d. Objective inference

52. Hypothesis relates _____

- a. Constant to variables
- b. Constant to constant
- c. Variables to constant
- d. Variables to variables

53. Determining the relationship between two or more variables occurs in _____
- Correlational research
 - Action research
 - Naturalistic observation
 - Survey research
54. In medical research, IRB is an acronym for which of the following?
- Internal Review Board
 - Institutional Rating Board
 - Institutional Review Board
 - Internal Request Board
55. As per ICMR guidelines research participants must give _____ before they can participate in a study?
- Guidelines
 - A commitment
 - Informed consent
 - Private information
56. Ideally, the research participant's identity is not known to the researcher. This is called:
- Anonymity
 - Confidentiality
 - Deception
 - Desensitizing
57. In the process of conducting research "Formulation of Hypothesis" is followed by
- Statement of objectives
 - Analysis of data
 - Selection of research tools
 - Collection of data
58. When each member of a population has an equally likely chance of being selected, this is called:
- A non random sampling method
 - A quota sample
 - A snowball sample
 - An equal probability selection method
59. Questionnaire is a :
- Research method
 - Measurement technique
 - Tool for data collection
 - Data analysis technique

60. Which scale is the simplest form of measurement?
- Nominal
 - Ordinal
 - Interval
 - Ratio
61. Analysis of covariance is:
- A general linear model which blends analysis of variance and regression
 - A statistical technique that can be used to control sequencing effects
 - A statistical technique that substitutes for random assignment to groups
 - Adjusts scores on the independent variable to control for extraneous variables
62. _____ is one where all participants participate in all experimental treatment conditions.
- Factorial design
 - Repeated measures design
 - Replicated design
 - Pre test – post test control-group design
63. Which of the following is necessary in obtaining informed consent?
- A description of the statistical analyses that will be carried out
 - A description of the purpose of the research
 - A description of the reliability and validity of test instruments
 - A list of publications that the researcher has had in the last ten years
64. Which one of the following terms is not related to Intellectual Property Rights?
- Copyrights
 - Patents
 - Trade Marks
 - Thesaurus
65. What is the opposite of a variable?
- A constant
 - An extraneous variable
 - A dependent variable
 - A data set
66. A meta-analysis would allow to:
- assess the reliability of the study
 - explore the variations or inconsistencies in the outcomes of a large number of studies
 - replicate many studies
 - identify the antecedents of a behaviour

67. The difference between the mean of a researcher's sample and the mean of the population of the sample is known as the:
- sampling error
 - significance level
 - standard deviation
 - confidence interval
68. What does it mean when research quotes that their findings are "statistically significant" and the statistical level set was at 0.05?
- The extent to which the difference found is simply by chance
 - That 95% of the time the study will be wrong
 - That a difference found is likely to occur by chance 5 or fewer times out of a 100 and suggests that the difference is quite unusual and unlikely to be due to chance but rather a real difference between the groups or conditions
 - That a difference found is likely to occur by chance 5 or fewer times out of a 100 which suggests that the difference is due to chance and so does not represent a real difference between the groups or conditions
69. Research that is done to examine the findings of someone else using the "same variables but different people" is which of the following?
- Exploration
 - Hypothesis
 - Replication
 - Empiricism
70. Which one of the below is true of pre-coding?
- Pre-coding is only employed when self-completion questionnaires are used
 - The data collected are limited by the nature of the categories created by the researcher
 - Pre-coding lends its self to qualitative data analysis
 - Pre-coding provides rich and detailed data
71. Which is the process of gathering evidence supporting inferences based test scores?
- Validation
 - Variation
 - Reliability
 - Prediction
72. The independent variable refers to
- The variable which shows us the effect of the manipulation
 - the variable being manipulated or varied in some way by the researcher
 - a variable which serves as the aim of an experiment
 - the variable which is only used in the control condition
73. In what tense is it suggested that the introduction should be written
- Present
 - Past
 - Future
 - None of the above

74. Interpretative Phenomenological Analysis is
- an early form of discourse analysis
 - closely related to psychoanalytic psychology
 - a relatively new development in qualitative methods
 - a proposed method of qualitative analysis awaiting proper development
75. How would you best judge the fruitfulness of research?
- Fruitfulness of the research is probably best judged in terms of the number of new ideas and insights it offers. This is not easily catalogued; rather it is easy to spot when research lacks novel insight and ideas
 - The fruitfulness of any research can best be judged according to whether or not the results are significant
 - The fruitfulness of any research could be judged by assessing the impact of the research on the public or other researchers
 - All of the above
76. Fundamental Research is otherwise called
- Action Research
 - Survey
 - Pilot study
 - Pure Research
77. Research method is a part of
- Problem
 - Experiment
 - Research Techniques
 - Research methodology
78. A review of the literature prior to formulating research questions allows the researcher to do which of the following?
- To become familiar with prior research on the phenomenon of interest
 - To identify potential methodological problems in the research area
 - To develop a list of pertinent problems relative to the phenomenon of interest
 - All of the above
79. UGC Stands for
- University Grants Commission
 - Union Government Commission
 - University Governance Council
 - Union government Council
80. A Hypothesis which develops while planning the research is
- Null Hypothesis
 - Working Hypothesis
 - Relational Hypothesis
 - Descriptive Hypothesis

81. Bibliography means
- Foot Note
 - Quotations
 - List of Books referred
 - Biography
82. The main objective of study is to acquire knowledge
- Exploratory
 - Descriptive
 - Diagnostic
 - Descriptive and Diagnostic
83. An observation of a dependent variable response prior to any attempt to change this response is known as the
- Flat line
 - Baseline
 - Variance
 - Reverse
84. Questions which allow only a few alternative way of answering is called
- Open ended questions
 - Unstructured questions
 - Structural questions
 - Dichotomous questions\
85. Sampling which provides for a known non zero chance of selection is
- Probability sampling
 - Non probability sampling
 - multiple Choice
 - analysis
86. Standard Deviation is a measure of
- Chance
 - central tendency
 - deviation from mean value
 - none
87. Z score criteria applicable to
- Normal Distribution
 - Skewed deviation
 - Chi-Square test
 - Paired T-Test

88. In a study, variation in cholesterol was seen before and after giving a drug. The test which would give its significance is

- a) unpaired t-test
- b) Fischer Test
- c) Paired T-Test
- d) Chi-Square Test

89. While applying chi-square test to contingency table of 4 rows and 4 columns, the degrees of freedom would be:

- a) 1
- b) 4
- c) 9
- d) 8

90. Appropriate statistical method to compare two means is

- a) Chi-Square test
- b) Student's T-test
- c) Odds Ratio
- d) Correlation Coefficient

91. Not true about chi-square test is :

- a) Tests the significance of difference between two proportions
- b) Tells about presence or absence of an association between two variables
- c) Directly measures the strength of association
- d) Can be used when more than two groups are to be compared

92. The Correlation Coefficient between Smoking & Lung Cancer was found to be 1.4 This indicates:

- a) Weak Correlation
- b) Moderate Correlation
- c) Strong Correlation
- d) Mistake in calculation

93. Test of association between two qualitative variables is done by:

- a) Chi-Square Test
- b) Correlation
- c) Regression
- d) None

94. Mean, Median and Mode are:

- a) Measures of dispersion
- b) Measures association between two variables
- c) Test of significance
- d) Measures of central tendency

95. Association can be measured by all except:

- a) Correlation coefficient
- b) Cronbach's alpha
- c) P value
- d) Odds ratio

96. Not required for chi-square test:

- a) Null Hypothesis
- b) Degrees of freedom
- c) Means in different groups
- d) Proportions in different groups

97. Correlation coefficient varies between :

- a) 0 to +1
- b) -1 to 0
- c) -1 to +1
- d) +1 to +2

98. Type I sampling error is classified as:

- a) Alpha error
- b) Beta error
- c) Gamma error
- d) Delta error

99. In a standard normal curve, the area between one standard deviation on either side will be:

- a) 68%
- b) 85%
- c) 99.7%
- d) None of the above

100. Normal distribution curves depends on:

- a) Mean and sample size
- b) Range and sample size
- c) Mean and standard deviation
- d) Mean and Median