

# History of the Profession of Pharmacy in India in Relation to Pharmacy Education, Industry, Pharmacy Practice and Various Professional Associations; Pharmacy as a Career; Pharmacopoeia

- The Greek word *Poeio* means:**
  - To cure
  - To make
  - To diagnose
  - To treat
- In 1948 \_\_\_\_\_ prepared the first edition of Indian pharmacopoeia.**
  - Dr Mukherjee
  - William Martindale
  - Dr BN Ghosh
  - ML Schroff
- The first British pharmacopoeia was published in \_\_\_\_\_.**
  - 1890
  - 1864
  - 1870
  - 1895
- In the year 2018 which edition of Indian pharmacopoeia was published?**
  - 2nd edition
  - 5th edition
  - 7th edition
  - 8th edition
- The British Pharmacopoeia is the National Pharmacopoeia of the \_\_\_\_\_.**
  - Europe
  - United Kingdom
  - France
  - South Africa
- DEC stands for \_\_\_\_\_.**
  - Drug Education Committee
  - Drug Ethical Committee
  - Drug Enquiry Committee
  - None of the above
- Who organizes the Indian Pharmaceutical Congress every year?**
  - Indian Pharmaceutical Congress
  - Indian Pharmacy Graduates Association
  - Indian Pharmaceutical Congress Association
  - Indian Pharmaceutical Association
- Earliest pharmacies were known as**
  - Apothecary shops
  - Pharmacy
  - Medicine point
  - Drugstore
- The architect of Indian pharmaceutical industry is \_\_\_\_\_.**
  - Acharya SB Manikdas
  - Dr RC Subhedar
  - Dr APJ Abdul Kalam
  - Acharya PC Ray
- At least \_\_\_\_\_ is required to practice as a pharmacist in India.**
  - Degree in Pharmacy
  - Masters in Pharmacy
  - Pharm D
  - Diploma in pharmacy
- Pharmacy education in India as a university level programme started in 1937 at \_\_\_\_\_.**
  - Delhi University
  - University of Madras
  - Banaras Hindu University
  - Patna University
- According to the reference, the commonly worshipped Hindu God of Medicine, “\_\_\_\_\_” is the original exponent of the Indian medicine.**
  - Ganesh
  - Mahadev
  - Dhanvantari
  - Bramha

13. The \_\_\_\_\_ was enacted as the nation's first minimum standard of educational qualification for pharmacy practice.
- Drugs and Cosmetics Act 1940 (1945)
  - DPCO Act
  - Pharmacy Act 1948
  - All of the above
14. Pharmacy practice in India is governed by which of the following Act?
- Pharmacy Act 1948
  - Drugs and Cosmetics Act 1940 (1945)
  - DPCO Act
  - All of the above
15. Key strengths of pharmaceutical industry are \_\_\_\_\_.
- Strong manufacturing base
  - Cost competitiveness
  - Fast growing healthcare industry
  - All of the above
16. The word 'pharmacy' is derived from the Greek word \_\_\_\_\_.
- Pharmaces
  - Pharma
  - Pharmacisto
  - Pharmakon
17. The present education regulations 2020 framed replaced \_\_\_\_\_.
- Education Regulations 1981
  - Education Regulations 1991
  - Education Regulations 1982
  - Education Regulations 2014
18. \_\_\_\_\_ is the federation of five national pharmaceutical associations as its constituents.
- Indian Pharmaceutical Congress
  - Indian Pharmaceutical Congress Association
  - Indian Pharmacy Graduates Association
  - Indian Pharmaceutical Association
19. \_\_\_\_\_ is the premier professional association of pharmacists in India.
- Indian Pharmaceutical Congress
  - Indian Pharmacy Graduates Association
  - Indian Pharmaceutical Association
  - Indian Pharmaceutical Congress Association
20. \_\_\_\_\_ has the highest number of US FDA approved drug manufacturing units (outside USA) today.
- India
  - Russia
  - China
  - America
21. \_\_\_\_\_ were medical doctors as well as pharmacists.
- Charaka and Chanakya
  - Chanakya and Sushruta
  - Charaka and Sushruta
  - Aryabhatta and Valmiki
22. The Drugs and Cosmetics Act was passed in the year \_\_\_\_\_.
- 1940
  - 1945
  - 1948
  - 1955
23. Who is known as the "Father of Pharmacy Education in India"?
- Acharya PC Ray
  - Prof Mahadev Lal Schroff
  - Sushruta
  - Charaka
24. Pharmacy education in India at the certificate level was started in 1842 in Goa by \_\_\_\_\_.
- Britishers
  - Jews
  - Native businessmen
  - Portuguese
25. \_\_\_\_\_ was the first pharmaceutical manufacturing facility establishment in India.
- Indian Pharmaceutical Company Ltd.
  - Bengal Chemicals and Pharmaceutical Works Ltd.
  - Calcutta Chemicals
  - Ranbaxy Pharmaceuticals Ltd.
26. The first edition of IP was published in \_\_\_\_\_.
- 1948
  - 1955
  - 1940
  - 1960
27. Extra pharmacopoeia is also termed \_\_\_\_\_.
- Martindale: The Complete Drug Reference
  - Pharmacopoeia codex
  - National formulary
  - International pharmacopoeia
28. \_\_\_\_\_ is pharmacy as the minimum required qualification to enter into the pharmacy profession in India.
- Degree
  - Postgraduation
  - Diploma
  - Pharm D
29. Dioscorides wrote \_\_\_\_\_
- Merck Index
  - Indian Pharmacopoeia
  - Martindale
  - De Materia Medica



50. \_\_\_\_\_ is an art and science of compounding and dispensing of medications.  
 A. Biotechnology  
 B. Pharmacodynamics  
 C. Pharmacy  
 D. Pharmacovigilance
51. The first of pharmacy shop was opened in \_\_\_\_\_.  
 A. France  
 B. Italy  
 C. Germany  
 D. Bagdad
52. USP means  
 A. United States Pharmacology  
 B. United States Pharmacy  
 C. United States Pharmacopoeia  
 D. United States Pharmaceutical
53. Alembic Chemical Works at Baroda was established by \_\_\_\_\_.  
 A. Prof TK Gujjar  
 B. Acharya PC Ray  
 C. RN Chopra  
 D. Mr Bathgate
54. Pharmacopoeia contains \_\_\_\_\_.  
 A. Monograph and drug substances  
 B. Standard tests  
 C. Description formulae  
 D. All of the above
55. Who organises the Indian Pharmaceutical Congress every year?  
 A. Indian Pharmaceutical Congress  
 B. Indian Pharmaceutical Congress Association  
 C. Indian Pharmacy Graduate Association  
 D. Indian Pharmaceutical Association
56. The Pharmacy Act was established in \_\_\_\_\_.  
 A. 1960  
 B. 1952  
 C. 1948  
 D. 1949
57. Long form of APTI is \_\_\_\_\_.  
 A. Association of pharmaceutical teachers of India  
 B. Association of pharmaceutical training in India  
 C. Association of pharmaceutical theories in India  
 D. Association of post teachers in India
58. The Pharmacy Council of India is reconstituted after every \_\_\_\_\_ years.  
 A. 5  
 B. 4  
 C. 3  
 D. 2
59. IDMA stands for \_\_\_\_\_.  
 A. Indian Drug Manufacturer Association  
 B. Import of Drug Manufacturer Association  
 C. Indian Drug Management Association  
 D. Indian Dosage Management Association
60. In 1842, in India Portuguese started pharmacy education by providing a certificate course in \_\_\_\_\_.  
 A. Hyderabad  
 B. Goa  
 C. Bangalore  
 D. Delhi

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 Answer Key
 

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1 B	2 C	3 B	4 D	5 B	6 C	7 C	8 A	9 D	10 D
11 C	12 C	13 C	14 B	15 D	16 D	17 B	18 B	19 C	20 A
21 C	22 A	23 B	24 D	25 B	26 B	27 A	28 C	29 D	30 D
31 B	32 C	33 A	34 C	35 C	36 B	37 C	38 D	39 A	40 B
41 A	42 A	43 C	44 D	45 B	46 D	47 A	48 D	49 B	50 C
51 D	52 C	53 A	54 D	55 B	56 C	57 A	58 A	59 A	60 B

# Packaging Materials

- Which one of the following is not an official test for rubber closure?  
A. Extractive test                      B. Pyrogen test  
C. Permeability test                    D. Compatibility test
- Following are the materials used for container *except* \_\_\_\_\_.  
A. Glass                                      B. Plastic  
C. Rubber                                    D. Metal
- PVC means \_\_\_\_\_.  
A. Polyvinyl chloride                    B. Polyvinyl carbon  
C. Polyvinyl carbide                    D. Polyvinyl carbonate
- \_\_\_\_\_ is a material of choice for a flexible packaging.  
A. Metal                                      B. Glass  
C. Cellulose                                D. Cellophane
- \_\_\_\_\_ is a device by means of which container can be closed and opened.  
A. Aerosol                                  B. Closure  
C. Container                                D. None of the above
- Which of the following materials are used in pharmaceutical packaging?  
A. Glass                                      B. Plastic  
C. Metal                                      D. All of the above
- Major disadvantages of glass as a packaging material are  
A. Fragility                                  B. Weight  
C. Both A and B                          D. None of the above
- Composition of glass is \_\_\_\_\_.  
A. Sand                                        B. Soda ash  
C. Lime stone and cullet                D. All of the above
- Which of the following packaging materials is used to protect the drug against the light?  
A. Plastic containers  
B. Amber coloured glass containers  
C. Both A and B  
D. None of the above
- Type-I glass is also known as \_\_\_\_\_.  
A. Borosilicate glass  
B. Regular soda-lime glass  
C. Treated soda-lime glass  
D. None of the above
- Which of the following methods are used in the production of glass?  
A. Blowing                                  B. Drawing  
C. Pressing and casting                  D. All of the above
- To protect the contents of a bottle from the effects of sunlight by UV rays, which glass is used?  
A. Amber coloured glass                B. Red coloured glass  
C. Both A and B                          D. None of the above
- Soda ash is also known as \_\_\_\_\_.  
A. Pure silica                                B. Treated soda-lime  
C. Limestone                                D. Sodium carbonate
- Plastic containers are generally made from which of the following materials?  
A. Polyethylene                            B. Polypropylene  
C. Polystyrene                              D. All of the above
- The package that is directly in contact with formulation is called \_\_\_\_\_.  
A. Secondary package                    B. Tertiary package  
C. Primary package                        D. All of the above

16. The advantages of plastic containers over glass containers are \_\_\_\_\_.
- Easy formation
  - Resistance to breakage
  - Freedom of design
  - All of the above
17. LDPE stands for \_\_\_\_\_.
- Low density polyethylene
  - Light density polyethylene
  - Low density polypropylene
  - None of the above
18. Hermetic containers are also known as \_\_\_\_\_.
- Air-tight containers
  - Multi-dose containers
  - Single dose containers
  - None of the above
19. Thermoplastics are \_\_\_\_\_.
- Does not softened upon exposure to high temperature
  - Hard and brittle
  - Softened upon exposure to high temperature
  - None of the above
20. HDPE stands for \_\_\_\_\_.
- High density polyethylene
  - High density polyethene
  - High density polypropylene
  - None of the above
21. Type-II glasses are \_\_\_\_\_.
- Treated soda-lime glass
  - NP glass
  - Borosilicate glass
  - General soda-lime glass
22. Rubbers are used as material for construction of \_\_\_\_\_.
- Container
  - Closure
  - Both A and B
  - None of the above
23. Plastic containers are sterilized using \_\_\_\_\_.
- Autoclave
  - Bleaching agent
  - Ethylene oxide
  - All of the above
24. The package composed of a layer having cavities that hold the pharmaceutical product and a lid is called \_\_\_\_\_.
- Strip package
  - Child resistant package
  - Blister package
  - Well-closed package
25. A light-resistant container provides protection against \_\_\_\_\_.
- Moisture
  - Light
  - Both A and B
  - None of the above
26. Glass containers are \_\_\_\_\_ in nature.
- Fragile
  - Light
  - Both A and B
  - None of the above
27. Which is the most resistant type of glass?
- Type I
  - Type II
  - Type III
  - Type IV
28. Which of the following is used as vulcanizing agent in the manufacture of rubber closures?
- Activated carbon black
  - Sulphur
  - Talc
  - Stearic acid
29. \_\_\_\_\_ glass is a glass of highest pharmaceutical grade
- Type I
  - Type II
  - Type III
  - Type IV
30. Soda-lime glass is also known as \_\_\_\_\_.
- Hard glass
  - Soft glass
  - Potash glass
  - Lead glass

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**Answer Key**

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1 B	2 C	3 A	4 D	5 B	6 D	7 C	8 D	9 B	10 A
11 D	12 C	13 C	14 D	15 C	16 D	17 A	18 A	19 C	20 A
21 A	22 B	23 C	24 C	25 B	26 A	27 A	28 B	29 A	30 B

## Pharmaceutical Aids and Preservatives

- 1. Identify the artificial sweetener among the following:**
  - A. Sucrose
  - B. Dextrose
  - C. Sucralose
  - D. Mannitol
- 2. To increase viscosity of liquid which of the following reagent is used?**
  - A. PVP
  - B. Sodium carboxymethyl cellulose
  - C. Methyl cellulose
  - D. All of the above
- 3. Which of the following is not used as a diluent?**
  - A. Lactose
  - B. Microcrystalline cellulose
  - C. Calcium carbonate
  - D. Polyvinyl Pyrrolidone
- 4. Which among the following is not an example for natural colors?**
  - A. Annatto
  - B. Carotene
  - C. Saffron
  - D. Naphthalene blue
- 5. Chelating agents act by \_\_\_\_\_ mechanism.**
  - A. Complexation
  - B. Hydration
  - C. Oxidation
  - D. None of the above
- 6. Diluents are used to \_\_\_\_\_.**
  - A. Add cohesiveness to the powder blend
  - B. Make up the required bulk of the tablet
  - C. Both A and B
  - D. None of the above
- 7. Antioxidants act by inhibiting \_\_\_\_\_ mechanism.**
  - A. Complexation
  - B. Hydration
  - C. Oxidation
  - D. None of the above
- 8. Preservatives improve \_\_\_\_\_.**
  - A. Shelf life of the product
  - B. Product stability
  - C. Appearance of the product
  - D. All of the above
- 9. Lakes are example for \_\_\_\_\_.**
  - A. Colouring agent
  - B. Flavouring agent
  - C. Sweetening agent
  - D. None of the above
- 10. Which of the following is an example of a non-nutritive sweetening agent?**
  - A. Sucralose
  - B. Sucrose
  - C. Mannitol
  - D. None of the above
- 11. EDTA is an example of \_\_\_\_\_.**
  - A. Chelating agent
  - B. Antifungal preservative
  - C. Anti-oxidant
  - D. None of the above
- 12. A flavouring agent is used to enhance \_\_\_\_\_ of the product.**
  - A. Smell
  - B. Appearance
  - C. Palatability
  - D. None of the above
- 13. Which of the following are widely used and excellent preservatives?**
  - A. Quaternary ammonium compounds
  - B. Mercurials
  - C. Chelating agents
  - D. Chloroform

14. Benzalkonium chloride is categorized as \_\_\_\_\_.  
 A. Acidic preservative  
 B. Neutral preservative  
 C. Mercurial preservative  
 D. Quaternary ammonium compounds
15. Which of the following is an example of synthetic colouring agent?  
 A. Amaranth  
 B. Curcumin  
 C. Cochineal  
 D. None of the above
16. Which of the following sugar has bitter taste?  
 A. Glucose  
 B. Sucrose  
 C. Saccharine  
 D. None of the above
17. Which of the following is a synthetic sweetener?  
 A. Glucose  
 B. Sucrose  
 C. Sorbitol  
 D. Aspartame
18. At which concentration, phenol acts as preservative?  
 A. 0.2–0.5  
 B. 0.5–0.8  
 C. 0.05–0.1  
 D. None
19. Most widely used flavouring agent in food industry is  
 A. Menthol  
 B. Chloroform  
 C. Monosodium glutamate  
 D. None of the above
20. Ingredients used to enhance the elegance of pharmaceutical formulations are called \_\_\_\_\_.  
 A. Carminatives  
 B. Pharmaceutical aids  
 C. Astringent  
 D. None of the above
21. Cochineal is a \_\_\_\_\_ agent.  
 A. Flavouring  
 B. Colouring  
 C. Sweetening  
 D. Thickening
22. Which of the following flavour is not responsible for sour taste?  
 A. Citrus flavour  
 B. Liquorice  
 C. Raspberry  
 D. Mint spice
23. Which of the following agents are used as flavouring agents?  
 A. Menthol  
 B. Chloroform  
 C. Both A and B  
 D. None of the above
24. Which of the following is a coal tar colour?  
 A. Amaranth  
 B. Caramel  
 C. Titanium dioxide  
 D. Cochineal
25. The colouring agents are permitted under the Act \_\_\_\_\_.  
 A. Pharmacy Act 1948  
 B. DMR Act 1954  
 C. NDPS Act 1985  
 D. D and C Act 1940
26. Which of the following is used as a colouring agent?  
 A. Lemon  
 B. Sorbitol  
 C. Clove  
 D. Caramel
27. Pharmaceutical aids are also known as \_\_\_\_\_.  
 A. Adjuvants  
 B. Adjuncts  
 C. Excipients  
 D. All of the above
28. Titanium dioxide is used as \_\_\_\_\_.  
 A. Flavouring agent  
 B. Colouring agent  
 C. Sweetening agent  
 D. All of the above
29. BHA and BHT are used as \_\_\_\_\_.  
 A. Buffers  
 B. Antioxidants  
 C. Diluents  
 D. Vehicles
30. \_\_\_\_\_ is a propellant for sprays and aerosols.  
 A. Benzalkonium chloride  
 B. Trichlorofluoromethane  
 C. Carbon tetrachloride  
 D. Propyl gallate

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### Answer Key

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1 A	2 D	3 D	4 D	5 A	6 B	7 C	8 D	9 A	10 A
11 A	12 C	13 A	14 D	15 A	16 C	17 D	18 A	19 C	20 B
21 B	22 D	23 C	24 A	25 D	26 D	27 D	28 B	29 B	30 B



# Unit Operations

## Size Reduction, Size Separation, Mixing, Filtration, Drying, Extraction

- \_\_\_\_\_ is a solvent for extraction of alkaloids, glycosides, volatile oils and resins.  
A. Water                                      B. Alcohol  
C. Kerosene                                    D. Light petroleum
- Following are the processes of extraction *except* \_\_\_\_\_.  
A. Percolation                                B. Digestion  
C. Drying                                        D. Maceration
- \_\_\_\_\_ is used for drying of biological product like plasma, serum, vaccines, enzymes, etc.  
A. Tray dryer                                B. Spray dryer  
C. Rotary dryer                               D. Freeze dryer
- Thermolabile material can be sterilised by using \_\_\_\_\_.  
A. Filter leaf                                    B. Sintered glass filter  
C. Filter press                                   D. Filter paper
- The efficiency of ball mill is maximum at \_\_\_\_\_.  
A. Low speed  
B. High speed  
C. Very high speed  
D. 2/3 speed (critical speed)
- Most simple and most frequently used method for size separation is \_\_\_\_\_.  
A. Sieve Shaker  
B. Cyclone separator  
C. Air separator  
D. Elutriation
- Which type of mixtures is easily formed?  
A. Positive                                      B. Negative  
C. Neutral                                        D. Ampholytic
- The process of separation of insoluble particle from suspension or slurry is called \_\_\_\_\_.  
A. Filtration                                    B. Sieving  
C. Distillation                                 D. Drying
- Which one of the following does not influence filtration?  
A. Temperature                                B. Density  
C. Viscosity                                     D. pH
- Metafilter is also known as \_\_\_\_\_.  
A. Filter press                                 B. Filter candle  
C. Edge filter                                    D. Sintered filter
- Filter aids are added to the liquid \_\_\_\_\_.  
A. To increase the porosity  
B. To increase cake permeability  
C. Both A and B  
D. None of the above
- Size reduction is also called \_\_\_\_\_.  
A. Comminution  
B. Continuation  
C. Communication  
D. Elutriation
- Which of the following factor is not affecting on the process of size reduction?  
A. Hardness                                    B. Stickiness  
C. Viscosity                                     D. Abrasiveness
- In the ball mill maximum size reduction occurs at \_\_\_\_\_ speed.  
A. Low  
B. High  
C. Optimum/critical  
D. None of the above



36. Which mechanism help in size separation by sieve shaker?  
A. Centrifugal force                      B. Sedimentation  
C. Brushing                                  D. Shearing forces
37. Movement of particle can be enhanced during size separation by which one of the following modes?  
A. Agitation                                  B. Attrition  
C. Gravitation                                D. Mixing
38. The solvent used for extraction is called \_\_\_\_\_.  
A. Menstruum                                B. Marc  
C. Expression                                 D. Galenical
39. For \_\_\_\_\_ mixing each particle of one material lies as nearly adjacent as possible to a particle of other material.  
A. Positive                                    B. Negative  
C. Perfect                                      D. Neutral
40. The Pharmacopoeia has prescribed only the upper limit for the \_\_\_\_\_ fine grades of powder  
A. 2    B. 3  
C. 5    D. 4
41. The preparations which are made by using extraction method are called \_\_\_\_\_.  
A. Biologicals                                 B. Botanicals  
C. Galenicals                                 D. All of the above
42. \_\_\_\_\_ is not used for mixing, in dispensing.  
A. Sizing                                        B. Spatulation  
C. Trituration                                 D. Tumbling
43. Which type of the following is also known as twin shell blender?  
A. Double cone blender                    B. Tumbler mixer  
C. Sigma blade mixer                        D. Paddle mixer
44. Degree of mixing is also known as \_\_\_\_\_.  
A. Degree of homogeneity                 B. Extent of mixing  
C. Random mixing                            D. None of the above
45. Sieve through which all the particles must pass in case of moderately fine particles is \_\_\_\_\_.  
A. 44    B. 85  
C. 22    D. 10
46. The principle behind cyclone separator is \_\_\_\_\_.  
A. Agitation                                  B. Centrifugal force  
C. Sieves                                        D. None of the above
47. Sintered glass filter is made from \_\_\_\_\_.  
A. Limestone                                 B. Soda-lime glass  
C. Sulphur glass                              D. Borosilicate glass
48. Membrane filter works on the principle of \_\_\_\_\_.  
A. Physical separation                        B. Chemical separation  
C. Shearing force                              D. Gravitational force
49. 'Kozeny-Carman equation' and 'Poiseulle's law' are the theories of \_\_\_\_\_.  
A. Extraction                                 B. Separation  
C. Filtration                                  D. Mixing
50. Final removal of liquid from the solid with the help of heat is called \_\_\_\_\_.  
A. Extraction                                 B. Drying  
C. Separation                                 D. Mixing
51. \_\_\_\_\_ is also known as freezer drying.  
A. Homogenization                         B. Lyophilization  
C. Clarification                                D. Filtration
52. In cyclone separator the powder is separated depending on its \_\_\_\_\_.  
A. Particle size                                B. Density  
C. Particle size and density                D. Shape of powder
53. Which of the following equipment can be used for mixing of powder?  
A. Turbine mixer                              B. Double cone blender  
C. Sigma blade mixer                        D. All of the above
54. A clear liquid passing through the filter is called \_\_\_\_\_.  
A. Filtrate                                      B. Slurry  
C. Filter media                                 D. Filter cake
55. The separation process in which the amount of solid in liquid is not more than 1% w/v is called \_\_\_\_\_.  
A. Clarification                                B. Filtration  
C. Centrifugation                             D. Evaporation
56. Leaching means \_\_\_\_\_.  
A. Liquid-liquid extraction                B. Solid-liquid extraction  
C. Solid-phase extraction                 D. All of the above
57. \_\_\_\_\_ is the process of removal of an active constituent from crude drug by using suitable solvent in which it is soluble.  
A. Filtration                                  B. Size reduction  
C. Drying                                        D. Extraction
58. Continuous hot percolation is also known as \_\_\_\_\_.  
A. Lyophilization                             B. Soxhalation  
C. Homogenization                         D. None of the above
59. Which of the following is standard for sieve?  
A. Sieve number                              B. Nominal aperture size  
C. Nominal diameter of wire              D. All of the above

60. Which materials are not used in drying in a freeze dryer?  
 A. Seafood                                      B. Fruits  
 C. Pharmaceuticals                            D. Dyes
61. In drying process, the final product is in the form of \_\_\_\_\_.  
 A. Slurry    B. Solution  
 C. Solid    D. Solvent concentrate
62. Condition that is highly critical in drying process is \_\_\_\_\_.  
 A. Moisture                                        B. Pressure  
 C. Temperature                                  D. Volume
63. Advantage of fluidized bed dryer is \_\_\_\_\_.  
 A. No attrition  
 B. Entire material is continuously exposed to heat source  
 C. Fluffy mass is formed  
 D. Humidity can be increased
64. In sieving, sieves are arranged in \_\_\_\_\_ orders.  
 A. Ascending                                      B. Random  
 C. Descending                                    D. Horizontal
65. Mechanism of mixing in silverson mixer is \_\_\_\_\_.  
 A. Convective                                      B. Laminar  
 C. Random                                         D. Turbulent
66. A double cone mixer is used for mixing \_\_\_\_\_.  
 A. Solids     B. Semi-solids  
 C. Liquids                                         D. Suspensions
67. Triple roller mill works on the principle of \_\_\_\_\_.  
 A. Diffusion mixing                              B. Convective mixing  
 C. Dry mixing                                      D. Shear mixing
68. The rate of flow of the filtrate through the filter cake is \_\_\_\_\_ to the thickness of the cake.  
 A. Inversely proportional  
 B. Directly proportional  
 C. Remain constant  
 D. None of the above
69. Which of the following is not a filter aid?  
 A. Diatomaceous earth                        B. Perlite  
 C. Cellulose                                        D. Cotton
70. Filter aids are added to the liquid \_\_\_\_\_.  
 A. To increase the porosity  
 B. To increase cake permeability  
 C. Both A and B  
 D. None of the above
71. Which of the following theory not describe rate of filtration?  
 A. Darcy Law  
 B. Poiseulle's equation  
 C. Kozeny-Carman equation  
 D. Noyes-Whitney equation
72. The slurry is \_\_\_\_\_.  
 A. A suspension to be filtered  
 B. A porous membrane used to retain the solids  
 C. The solids which are present on the filter  
 D. A clear liquid passing through the filter
73. Which of the following dryer is known as lyophilizer?  
 A. Fluidized bed dryer                        B. Spray dryer  
 C. Freeze dryer                                 D. Vacuum dryer
74. \_\_\_\_\_ means extraction carried out by mechanical means.  
 A. Evaporation                                    B. Expression  
 C. Galenicals                                      D. Filtration
75. Proper drying can prevent \_\_\_\_\_ of the product.  
 A. Loss    B. Weight  
 C. Deterioration                                D. Solubility
76. Drying involves \_\_\_\_\_ transfer operation.  
 A. Mass     B. Heat  
 C. Mass and heat                                D. Either mass or heat
77. For extraction of thermolabile drugs which extraction process should be used?  
 A. Percolation                                    B. Maceration  
 C. Decoction                                      D. Both A and B
78. The solvent used for extraction is known as  
 A. Distillate                                        B. Extract  
 C. Marc     D. Menstruum
79. The inert insoluble material that remains after extraction is called \_\_\_\_\_.  
 A. Distillate                                        B. Extract  
 C. Marc     D. Menstruum
80. Which of the following process is used for extraction?  
 A. Infusion                                         B. Decoction  
 C. Digestion                                        D. All of the above
81. Pouring water over the drugs and then allowing it to keep in contact with water usually for the 15 min is called \_\_\_\_\_.  
 A. Infusion                                         B. Decoction  
 C. Percolation                                    D. Digestion

82. Extraction does not involve one of the following components \_\_\_\_\_.
- A. Active constituents
  - B. Solvent
  - C. Vapour
  - D. Crude solids
83. Which of the following is not a mechanism of size reduction?
- A. Compression
  - B. Impact
  - C. Attrition
  - D. Elutriation
84. Following are the processes used for extraction *except* \_\_\_\_\_.
- A. Maceration
  - B. Sublimation
  - C. Digestion
  - D. Percolation
85. Preparations like infusions, decoctions, spirits, elixirs are commonly known as \_\_\_\_\_.
- A. Pharmaceuticals
  - B. Galenicals
  - C. Nutraceuticals
  - D. Cosmeceuticals
86. Solvent used for extraction is \_\_\_\_\_.
- A. Water
  - B. Alcohol
  - C. Ether
  - D. All of the above
87. What is the disadvantage of alcohol as solvent for extraction?
- A. Toxicity
  - B. Stability
  - C. Cost
  - D. Selectivity
88. Ball mill is based on principle of \_\_\_\_\_.
- A. Cutting
  - B. Compression
  - C. Impact and attrition
  - D. Attrition
89. Hammer mill is based on the principle of \_\_\_\_\_.
- A. Impact
  - B. Attrition
  - C. Cutting
  - D. Compression
90. Elutriation is a method of \_\_\_\_\_.
- A. Size reduction
  - B. Extraction
  - C. Size separation
  - D. Filtration
91. In cyclone separator \_\_\_\_\_ force is used to separate solid from the fluid.
- A. Fractional force
  - B. Centrifugal force
  - C. Electromagnetic force
  - D. Nuclear force
92. \_\_\_\_\_ is a unit operation in which two or more substance combined together in such a way that each particle of material looks similar to particles of other material.
- A. Filtration
  - B. Extraction
  - C. Mixing
  - D. Drying
93. Following is the mechanism of mixing \_\_\_\_\_.
- A. Shear mixing
  - B. Convective mixing
  - C. Diffusion mixing
  - D. All of the above
94. Propeller mixer and turbine mixer are used for mixing of \_\_\_\_\_.
- A. Solids
  - B. Liquids
  - C. Semi-solids
  - D. Powders
95. Double cone blender works on the mechanism of \_\_\_\_\_.
- A. Convective mixing
  - B. Diffusion mixing
  - C. Shearing mixing
  - D. All of the above
96. Silverson mixer is used for \_\_\_\_\_.
- A. Homogenization
  - B. Filtration
  - C. Extraction
  - D. Separation
97. Clarification is used for the removal of small amount of suspended solids \_\_\_\_\_.
- A. Not more than 2%
  - B. Not more than 0.15%
  - C. Not more than 1.5%
  - D. Not more than 2.5%
98. The deposited layer of solid on the filter medium is called \_\_\_\_\_.
- A. Filter cake
  - B. Filter medium
  - C. Filtrate
  - D. Slurry
99. Which of the following filters are used for sterile filtration?
- A. Cotton wool and filter paper
  - B. Cotton wool and glass wool
  - C. Membrane filter and sintered glass filter
  - D. Muslin cloth and asbestos
100. \_\_\_\_\_ are the examples of filter aids.
- A. Diatomic and Kieselguhr
  - B. Asbestos and cotton wool
  - C. Glass wool and cotton wool
  - D. Muslin cloth and asbestos

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**Answer Key**

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1 B	2 C	3 D	4 B	5 D	6 A	7 A	8 A	9 D	10 C
11 C	12 A	13 C	14 C	15 D	16 C	17 C	18 C	19 D	20 D
21 A	22 D	23 D	24 B	25 B	26 C	27 D	28 A	29 B	30 A
31 D	32 A	33 B	34 A	35 A	36 D	37 A	38 A	39 C	40 A
41 C	42 A	43 A	44 A	45 A	46 B	47 D	48 A	49 C	50 B
51 B	52 C	53 B	54 A	55 A	56 B	57 D	58 B	59 D	60 D
61 C	62 A	63 B	64 C	65 D	66 A	67 D	68 A	69 D	70 C
71 D	72 A	73 C	74 B	75 C	76 C	77 C	78 C	79 C	80 D
81 A	82 C	83 D	84 B	85 B	86 D	87 C	88 C	89 A	90 C
91 B	92 C	93 D	94 B	95 B	96 A	97 B	98 A	99 C	100 A