PHB Education

Government Exam and D. Pharm Exit Exam Preparation Questions Bank

Subject: Pharmacognosy

Chapter -4 : Distribution, Identification tests, pharmaceutical applications, isolation, the therapeutic activity of Crude drugs

Topic: Pharmacognosy – Resins

1–10. Distribution of Resins

1. Resins are mainly found in which part of the plant?

   A) Leaves

   B) Bark

   C) All parts of the plant

   D) Flowers

   Answer: C) All parts of the plant

2. Resins are formed in plants as:

   A) Secondary metabolites

   B) Primary metabolites

   C) Carbohydrates

   D) Proteins

   Answer: A) Secondary metabolites

3. Resins are mostly found in plants belonging to the family:

   A) Pinaceae

   B) Lamiaceae

   C) Solanaceae

   D) Rutaceae

   Answer: A) Pinaceae

4. The natural source of benzoin resin is:

   A) *Styrax benzoin*

   B) *Boswellia serrata*

   C) *Pistacia lentiscus*

   D) *Commiphora mukul*

   Answer: A) *Styrax benzoin*

5. Asafoetida is obtained from:

   A) Roots

   B) Rhizomes

   C) Oleogum resin

   D) Bark

   Answer: C) Oleogum resin

6. Resin ducts are most commonly found in:
   A) Coniferous trees
   B) Grasses
   C) Shrubs
   D) Herbs
   Answer: A) Coniferous trees
7. Colophony (rosin) is obtained from:
   A) Pine tree
   B) Eucalyptus
   C) Mentha
   D) Clove
   Answer: A) Pine tree
8. The chief resin-producing tissue in plants is:
   A) Laticifers
   B) Parenchyma
   C) Resin canals
   D) Phloem fibers
   Answer: C) Resin canals
9. Guggul is obtained from:
   A) *Commiphora mukul*
   B) *Styrax benzoin*
   C) *Boswellia serrata*
   D) *Cannabis sativa*
   Answer: A) *Commiphora mukul*
10. Resin exudates are secreted through:
    A) Resin ducts and canals
    B) Phloem cells
    C) Xylem vessels
    D) Epidermal glands
    Answer: A) Resin ducts and canals

11–20. Identification Tests of Resins

11. Resins are insoluble in:
    A) Water
    B) Alcohol
    C) Ether

D) Acetone

Answer: A) Water

12. Resins are soluble in:

A) Alcohol and ether

B) Water only

C) Alkali

D) Chloroform only

Answer: A) Alcohol and ether

13. Acid value of resins is determined by:

A) Alkalimetric titration

B) Iodometric titration

C) Redox titration

D) Complexometric titration

Answer: A) Alkalimetric titration

14. Softening point of resin indicates:

A) Quality and purity

B) Color intensity

C) Odor strength

D) Solubility

Answer: A) Quality and purity

15. Presence of benzoic acid in benzoin is confirmed by:

A) Sublimation test

B) Iodine test

C) Fehling's test

D) Xanthoproteic test

Answer: A) Sublimation test

16. Resin acids give precipitate with:

A) Lead acetate

B) Fehling's solution

C) Benedict's reagent

D) Molisch's reagent

Answer: A) Lead acetate

17. Fragrance in benzoin is due to:

A) Benzoic acid and cinnamic acid

B) Eugenol

C) Resorcinol

D) Tannic acid

Answer: A) Benzoic acid and cinnamic acid

18. Resins when burned give:

A) Sooty flame and aromatic odor

B) Smokeless flame

C) No odor

D) White vapors

Answer: A) Sooty flame and aromatic odor

19. Resins can be identified by their:

A) Brittle and translucent nature

B) Crystalline form

C) Metallic luster

D) High solubility in water

Answer: A) Brittle and translucent nature

20. Volatile oils differ from resins because they are:

A) Volatile in steam

B) Insoluble in ether

C) Solid and non-volatile

D) Insoluble in alcohol

Answer: A) Volatile in steam

21–30. Pharmaceutical Applications of Resins

21. Resin acids are used in the preparation of:

A) Varnishes and adhesives

B) Laxatives

C) Diuretics

D) Vitamins

Answer: A) Varnishes and adhesives

22. Podophyllum resin is used as:

A) Cathartic and cytotoxic agent

B) Analgesic

C) Antacid

D) Antipyretic

Answer: A) Cathartic and cytotoxic agent

23. Benzoin is used in:

A) Friar's balsam (compound tincture of benzoin)

B) Iron preparations

C) Diuretics

D) Sedatives

Answer: A) Friar's balsam

24. Turpentine resin is used as:

A) Counter-irritant and rubefacient

B) Antacid

C) Laxative

D) Sedative

Answer: A) Counter-irritant and rubefacient

25. Colophony is used as:

A) Emulsifying agent

B) Base for plasters and ointments

C) Laxative

D) Flavoring agent

Answer: B) Base for plasters and ointments

26. Cannabis resin (hashish) is used as:

A) Sedative and analgesic

B) Antacid

C) Antitussive

D) Diuretic

Answer: A) Sedative and analgesic

27. Storax and balsams are used as:

A) Expectorants

B) Laxatives

C) Diuretics

D) Antacids

Answer: A) Expectorants

28. Guggul is used in:

A) Hyperlipidemia

B) Diabetes

C) Hypertension

D) Constipation

Answer: A) Hyperlipidemia

29. Asafoetida acts as a:

A) Carminative and antispasmodic

B) Sedative

C) Diuretic

D) Antacid

Answer: A) Carminative and antispasmodic

30. Mastic resin is used as:

A) Dental adhesive

B) Antacid

C) Sedative

D) Diuretic

Answer: A) Dental adhesive

31–40. Isolation of Resins

31. Resins are usually obtained by:

A) Exudation from bark

B) Crushing seeds

C) Fermentation

D) Boiling roots

Answer: A) Exudation from bark

32. Oleoresins are isolated by:

A) Solvent extraction

B) Expression

C) Steam distillation

D) Maceration in water

Answer: A) Solvent extraction

33. Resins are insoluble in:

A) Water

B) Organic solvents

C) Alcohol

D) Ether

Answer: A) Water

34. The crude resinous material is purified by:

A) Dissolving in alcohol and filtering

B) Distilling under pressure

C) Boiling in water

D) Heating with alkali

Answer: A) Dissolving in alcohol and filtering

35. The mixture of resin and volatile oil is known as:

A) Oleoresin

B) Gum resin

C) Glycoresin

D) Balsam

Answer: A) Oleoresin

36. A mixture of resin, gum, and volatile oil is:

A) Oleo-gum resin

B) Balsam

C) Glycoresin

D) Resin acid

Answer: A) Oleo-gum resin

37. The resin obtained from pine trees by tapping is:

A) Turpentine

B) Mastic

C) Benzoin

D) Storax

Answer: A) Turpentine

38. Alcoholic extraction of resin produces:

A) Soft resin

B) Hard resin

C) Volatile oil

D) Gum

Answer: A) Soft resin

39. The yield of resin depends upon:

A) Season and age of plant

B) Soil type only

C) Water availability

D) Harvest time only

Answer: A) Season and age of plant

40. Resins are stored in:

A) Airtight amber glass containers

B) Paper packets

C) Wooden boxes

D) Plastic bottles

Answer: A) Airtight amber glass containers

41–50. Therapeutic Activity of Resins

41. Podophyllin resin acts as:

A) Antimitotic and cathartic

B) Antacid

C) Diuretic

D) Analgesic

Answer: A) Antimitotic and cathartic

42. Benzoin resin has:

A) Antiseptic and expectorant properties

B) Sedative properties

C) Antacid action

D) Diuretic effect

Answer: A) Antiseptic and expectorant properties

43. Colophony acts as:

A) Emulsifying and adhesive agent

B) Antacid

C) Sedative

D) Diuretic

Answer: A) Emulsifying and adhesive agent

44. Turpentine oil acts as:

A) Rubefacient and expectorant

B) Antacid

C) Laxative

D) Antidiabetic

Answer: A) Rubefacient and expectorant

45. Cannabis resin (hashish) produces:

A) Sedative and analgesic effects

B) Cathartic effect

C) Antacid action

D) Antiseptic effect

Answer: A) Sedative and analgesic effects

46. Guggul resin is used in:

A) Reducing cholesterol

B) Treating fever

C) Constipation

D) Depression

Answer: A) Reducing cholesterol

47. Asafoetida acts as:

A) Carminative and expectorant

B) Analgesic

C) Diuretic

D) Antacid

Answer: A) Carminative and expectorant

48. Mastic resin has:

A) Local adhesive and antiseptic property

B) Antacid property

C) Sedative effect

D) Laxative property

Answer: A) Local adhesive and antiseptic property

49. Benzoin is used externally as:

A) Protective for cracked skin

B) Laxative

C) Sedative

D) Analgesic

Answer: A) Protective for cracked skin

50. Resins generally show:

A) Antiseptic, irritant, and expectorant activity

B) Antacid activity

C) Diuretic property

D) Laxative property

Answer: A) Antiseptic, irritant, and expectorant activity

Resins – Fill in the Blanks (with Answers)

(A) Distribution of Resins

1. Resins are _____ metabolites found in plants.
   Answer: Secondary
2. Resins occur mostly in _____ plants.
   Answer: Higher (vascular)
3. The main source of resins is the plant family _____.
   Answer: Pinaceae
4. Resin canals or ducts are present mainly in _____ trees.
   Answer: Coniferous
5. The resin obtained from *Styrax benzoin* is called _____.
   Answer: Benzoin
6. *Boswellia serrata* yields the resin known as _____.
   Answer: Indian olibanum (Frankincense)
7. *Commiphora mukul* produces the resin _____.
   Answer: Guggul
8. Asafoetida is an example of an _____ resin.
   Answer: Oleo-gum
9. The resin from pine trees is called _____.
   Answer: Turpentine
10. Colophony (rosin) is obtained as a residue after distillation of _____.
    Answer: Turpentine

(B) Chemical Nature and Composition

11. Chemically, resins are composed of _____ compounds of high molecular weight.
    Answer: Carbon, hydrogen, and oxygen
12. The chief constituents of resins are _____, _____, and _____.
    Answer: Resin acids, resin alcohols, esters
13. Resins are generally _____ in water.
    Answer: Insoluble
14. Resins are soluble in organic solvents like _____ and _____.
    Answer: Alcohol, ether
15. The mixture of resin and volatile oil is called _____.
    Answer: Oleoresin
16. The mixture of gum, resin, and volatile oil is known as _____.
    Answer: Oleo-gum resin

17. The mixture of resin and gum without oil is termed _____.
Answer: Gum resin
18. A resin containing aromatic acids like benzoic or cinnamic acid is called a _____.
Answer: Balsam
19. Volatile oils differ from resins as they are _____ in steam.
Answer: Volatile
20. Resins are generally _____ or _____ in physical appearance.
Answer: Brittle, semi-solid

(C) Identification Tests of Resins

21. Resins burn with a _____ flame and aromatic odor.
Answer: Sooty
22. When dissolved in alcohol, resins form a _____ solution.
Answer: Clear
23. Lead acetate solution produces a _____ with resin acids.
Answer: Precipitate
24. The acid value of resin is determined by _____ titration.
Answer: Alkalimetric
25. The presence of benzoic acid in benzoin can be confirmed by _____ test.
Answer: Sublimation
26. Resins have a characteristic _____ when heated.
Answer: Odor
27. The purity of resin can be checked by determining its _____ point.
Answer: Softening
28. Resin acids are _____ in nature and combine with alkali to form soaps.
Answer: Acidic
29. Resins give a sticky and _____ feel when rubbed between fingers.
Answer: Viscous
30. The presence of resin in a plant extract can be tested by its _____ in water.
Answer: Insolubility

(D) Isolation and Preparation of Resins

31. Natural resins are obtained by _____ or tapping of plants.
Answer: Exudation
32. Oleoresins are extracted by _____ extraction method.
Answer: Solvent

33. Crude resins are purified by dissolving in _____ and filtering impurities.
Answer: Alcohol

34. Alcoholic extraction of resin gives a _____ resin.
Answer: Soft

35. The yield of resin depends upon the _____ and _____ of the plant.
Answer: Age, season

36. The crude resin exudate should be stored in _____ containers.
Answer: Airtight amber glass

37. The volatile portion of the resinous exudate is known as _____.
Answer: Turpentine oil

38. The non-volatile solid residue after distillation is _____.
Answer: Colophony

39. Synthetic resins are prepared by _____ reactions.
Answer: Polymerization

40. Oleo-gum resins like Asafoetida are collected from the _____ of the plant.
Answer: Taproot

(E) Pharmaceutical Applications of Resins

41. Benzoin is used in the preparation of _____.
Answer: Compound tincture of benzoin (Friar's balsam)

42. Turpentine acts as a _____ and _____.
Answer: Counter-irritant, rubefacient

43. Colophony is used as a base for _____ and _____.
Answer: Plasters, ointments

44. Podophyllum resin is used as a _____ and _____ agent.
Answer: Cathartic, antimitotic

45. Guggul resin is mainly used to lower _____ levels in the blood.
Answer: Cholesterol

46. Asafoetida is used as a _____ and _____.
Answer: Carminative, antispasmodic

47. Mastic resin is used as a _____ adhesive.
Answer: Dental

48. Cannabis resin (hashish) is used as a _____ and _____.
Answer: Sedative, analgesic

49. Benzoin possesses _____ and _____ properties.
Answer: Antiseptic, expectorant

50. Most resins show general _____, _____, and _____ activity.

Answer: Antiseptic, expectorant, irritant

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