

PHARMACOGNOSY AND PHYTOCHEMISTRY

Select the correct answer out of the given choices

1. Is Known as father of medicine?
a) Aristotle b) Dioscorides
c) Hippocrates d) Galen
Ans: c
2. **Drug is not under the class of organized drug :**
a) Leaves b) flowers
c) Fruits d) Gums
Ans: d
3. **Drug is not under the seed class :**
a) Nux vomica b) Digitalis
c) stropanthus d) Ispgol
Ans: b
4. **Drug which does not belong to leaves class :**
a) Senna b) Digitalis
c) Eucalyptus d) turmeric
Ans: d
5. **Drug which does not belong to fruit class :**
a) Artemesia b) fennel
c) Coriander d) Colocynth
Ans: a
6. **Dried latex of the drug is used, except :**
a) Opium b) Gatta parcha
c) Papain d) Balsam
Ans: b
7. **The roots of following drugs are effective, except :**
a) Rauwolfia b) Ipecacuanha
c) Turmeric d) Aconite
Ans: d
8. **Leaves of the following drugs are affective, except:**
a) Senna b) Digitalis
c) Clove d) Vasaka
Ans : c

9. Entire parts of the following drugs are effective, except:

- a) Ergot b) Belladonna
- c) Ephedra d) Clove

Ans:d

10. Select the drug, which is not belonging to glycoside class?

- a) Digitalis b) senna
- c) Nux vomica d) Cascara

Ans: b

11. select the drug, which is not belonging to tannin class?

- a) Myrobalam d) Pale catechu
- c) Ashoka d) Peppermint

Ans: d

12. Drug not belonging to volatile oil class:

- a) Peppermint b) Clove
- c) Castor oil d) Garlic

Ans : c

13. Select the does not belong to tannin class:

- a) Colophony b) Guar gum
- c) Acacia d) Agar

Ans : c

14. Select the drug, which is not showing carminative property?

- a) dill b) Mentha
- c) senna d) Cardamom

Ans : a

15. _____ is not used as expectorant.

- a) Ipecacuanha b) Vasaka
- c) Liquorice d) atropine

Ans: d

16. _____ is not used as cardiotonics

- a) Digitalis b) Cinchona
- c) Squill d) Stropanthus

Ans:b

17. Drugs is used as Antihypertensive :

- a) Rauwolfia b) Digitalis
- c) squill d) Stropanthus

Ans : c

18. ____ is used as adrenergic drug.
a) Ephedra b) Physostigma
c) Pilocarpus d) belladonna
Ans : d
19. ____ is not used as CNS depressant.
a) Hyoscyamine b) Belladonna
c) coffee d) Opium
Ans :
20. Drug do not used as anticancer :
a) Podophyllum b) Curare
c) Camptotheca d) Taxus
Ans : b
21. Drug is not used as antirheumatic :
a) Quassia b) Aconite
c) Colchicum d) Guggul
Ans : d
22. Drug is used as emetic :
a) Agar b) Isapghul
c) Ipecas d) Banana
Ans : c
23. Drug is used as bronchodilator :
a) Tea b) Liquorice
c) Ipecacuanha d) Vasaka
Ans : c
24. Drug is used as antimalarial :
a) Ashwagandha b) Tulsi
c) Ginseng d) Artemesia
Ans : d
25. Is not the function of cell wall of the plant?
a). Protect the protoplast
b) Provide mechanical support to the organ
c) check the rate of transpiration
d) Give green colour to leaf
Ans : b

26. Alkaloids are _____ type of substances.

- a) Acid b) Neutral
- c) Chemical d) Basic nitrogenous

Ans : d

27. glycosides are condensation products of :

- a) Sugar + aglycone b) Sugar + Protein
- c) Protein + aglycone d) Fats + aglycone

Ans : a

28. Tannins give colour with iron compound :

- a) Pale yellow b) Blue black
- c) Light pink d) Orange

Ans : c

29. The example of capsule fruit is :

- a) Radish b) Mustard
- c) Cabbage d) Datura

Ans : a

30. Flower bud of drug showing medicinal importance:

- a) saffron b) Clove
- c) Fig d) Caraway

Ans : b

31. The term Aril means :

- a). Outgrowth originating from micropyle
- b) Succulent growth from hileum
- c) Enlarged funicle
- d) Stiff bristle like appendages

Ans : b

32. The term Arillode means :

- a). Outgrowth from micropyle
- b) Stiff bristle like appendages
- c) Warty outgrowth
- d) Enlarged funicle

Ans : b

33. Drug is not an example of organized crude drug :

- a) Digitalis b) Cinchona
- c) Aloe d) Clove

Ans : a

5. **Class**
a) Seeds
b) Leaves
c) Fruits
d) Flowers
Ans: a) iv b) i. c) ii d) iii
6. **Class**
a) Lipids
b) Resins
c) Volatile oil
Ans : a) i. b) ii c) iii
7. **Class**
a) Glycosides
b) Alkaloids
c) Tannins
d) Carbohydrates
Ans: a) ii b) i. c) iii d) iv
8. **Class**
a) Emetics
b) Purgative
c) Carminative
d) Bitters
Ans : a) iv b) i. c) ii d) iii
9. **Class**
a) Expectorant
b) Antitussive
c) Anitexpectorant
d) Bronchodilator
Ans : a) iv b) ii c) iii d) i
10. **Pharmacological action**
a) Anticholinergic
b) Cholinergic
c) Adrenergic
Ans : a) ii b) i. c) iii
- Example**
i) Vasaks
ii) Coriander
iii) Pyrethrum
iv) Isapgol
- Example**
i) Bees wax
ii) Bees was
iii) Garlic
- Example**
i) Cinchona
ii) Digitalis
iii) Ashoka
iv) Guar gum
- Example**
i) Castor oil
ii) Cardamom
iii) Cinchona
iv) Ipecacuanha
- Example**
i) Tea
ii) Opium
iii) Starmonium
iv) Vasaka
- Example**
i) Physostigmina
ii) Datura
iii) Opium

- | | | |
|-----|--------------------|---|
| 11. | Drug | Epidermal structure |
| | a) Digitalis | i) Wavy |
| | b) Hyoscyamus | ii) Wavy and striated cuticle |
| | c) belladonna | iii) striated walled and polygonal |
| | d) Senna | iv) Thick walled beaded |
| | Ans : a) iv | b) i. c) ii d) iii |

ALKALOIDS

Select the correct answer out of the given choices

1. **Protoalkaloids are also called as :**

a) Amino alkaloid	b) Pseudo alkaloid
c) True alkaloid	d) Extra alkaloid

Ans : a
2. **True alkaloids are always present in plants as:**

a) Salts of inorganic acid	b) Salts of organic acid
c) Salts of me conic acid	d) Salts of benzoic acid

Ans: b
3. **the example of pseudoalkaloid :**

a) Caffeine	b) Hygrine
c) Arecoline	d) Lobeline

Ans : a
4. **Which drug is not under the chemical class of indole?**

a) Quinidine	b) Quinine
c) Atropine	d) camptothecin

Ans : c
5. **The ring structure present in strychnine :**

a) Indole	b) Pyrrole
c) Pyridine	d) Piperidine

Ans : a
6. **Drug is an example of amino alkaloid :**

a) Ephedrine	b) Aconine
c) Caffeine	d) Theophylline

Ans : b

7. **Deadly Nightshade is the synonym of the drug :**

- a) Datura
- b) Belladonna
- c) Cinchona
- d) Coca

Ans : b

8. **Family of the Vinka :**

- a) Rubiaceae
- b) Solanaceae
- c) Apocyanaceae
- d) Erythroxylaceae

Ans : c

9. **Which is not the use of argot?**

- a) Oxytocin
- b) Prevent post partum hemorrhage
- c) Migraine
- d) Laxative

Ans : d

10. **Nux vomica is not used as:**

- a) CNS stimulant
- b) bitter stomachic
- c) Tonic
- d) Expectorant

Ans :

11. **Family of Ipecac is :**

- a) Rubiaceae
- b) Theaceae
- c) Solanaceae
- d) Acantheceae

Ans: a

11. **Which is not the use of Stramonium ?**

- a) Anticholinergic
- b) Mydriatic
- c) Antiadrenergic
- d) Control of Motion sickness

Ans : c

12. **Which is not the chemical constituent naturally obtained from Opium?**

- a) Morphine
- b) Codeine
- c) Narcotine
- c) Heroine

Ans : d

13. **Which is the active chemical constituent obtained from Ipecac ?**

- a) Cephaeline
- b) Berberine
- c) Hydrastine
- d) Tropane

Ans : a

14. **'Thorn apple' is the synonym for the drug:**

- a) Belladonna
- b) Cinchona
- c) Datura
- d) Stramonium

Ans : d

15. Which drug is not belonging to family Apocyanaceae ?

- a) Vinca
- b) rauwolfia
- c) Kurchi
- d) Gloriosa

Ans : d

16. Which is not the biological source of Cinchona ?

- a) Cinchona calisaya
- b) cinchona officinalis
- c) Cinchona succirubra
- d) Cinchona indica

Ans : d

17. Which ergot alkaloid is water-soluble ?

- a) Ergotamine
- b) Ergosine
- c) Ergocristine
- d) Ergometrine

Ans : d

18. Ergometrine alkaloid shows :

- a) Laevo
- b) Dextro
- c) Racemic mixture
- d) Trans

Ans : a

19. Ergometrine shows configuration :

- a) Laevo
- b) Dextro
- c) Racemic Mixture
- d) trans

Ans : b

20. Ergot contains large number of indole alkaloids, which are the derivatives of :

- a) Lysergic acid
- b) Benzoic acid
- c) Cinnamic acid
- d) Meconic acid

Ans : a

21. Which forms of the ergot alkaloids are especially important?

- a) Laevo
- b) Dextro
- c) cis
- d) trans

Ans : a

22. How many pairs of alkaloid are present Ergot ?

- a) Five
- b) Four
- c) Three
- d) Six

Ans : d

23. Ergot powder gives blue color with :

- a) P-dimethylaminobenzaldehyde

- b) Benzaldehyde
- c) Cinnamaldehyde
- d) Formaldehyde

Ans : a

24. Van-Urk's reagent chemically is :

- a) P-dimethylaminobenzaldehyde
- b) Benzoic acid+Cinnamic acid
- c) P-dimethylbenzoic acid
- d) Cinnamaldehyde

Ans : a

25. Ergometrine gives fluorescence in water :

- a) Yellow
- b) Green
- c) Red
- d) Blue

Ans : d

26. 'Crow fig' is the synonym for the drug:

- a) Strychnous nux vomica
- b) Rauwolfia sepentina
- c) Rauwolfia densiflora
- d) Rauwolfia vometoria

Ans : a

26. Strychnous nux vomica belongs to family :

- a) Scrophulareaceae
- b) Liliaceae
- c) Apocyanaceae
- d) Loganiaceae

Ans : d

27. One of the following microscopic characters not associated with Nux Vomica is :

- a) Epidermis consist of lignified trichomes
- b) Epidermis is followed by layer of collapsible cells
- c) Endosperm shows presence of plasmodesma
- d) Calcium oxalate crystal and starch grain are present

Ans : d

28. Lignified trichomes is characteristic of drug :

- a) Catharanthus
- b) Cassia angustifolia
- c) Strychnous nux vomica
- d) Digitalis purpurea

Ans:c

29. When the transverse section of nux vomica is treated with ammonium vanadate and sulphuric acid, the endospermic cells show purple colour, due to presence of :

- a) Strychnine
- b) Brucine

- a) Heroin b) Morphine
c) Codeine d) Papaverine

Ans : a

38. Trukish opium is commonly known as:

- a) Chemist opium b) Druggist opium
c) Chinese opium d) Chemist and druggist

Ans : b

39. Cephaelis Ipecacuanha belongs to family:

- a) Rubiaceae b) Liliaceae
c) Apocyanaceae d) Rutaceae

Ans : a

40. Which is not the characteristic feature of alkaloid ?

- a) Complex molecular structure and nitrogen in the molecule
b) Basic in nature
c) Biosynthetically derived
d) Acidic in nature only

Ans : d

41. Jesuit's bark is synonym of :

- a) Coca leaves b) Ipecacuanha
c) Cinchona d) Calumba

Ans : c

42. Which alkaloid is not present in cinchona bark?

- a) Quinidine b) Quinine
c) Quinovin d) Cinchonin

Ans : c

43. Which species of cinchona contains highest percentage alkaloid ?

- a) cinchona succirubra b) Cinchona officinalis
c) Cinchona calisaya d) Cinchona ledgeriana

Ans : a

44. Which is not the prominent chemical constituent in Ipecac?

- a) Emetine b) Pyschotrine
c) Cephaeline d) Cinchonine

Ans : d

45. The pharmacological action of Ipecac:

- a) Stimulant b) Emetic
c) Sedative d) Hypnotic

Ans : b

46. Papaverine, narcotine and narceine is under the chemical class:

- a) Quinoline
- b) Benzyl isoquinoline
- c) Isoquinoline
- d) Benzophenone

Ans : c

47. Papaverine shows pharmacological activity:

- a) Spasmolytic
- b) Emetic
- c) Antitussive
- d) Antipyretic

Ans : a

48. In UV light Ergot shows fluorescence :

- a) Yellow
- b) Blue
- c) Red
- d) Violet

Ans : c

49. Adulterants of rauwolfia serpentine are distinguished on the basis of :

- a) Presence of sclerenchyma
- b) Absence of sclerenchyma
- c) Presence of parenchyma
- d) Absence of parenchyma

Ans : a

50. Glycoside present in stychnous nux vomica :

- a) Strychnine
- b) Brucine
- c) Ajmaline
- d) Loganine

Ans : d

51. Major pharmacological action of Ephedrine :

- a) Kidney failure
- b) Anti-inflammatory
- c) Heart failure
- d) Bronchial asthma

Ans : d

52. Morphine contains main nucleus :

- a) Phenanthrene
- b) Anthracene
- c) Naphthalene
- d) Naphthacene

Ans : a

53. The characteristic not associated with alkaloids:

- a) They all contain nitrogen
- b) Most of non-volatile alkaloids are solid
- c) All the alkaloid contains sulphur
- d) They are physiologically active

Ans : c

54. Thalleoquin test contain reagents:

- a) Bromine water + Few drops of ammonia
- b) Potassium permanganate + Few drops of ammonia
- c) Bromine water + Nitric acid
- d) Bromine water + Sodium hydroxide

Ans : a

55. Thalleoquin test is used for identification of :

- a) Atropine
- b) Vincristine
- c) Quinine
- d) Strychnine

Ans : c

CHOOSE THE CORRECT PAIRS :

1. **Reagent**
 - a) Mayer's
 - b) Dragendorff's
 - c) Wager reagent
 - d) Hager reagent

Ans : a) iv b) i. c) ii d) iii
2. **Alkaloidal drug**
 - a) Ergot
 - b) Nux vomica
 - c) Rauwolfia
 - d) Opium

Ans : a) iii b) iv c) i. d) ii
3. **Drug**
 - a) Ergot
 - b) Rauwolfia
 - c) Vinca
 - d) Physostigma

Ans : a) iv b) ii c) i. d) iii
4. **Drug**
 - a) Ergot
 - b) Nux vomica
 - c) Rauwolfia
 - d) Vinca

Activity

 - i) CNS stimulant
 - ii) Anticancer
 - iii) Oxytocic
 - iv) Hypotensive

5. **Shatavari is under the chemical class of glycoside:**

- a) Sterol
- b) Saponin
- c) Cyanogenic
- d) Isothiocyanate

Ans : b

6. **Drug is not under the class of cardiac glycoside :**

- a) digitalis
- b) Thevetia
- c) Indian squill
- d) Bitter almond

Ans : d

7. **The drug showing cardio tonic activity:**

- a) Thevetia
- b) Cochineal
- c) Rhubarb
- d) Aloe

Ans : a

8. **Which drug is used as diuretic?**

- a) Quillaia
- b) Senega
- c) Ginseng
- d) Gokhru

Ans : d

9. **The drug used as nerve tonic :**

- a) Brahmi
- b) Mordica
- c) Ginseng
- d) Senega

Ans: a

10. **The family of Gokhru :**

- a) Liliaceae
- b) Cucurbitaceae
- c) Zygophyllaceae
- d) Araliaceae

Ans: c

11. **Boritrager test is used for one of the following drugs:**

- a) Senna
- b) Aloe
- c) Digitalis
- d) Stropanthus

Ans: a

12. **In kiung's isobarbaloin test, Curacao aloes shows colour :**

- a) Yellow
- b) Blue
- c) Wine red
- d) Green

Ans: c

13. **In klung's isobarbaloin test, Socotrine and Zanziber aloes show colour:**

- a) Red
- b) Faint yellow
- c) Green
- d) No colouration

Ans: d

13. Alcoholic extract of aloe under UV light gives colour:

- a) Blue
- b) Red
- c) Deep brown
- d) Pink

Ans: c

14. The substitute for aloes :

- a) Cape aloes
- b) Socotrine aloes
- c) Curacao aloes
- d) Natal aloes

Ans: d

15. The biological source for cape aloes :

- a) Curacao aloes
- b) Socotrine aloes
- c) Aloe ferrox
- d) Zanziber aloes

Ans : c

16. Saponin glycoside shows one of the following property:

- a) Laxative
- b) Anticonvulsant
- c) Foaming
- d) Astringent

Ans: c

17. Out of the following, one is not the example of Cardinolide:

- a) Digitoxin
- b) Digoxin
- c) Gitoxigenin
- d) Scillarin A

Ans : d

18. The biological source for Dioscoria:

- a) dioscoria deltoid
- b) dioscoria floribunda
- c) dioscoria villosa
- d) Dioscorea compositae

Ans : a

19. Yam is the synonym of the drug:

- a) Stropanthus
- b) Dioscoria
- c) Safed musali
- d) Liquorice

Ans : b

20. Dioscoria is used in the treatment of :

- a) Ulcer
- b) Cancer
- c) Rheumatic arthritis
- d) Kidney stone

Ans : c

21. _____ Is not the synonym of Liquorice.

- a) Glycyrrhiza
- b) Liquorice root
- c) Mulethi
- d) Yam

Ans : d

22. Liquorice belongs to family :

- a) Liliaceae
- b) Triterpenoid
- c) Loganaceae
- d) Leguminosae

Ans : d

23. Glycyrrhizic acid on hydrolysis gives :

- a) Glycyrrhetic acid
- b) Glycyrrhizin
- c) Liquiritin
- d) Isoliquiritin

Ans: a

24. Liquorice is used in the treatment of :

- a) Conjunctivitis
- b) Peptic ulcer
- c) Allergy
- d) Skin disease

Ans : b

25. When glycyrrhiza is treated with 80% sulphuric acid, then it shows colour:

- a) Yellow
- b) Red
- c) Green
- d) Violet

Ans: a

26. Rhubarb is cultivated mainly in which state of India:

- a) J and K
- b) Madhya Pradesh
- c) Maharashtra
- d) Bengal

Ans: a

27. Rhubarb when treated with alkali, shows red colour due to presence of :

- a) Anthroquinone glycoside
- b) Cardiac glycoside
- c) saponin glycoside
- d) Cyanogenic glycoside

Ans: a

28. Keller kiliani test is positive for:

- a) Digitoxose
- b) Gitoxose
- c) digitoxigenin
- d) gitoxigenin

Ans: a

29. Presence of star spots is the characteristic of drug:

- a) Cascara
- b) Senna
- c) Aloe
- d) Rhubarb

Ans: d

30. Modified Borntröger test is positive for drug:

Ans: c

CHOOSE THE CORRECT PAIRS:

1. **Drug** **Family**
a) Indian senna i) Liliaceae
b) Aloe ii) Polygonaceae
c) Rhubarb iii) Rhamnaceae
d) Cascara iv) Leguminosae
Ans: a) iv b) i. c) ii d) iii

2. **Types of Glycosides:** **Example**
a) Anthracene glycoside i) Digitalis
b) Cardiac glycoside ii) Bitter almond
c) Saponin glycoside iii) Dioscorea
d) Cyanogenetic glycoside iv) Senna leaf
Ans: a) iv b) i. c) iii d) ii

3. **Drug** **Activity**
a) Red squill i) Cardiotonic
b) Kalmegh ii) Purgative
c) Aloe iii) Nervine tonic
d) Brahmi iv) Rat poisoning
Ans: a) iv b) i. c) ii d) iii

4. **Drug** **Use**
a) Gokhru i) Hypoglycemic
b) Momordica ii) Galactagogue
c) Shatavari iii) Diuretic
d) Liquorice iv) Expectorant
Ans: a) iii b) i. c) ii d) iv

5. **Drug** **Source**
a) Gokhru i) glycyrrhiza glabra
b) Liquorice ii) Urgenia martima
c) Bramhi iii) Tribulus teristris
d) European squill iv) Bacopa moniera
Ans: a) iii b) i. c) iv d) ii

6. **Drug** **Test**

3. Which of the following oil is used as vehicle of oily injectables?

- a) Arachis oil
- b) Linseed oil
- c) Castor oil
- d) Jojoba oil

Ans: a

4. Oil is having antileprotic property:

- a) Linseed oil
- b) Jojoba oil
- c) Chaulmoogra oil
- d) Corn oil

Ans: c

5. The oil is not used as vehicle for the injectables:

- a) Arachis oil
- b) Olive oil
- c) Sesame oil
- d) Corn oil

Ans: d

6. Oil is showing laxative property:

- a) Arachis oil
- b) Sesame oil
- c) Castor oil
- d) Corn oil

Ans: c

7. Acid value is defined as:

- a) Number of milligram of potassium hydroxide required to neutralize one gram of fat or oil
- b) Number of gram of potassium hydroxide required to neutralize one gram of fat or oil
- c) Number of Kilogram of potassium hydroxide required to neutralize one gram of fat or oil
- d) Number of ml of potassium hydroxide (5N) required to neutralize one gram of fat or oil

Ans: a

8. The test not used as an analytical parameter for oil:

- a) Acetyl value
- b) Acid value
- c) Hydroxyl value
- d) Ketone value

Ans: d

9. Which oil generally lowers the blood cholesterol level?

- a) Arachis oil
- b) Castor oil
- c) Neem oil
- d) Corn oil

Ans: d

10. Drug

Source

- a) Seame oil
- i) Hydrocarpus wightiana

- b) Chaulmoogra oil ii) Zea mays
c) Corn oil iii) Sesamum indicum
d) Safflower oil iv) Carthmus tinctorius
Ans: a) iii b) i. c) ii d) iv

RESINS

Select the correct answer out of the given choices

1. Resins are classified into following subclasses except :

- a) Acid b) Ester
c) Resin alcohol d) Resin ether

Ans: d

2. Which is not an example of acid resins?

- a) Benzoin b) Colophony
- c) Sandrac d) Myrrh

Ans: a

3. Myrrh contains important acid:

- a) Comiphoric acid b) Abietic acid
- c) Benzoic acid d) Acetic acid

Ans: a

4. Out of the following, which is an example of oleoresin?

- a) Copaiba b) Canada balsam
- c) Capsicum d) Myrrh

Ans: d

5. Oleo gum resins are mixture of:

- a) Volatile oil + Gum + Resins b) Fixed oil + Gum + Resin
- c) Fats + Gum + Resin d) Gum + resins

Ans: a

6. Homogenous mixture of resins and oil are called as:

- a) Oleoresins b) Oleogum
- c) Glycoresin d) Balsma

Ans: a

7. Glycoresins are made up of :

- a) Resins + Sugar b) Resins + Volatile oil
- c) Resins + Gum d) Resins + Fixed oil

Ans: a

8. Resins containing benzoic acid or cinnamic acids are called as:

- a) Oleoresins b) Glycoresins
- c) Oleogum d) Balsam

Ans: d

9. Family of drug Zingiber officinale:

- a) Solanaceae b) Umbelliferae
- c) Zingiberaceae d) Convolvulaceae

Ans: c

10. Pungency of capsicum is destroyed by boiling it with:

- a) 2% hydrochloric acid b) 1% sulphuric acid

- c) 2% Acetic acid d) potassium hydroxide

Ans: d

11. Curcuma longa should not contain volatile oil less than:

- a) Curcuminoid b) Capsanthin
c) Thiamine d) Ascorbic acid

Ans: a

12. When the powder of curcuma longa is treated with sulphuric acid, it gives colour:

- a) Yellow b) Crimson
c) Green d) Blue

Ans: b

13. Which is not an example of oleoresins?

- a) Copaiba b) Canada balsam
c) Capsicum d) Myrrh

Ans: d

14. If the resins contain benzoic acids or cinnamic acids then are called as:

- a) Colophony b) Sandrac
c) Copaiba d) Balsam

Ans: d

15. Resins associated with volatile oil are called as:

- a) Oleo-gum-resin b) Oleo-resin
c) Gum resins d) Volatile resins

Ans: b

16. Ferulic acid when treated with hydrochloric acid gives:

- a) Acetic acid b) Umbellic acid
c) Cinnamic acid d) Vanillic acid

Ans: b

17. Ginger contains volatile oil in the percentage range:

- a) 1-4% b) 5-10%
c) 10-15% d) 15-20%

Ans: a

18. Resins are insoluble in :

- a) Alcohol b) Water
c) Volatile oil d) Fixed oil

Ans: b

19. Adulteration by exhausted ginger is detected form ginger by:

- a) Shape b) Size
c) Colour d) Water soluble ash

Ans: d

CHOOSE THE CORRECT PAIRS:

1. **Varieties of resin** **Resin yields**
a) Indian cannabis i) 15% or less
b) Kentuchy ii) 8% or less
c) Mexicn cannabis iii) 20% more
d) Wiscosin iv) 6% or less

Ans: a) iii b) ii c) i. d) iv

2. **Types of resins** **Example**
a) Acid resins i) Benzoin
b) Ester resins ii) Copaiba
c) Ester resins iii) Gutta purcha
d) Resins alcohol iv) Sandrac

Ans: a) iv b) i. c) ii d) iii

3. **Biological source** **Family**
a) Zingiber officinale i) Solanaceae
b) Capsicum annum ii) Zingiberaceae
c) Cannabis sativa iii) Convolulaceae
d) Ipomoea purga iv) Cannabianaceae

Ans: a) ii) b) i. c) iv d) iii

4. **Biological source** **Family**
a) Podophyllum hexandrum i) Leguminosae
b) Myroxylon balsamum ii) berberidaceae
c) Liquidamber orientalis iii) Burseraceae
d) Commiphora molmol iv) Hammelidaceae

Ans: a) ii b) i. c) iv d) iii

5. **Drug** **Chemical constituent**
a) Ginger i) Capsaicin

- b) Capsicum
- c) Colocynth
- d) Benzoin
- ii) Alpha elaterin
- iii) Benzoic acid
- iv) Zingerone

Ans: a)iv b) i. c) ii d) iii

6. Drug

- a) Turmeric
- b) Capsicum
- c) Asafoetida
- d) Jalap

Ans: a) i. b)iv c)ii d)iii

Alternative name

- i) Indian saffron
- ii) Devil's dung
- iii) Maxican jalap
- iv) Cayenne pepper

7. Drug

- a) Balsam tolu
- b) Asafoetida
- c) Curcumin
- d) Benzoin

Ans: a) iv b) i. c) ii d) iii

Identification test

- i) Drug + water and trituated – yellowish orange
- ii) Drug + H₂ SO₄ – Red colour
- iii) Alcoholic solution of benzoin + water – milky white
- iv) Drug + ferric chloride solution - Green colour

VOLATILE OILS

Select the correct answer out of the given choices

1. Terpenes made up of :

- a) Calcierene b) Pseudopriene
c) Neoprene d) Isoprene

Ans: d

2. Molecular formula for isoprene unit is:

- a) C₈ H₈ b) C₃ H₈
c) C₅ H₈ d) C₆ H₆

Ans: c

3. Example of alcohol volatile oil:

- a) Peppermint b) Cinnamon
c) Lemon peel d) Orange peel

Ans: a

4. Which is not an example of ester volatile oil?

- a) Gaultheria b) Lavender
c) Muster d) Cinnamon

Ans: d

5. Drug is not an example of phenol volatile oil:

- a) Clove b) Anise
c) Creosote d) Thyme

Ans: b

6. The major terpenoid in clove oil:

- a) Eugenol b) Santalol
c) Anethol d) Menthol

Ans: a

7. Triterpenes contain number of isoprene units:

- a) Four b) Five
c) Six d) Seven

Ans: c

8. Diterpenes contain number of isoprene units:

- a) Three b) Four
c) Five d) Six

Ans: b

9. Monoterpenes contain number of isoprene units:

- a) One b) Three

Ans: c

19. Nutmeg belongs to family:

- a) Luraceae b) Umbelliferae
- c) Myristicaceae d) Zingiberaceae

Ans: c

20. Drug, which does not, belong to family umbelliferae:

- a) Caraway b) Coriander
- c) Ajowan d) Cardamom

Ans: d

21. Nutmeg contains percentage of volatile oil:

- a) 5 to 16% b) 10 to 20 %
- c) 15 to 25% d) 20 to 30 %

Ans: a

22. Fennel contains percentage of volatile oil:

- a) 3 to 7 % b) 7 to 10%
- c) 10 to 13 % d) 13 to 155

Ans: a

23. Nutmeg should contain volatile oil not less than:

- a) 1 % w/v b) 2% w/v
- c) 3 % w/v d) 5 % w/v

Ans: d

24. Volatile oil in Coriander should not less than:

- a) 0.3% b) 3.0%
- c) 3.3% d) 4.4%

Ans: a

25. Cardamon contains volatile oil not less than:

- a) 1% b) 0.4 %
- c) 2.0% d) 4.0 %

Ans: d

26. Peppermint oil contains important terpenoid:

- a) Geraniol b) Anethol
- c) Menthol d) Eugenol

Ans: c

27. The clove oil contains important terpenoid:

- a) Eugenol b) Anethol
c) Menthol d) Cineol

Ans: a

28. Fennel contains type of stomata:

- a) Diacytic b) Actinocytic
c) Anisocytic d) Anomocytic

Ans: d

29. Exhuasted fennel is identified by absence of :

- a) Fenchone b) Anethol
c) Carvone d) Cineol

Ans: a

30. Which variety of fennel contains least percentage of volatile oil content?

- a) Indian b) Saxony
c) French sweet d) Japanese

Ans: a

31. The fat of nutmeg is known as:

- a) Ghee b) Nutmeg oil
c) Nutmeg butter d) Nutmeg protein

Ans: c

32. Cinnamom bark does not contain:

- a) Cinnamaldehyde b) Tannins
c) Coumarin d) Benzaldehyde

Ans: c

33. The biological source of cinnamon:

- a) Cinnamomum zeylanicum b) Cinnamomum cassia blume
c) Cinnamomum burmanii d) Cinnamomum loireirii

Ans: c

34. Biological source of Garlic is:

- a) Allium sativum b) Pinus roxburghii
c) Thymus vulgaris d) Santalum album

Ans: a

35. _____ is not the use of Allium sativum.

- a) Carminative b) Aphrodisiac

- c) Atherosclerosis d) Antiulcer

Ans: d

36. The family of Ocimum sanctum:

- a) Labiatae b) Liliaceae
c) Lauraceae d) Loganaceae

Ans: a

37. 'Holy basil' is the synonym for drug:

- a) Alpinia officinarum b) Allium sativum
c) Nardostachys jatamonum d) Ocimum sanctum

Ans: d

38. Alkaloid present in Black pepper is:

- a) Caryophyllene b) Cinnamaldehyde
c) 1-phellandrene d) Piperine

Ans: d

39. Drug which does not belong to family Umbelliferae:

- a) Cumin b) Anise
c) Lavender oil d) Celery

Ans: c

40. The percentage of clove oil in clove should not be less than:

- a) 15% b) 10%
c) 5% d) 1%

Ans: a

41. Does not occur in clove:

- a) Starch b) Volatile oil
c) Tannins d) Resins

Ans: a

42. When transverse section of clove is treated with potassium hydroxide solution, it gives:

- a) Strong odor of volatile oil
b) H₂S gas is evolved
c) CO₂ is evolved
d) Needle shaped crystals of potassium eugeonate

Ans: d

43. Clove oil is used in the manufacturing of :

- a) Salicylic acid b) Vanillin

c) Cinnamic acid d) Benzoic acid

Ans: b

44. Which is not used as an adulterant for clove?

a) Mother clove b) Blown clove

c) Clove stalk d) Pale clove

Ans: d

45. Clove stalk contains approximate percentage of volatile oil:

a) 5% b) 10%

c) 15% d) 20%

Ans: a

46. Oil which does not belong to alcohol class:

a) Nutmeg b) Sandalwood

c) Lemon grass d) Lavender

Ans: c

47. The oil, which is not belonging to aldehyde class:

a) Dill oil b) Cinnamon oil

c) Lemon grass oil d) Lemon oil

Ans: a

48. The oil, which is having counter irritant property:

a) Thyme b) Turpentine oil

c) Peppermint d) Orange oil

Ans: b

49. Fennel contains percentage of volatile oil:

a) 10 to 20% b) 20 to 30%

c) 30 to 40% d) 65 to 70%

Ans: d

CHOOSE THE CORRECT PAIRS:

- | 1. Volatile oil | Source |
|------------------------|------------------------|
| a) Turpentine oil | i) Cymbopogon citratus |
| b) Lemon grass oil | ii) Santalum album |
| c) Sandal wood oil | iii) Artemisia pallens |
| d) Davana oil | iv) Punus species |

Ans: a) iv b) i c) ii. d) iii

- | 2. Turpentine class | Number of isoprene units |
|----------------------------|---------------------------------|
|----------------------------|---------------------------------|

- | | |
|------------------|------------|
| a) Sesquiterpine | i) Two |
| b) Monoterpene | ii) Four |
| c) Diterpene | iii) Three |
| d) Triterpene | iv) Six |

Ans: a) iii b) i. c) ii d) iv

3. Drug Source

- | | |
|--------------|--------------------------|
| a) Cardamom | i) Coriandrum sativum |
| b) Caraway | ii) Carum carvi |
| c) Coriander | iii) Anethum graveolens |
| d) Dill | iv) Elettaria cardamomum |

Ans: a) iv b) ii c) i. d) iii

4. Source Family

- | | |
|-----------------------|-------------------|
| a) Anethum graveolens | i) Rutanceae |
| b) Citrus limonis | ii) Umbelliferae |
| c) Nutmeg | iii) Lauraceae |
| d) Cassia cinnamon | iv) Myristicaceae |

Ans: a) ii b) i. c) iv d) iii

5. Drug Volatile oil not less than

- | | |
|--------------|-----------|
| a) Coriander | i) 2.0% |
| b) Ajowan | ii) 2.5% |
| c) Dill | iii) 1.4% |
| d) Fennel | iv) 0.3% |

Ans: a) iv b) i. c) ii d) iii

6. Adulterants for clove Characteristics

- | | |
|--------------------|--|
| a) Mother clove | i) Expanded flowers of clove trees. |
| b) Blown cloves | ii) Contain only 5% of oil. |
| c) Clove stalks | iii) Oil is removed from clove. |
| d) Exhausted clove | iv) Dark brown, ovate and ripened
Fruits of clove |

Ans: a) iv b) i. c) ii d) iii

TANNINS

Select the correct answer out of given choices:

1. **Goldbeater skin test is used for identification of:**

- a) Alkaloids
- b) Glycosides
- c) Tannins
- c) Resins

Ans: c

2. **Tannins show some chemical reaction except:**

- a) solution of tannins precipitate gelatin.
- b) Tannins are precipitated by salt of copper, tin and lead.
- c) They show colour reaction with iron.
- d) They react with potassium mercuric iodide.

Ans: d

3. **Condensed tannins are called as:**

- a) Hydrolysable tannins
- b) Non hydrolysable
- c) Pseudotannins
- d) Prototannins

Ans: b

4. **Tannic acid is under the class of:**

- a) Condensed tannins
- b) Pseudotannins
- c) Hydrolysable tannins
- d) Condensed and pseudotannins

Ans: c

5. **Biological source of Arjuna**

- a) Terminalia arjuna
- b) Terminalia chebula
- c) Terminalia tomentosa
- d) Terminalia belerica

Ans: a

6. Tannic acid is antidote in poisoning:

- a) Iodine
- b) Cyanide
- c) Alkaloid
- d) Arsenic

Ans: c

7. When pterocarpus is treated with potassium hydroxide, it gives

- a) Violet
- b) Green
- c) Red
- d) Black

Ans : a

8. Gambir flurescin test is used for drug:

- a) Arjuna
- b) Ashoka
- c) Pale catechu
- d) Black catechu

Ans: c

9. Black catechu contains about percentage of acacatechin:

- a) One percentage
- b) Three percent
- c) Seven percent
- d) Ten percent

Ans: d

CHOOSE THE CORRECT PAIRS:

1. Drug	Application
a) Pale catechu	i) Hypoglycemic
b) Pterocarpus	ii) Diuretics
c) Amla	iii) Cardiotinics
d) Arjuna	iv) Diarrhoa

Ans: a) iv b) i. c) ii d) iii

CARBOHYDRATES

1. **Composition of Molisch reagent is**

- a) Alpha naphthol + sulphuric acid
- b) Beta naphthol + sulphuric acid
- c) Naphthylamine + sulphuric acid
- d) Phenol + sulphuric acid

Ans : a

2. **Chemical test used for identification of carbohydrates:**

- a) Ninhydrin b) Molisch
- c) Borntrager d) Baljet

Ans: b

3. **Important chemical constituent of Algin is:**

- a) Tragacanthin b) Bassorin
- c) Alginic acid d) Alginic ester

Ans: c

4. **Important chemical constituent honey is:**

- a) Glucose b) Fructose
- c) Maltose d) Invert sugar

Ans: d

5. **Pectin is used in the pharmaceutical industries as:**

- a) Adsorbent b) Demulcent
- c) Emulsifying agent d) Suspending agent

Ans: a

6. **Liquid glucose is obtained by:**

- a) Partial hydrolysis of glucose
- b) Partial hydrolysis of starch
- c) Complete hydrolysis of starch
- d) Complete hydrolysis of glucose

Ans: b

7. **The biological source for Indian gum is:**

- a) Cyamopsis tetragonoglobules b) Astragalus gamifer
- c) Acacia Arabica d) Acacia Senegal

Ans : c

8. **When Indian gum is treated with ruthenium red' it shows:**

- a) Pink colour b) Red colour
- c) Blue d) No colour change

Ans: d

10. **When Indian gum is treated with hydrogen peroxide and benzidine in alcohol; is shows blue colour due to:**

- a) Hydrolyase enzyme b) Oxidase enzyme
- c) Reductase enzyme d) Invertase enzyme

Ans: b

11. **The mostly used adulterant for Indian gum is:**

- a) Acacia Senegal gum
- b) Gum from Astragalus gummifer
- c) Gum ghatti from anogeissus latifolia
- d) Guar gum

Ans: c

12. **Synonym for Guar gum:**

- a) Jaguar gum b) Acacia
- c) Gum acacia d) Gum Arabica

Ans: a

13. **When guar gum is treated with about 2% solution of lead acetate; it shows:**

- a) Pink colour b) Blue colour
- c) Yellow colour d) No colour change

Ans: d

14. Artificial invert sugar is an adulterant for honey and it is detected by the test:

- a) Tollen's
- b) Ninhydrine
- c) Baljet test
- d) Fiehe's test

Ans: d

15. The water soluble portion of tragacanth is known as:

- a) Tragacanthin
- b) Bassorin
- c) Galctouronic acid
- d) D-galctopyranose

Ans: a

16. Pectin is used in the treatment of:

- a) Ulcer
- b) Hypertension
- c) Angina
- d) Diarrhoea

Ans: d

17. Biological source for Isapgol:

- a) Plantago ovata
- b) Aegle marmelos
- c) Giladinium amansii
- d) Condrus crispus

Ans: a

18. Which test is used for the purity of Isapgol?

- a) Barfoed test
- b) Millon's test
- c) Molisch test
- d) Swelling factor

Ans: d

19. When Isapgol is treated with rhuthenium red, it shows colour:

- a) Blue
- b) Yellow
- c) Pink
- c) Green

Ans: c

20. Isapgol seeds are adulterated with:

- a) Plantago purshii
- b) Plantago lanciolata
- c) Plantago aristala
- d) Plantago pysllium

Ans: b

21. Ager is used as:

- a) Binder
- b) Disintigrant
- c) Emulsifying agent
- d) Preservative

Ans: c

22. **Amylum is the synonym for:**
a) Tragacanth b) Starch
c) Inulin d) Locust bean
Ans: b
23. **Rice starch is of size:**
a) 2-12 micron b) 14-17 micron
c) 17-20 micron d) 20-25 micron
Ans: a
24. **Wheat starch is of size:**
a) 0.1 to 1 micron b) 2 to 3 micron
c) 3 to 5 micron d) 5 to 50 micron
Ans: d
25. **The size of potato starch varies from:**
a) 30 to 100 micron b) 100 to 130 micron
c) 130 to 10 micron d) 160 to 180 micron
Ans: a
26. **Starch contains amylase and amylopectin in the proportion:**
a) 1:2 b) 1:1
c) 1:3 d) 2:1
Ans: a
27. **The test, which is not used for identification of carbohydrates:**
a) Molisch test b) Osazone formation test
c) Ninhydrin test d) Resorcinol test
Ans: c
28. **Keller kiliani test is used for identification of:**
a) Fructose b) Maltose
c) Deoxy sugar d) Glucose
Ans: c
29. **The synonym of Lactose is:**
a) Milk sugar b) Butter sugar
c) Crystalline sugar d) Pure sugar
Ans: a

CHOOSE THE CORRECT PAIRS:

1. **Name** **Biological source**
- a) Carageenan i) Acacia Arabica
 b) Acacia ii) Chondrus crispus
 c) Agar iii) Gelidium amansii
 d) Gum ghatti iv) Anogeissus latifolia
Ans: a) ii b) i. c) iii d) iv
2. **Carbohydrates** **Biological source**
- a) Tragacanth i) Cyamopsis tetragonolobus
 b) Guar gum ii) Astragalus gummifer
 c) Psyllium iii) Plantago ovata
 d) Isapgol iv) Plantago psyllium
Ans: a) ii b) i. c) iv d) iii
3. **Name** **Biological source**
- a) Honey i) Oryza sativa
 b) Starch ii) Citrus limonis
 c) Pectin iii) Apis species
 d) Gum karaya iv) Sterculia urens
Ans: a) iii b) i. c) ii d) iv
4. **Starch** **Size**
- a) Rice i) 2 to 110 um
 b) Potato ii) 2 to 45 um
 c) Wheat iii) 2 to 10 um
 d) Maize iv) 10 to 30 um
Ans: a) iii b) i. c) ii d) iv
5. **A** **Source**
- a) Wheat i) Zea mays
 b) Maize ii) Oryza sativum
 c) Rice iii) Triticum sativum
 d) Potato iv) solanum tuberosum
Ans: a) iii b) i. c) ii d) iv

