

(3 Hours)

[Total Marks :100

- N.B. : (1) All questions are **compulsory**
(2) Draw structures and diagrams wherever necessary.

Section - I

Answer the following

40

1. Atropine is biosynthetically derived from ----- amino acid.
(a) Ornithine (b) Tryptophan
(c) Glycine (d) Lcycine
2. Liquorice contains all the phytoconstituents except -----
(a) Saponin glycosides (b) Flavonoids
(c) Anthraquinones (d) Potassium salts
3. Carotenoids contain ----- isoprene units
(a) One (b) Two
(c) Six (d) Eight
4. Sesamoline is present in ----- oil.
(a) Till oil (b) Ground nut oil
(c) Castor oil (d) Paraffin oil
5. The tannins are present in ----- samples.
(a) Clove (b) Asparagus
(c) Isapghul (d) Nux-vomica
6. The acid-insoluble ash give an idea about ----- content.
(a) Silicious content (b) Heavy metals
(c) Alkaline earth metals (d) Tannins
7. Isoflavonoids have substitution of phenyl ring at ----- position of benzopyranone.
(a) One (b) Two
(c) Three (d) Four

[TURN OVER

8. All the following members are balsam group except -----
(a) Benzoin (b) Balsam of Tolu
(c) Storax (d) Colophony
9. All the fibres form a bead on heating except----- .
(a) Glass (b) Nylon
(c) Rayon (d) Glass-wool
10. The herb ----- shows phototoxicity
(a) Psoralea (b) Plumbago
(c) Henna (d) Senna
11. The volatile oil is present in ----- of fennel.
(a) Vittae (b) Endosperm
(c) Endocarp (d) Epicarp
12. Vitali-morrins test is answered by ----- alkaloids.
(a) Tropane (b) Quinoline
(c) Purin (d) Indole
13. Iridoid glucosides are present in -----
(a) Gentian (b) Ginseng
(c) Ginger (d) Gymnema
14. Cardiac glycosides have following structural features
(a) Steroidal ning
(b) Deoxy sugar
(c) Hydronyl (OH) group at 14 position
(d) All the above
15. The presence of starch grains in clove powder is an indication the adulteration of samples with -----
(a) Fruits (b) Seeds
(c) Stalk (d) Hypanthium

[TURN OVER

16. The disulphide derivatives of hydrocarbons are present in the oleo-gum-resin of -----
 (a) Myrrh (b) Asafoetida
 (c) Asafoetida (d) Boswellia
17. The enzyme ----- is of plant origin.
 (a) Papain (b) Pepsin
 (c) Urokinase (d) Peptone
18. The following phytochemical is an example of 'Phytoalexin'
 (a) Rutin (b) Resveratrol
 (c) Aurone (d) Quercetin
19. ----- is an example of metabolic product.
 (a) Gum acacia (b) Gum tragacanth
 (c) Guar gum (d) Gum arabic
20. 'Carminic acid' is obtained from
 (a) Cochineal (b) Alkanna
 (c) Caraway (d) 'Lac'
21. The phytochemical ----- is allelochemical.
 (a) Juglone (b) Reseveratrol
 (c) Allicin (d) Plumbagin
22. The anti-cancer agent obtained from marine sources is -----
 (a) Dideminin (b) Etoposide
 (c) Vincristine (d) Vinblastine
23. The test used for detection of anthraquinone glycosides is -----
 (a) Born-tragger's test (b) Balget's test
 (c) Legal's test (d) Murexide test
24. The ----- method is used to obtain volatile oil from fennel fruits.
 (a) Ecuelle (b) Enfleurage
 (c) Steam distillation (d) Destructive distillation

[TURN OVER

25. The natural pesticides are obtained from -----
(a) Pyrethrum (b) DDT
(c) Organo halogens (d) Cyclothrins
26. The saponin glycosides can be detected by -----
(a) Foam formation (b) Hemolytic activity
(c) Liberman burchard's test (d) All the above
27. The phenyl propanoid derivatives are present in all the samples except -----

(a) Clove oil (b) Fennel oil
(c) Cinnamon oil (d) Lemon oil
28. ----- is an example of drying oil.
(a) Gound nut oil (b) Sesame oil
(c) Linseed oil (d) Cod liver oil
29. The alkaloid ----- can be obtained by stem distillation.
(a) Berberine (b) Nicotine
(c) Anabesine (d) Pilocarpine
30. The formulation of ----- is Ayurvedic formulation.
(a) Asava (b) Tincture
(c) Gel (d) Ointment
31. The alkaloid ----- is soluble in water
(a) Morphine (b) Aporphine
(c) Berberine (d) Quinine
32. The ----- sample cannot be hydrogenated to improve preservation.
(a) Cod liver oil (b) Gound nut oil
(c) Linseed oil (d) Sunflower oil
33. ----- is an example bicyclic mono-terpenoid derivative.
(a) α -pinine (b) Ferulic acid
(c) Eugenol (d) Geraniol

[TURN OVER

34. The ginger samples are plunged in boiling water.
(a) to extract volatile oil (b) to destroy vitality
(c) to destroy microbes (d) to wash it clean
35. ----- has addiction potential.
(a) Morphine (b) Codeine
(c) Papaverine (d) Thebain
36. 'Linamarin' is ----- glycoside obtained from linseed.
(a) Cyarogenic (b) Cardiac
(c) Glucosinolate (d) Benzyl isquinoline
37. Mace of nutmeg is ----- of the fruit.
(a) Epidermis (b) Arillus
(c) Endodermis (d) Testa
38. The Keler-killiani test is based on ----- for detection of cardiac glycorids
(a) Deoxy sugar (b) Sugar
(c) Aglycone (d) Oxidised sugar
39. The hallucinogenic agent obtained from ergct alkaloids is -----
(a) Heroin (b) L.S.D.
(c) Methicin (d) Ergometrine
40. 'Thalleoquine test' is answered by ----- alkaloids.
(a) Cinchona (b) Vasaka
(c) Ephedra (d) Kurchi

Section - IIAttempt any **three** questions out of **five****30**

1. Describe in detail the cultivation, collection and chemistry of opium alkaloids.
2. Discuss any two modern techniques for extraction of phytochemicals.
3. Classify volatile oils on the basis of principal chemical constituents, with suitable examples.

[TURN OVER

4. Define different types of tannins and give the qualitative tests for tannins.
5. Discuss role of Natural products in drug discovery.

Section - III

Attempt any **two** questions out of **four**

30

1. Give detailed account of ergot alkaloids with respect to sources, cultivation, active constituents, and uses.
 2. Give biosynthesis, of anthraquinone glycosides and give detailed account of any two drugs, containing anthraquinone glycosides, with respect to uses and preparation.
 3. Give detailed account of flavonoids with suitable examples.
 5. Discuss significance of authentication and standardization of 'herbal drugs'.
-