

(3 hours)

[Total marks: 75]

- N.B.: 1. All questions are compulsory.
2. Figures to right indicate full marks.

I Choose appropriate option for following multiple choice-based questions. 20

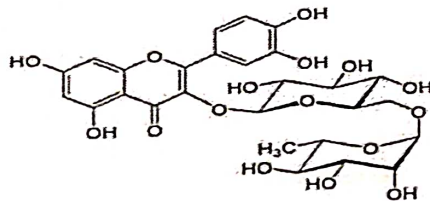
1 Geranyl pyrophosphate is

- C10 compound
- C20 compound
- C15 compound
- C30 compound

2 Dimethylallyl pyrophosphate is an isomer of

- Farnesyl pyrophosphate
- Isopentenyl pyrophosphate
- Squalene
- Mevalonic acid

3 Following compound is



a Aloë-emodin
b Sesamin
c Ephedrine
d Rutin

4 Caffeine can also be referred as

- 1,3,7-trimethylxanthin
- 1,3-dimethylxanthin
- 3,7-dimethethylxanthin
- 1,7-trimethylxanthin

5 Which of the following is phenolic volatile oil?

- Fenchone
- Coriandrol
- Citral
- Eugenol

6 Mother clove is

- Exhausted flower bud of *Eugenia caryophyllus*
- Flower of *Eugenia caryophyllus*
- Fruit of *Eugenia caryophyllus*
- Stem of *Eugenia caryophyllus*



- 7 *Pterocarpus marsupium* is the botanical name for
a Myrrh
b Indian kino
c Black catechu
d Ashoka
- 8 Pink colour in match stick test is due to the reaction of _____ with lignin
a Eugenol
b Chlorogenic acid
c Phloroglucinol
d vanillin
- 9 Pungent taste of fresh ginger is due to
a Bisabolol
b Gingerol
c Alpha- bisabolene
d Alpha- zingiberol
- 10 Abietic acid is present in
a Colophony
b Benzoin
c Guggul
d Myrrh
- 11 Source of Senna IP is
a *Cassia acutifolia*
b *Cassia angustifolia*
c *Cassia cinnamon*
d *Cassia fistula*
- 12 Sennoside C is a
a heterodianthrone
b homodianthrone
c Anthrone
d Anthranol
- 13 Digitalis leaves should be dried under _____
a 100 °C
b 60 °C
c 75 °C
d 90 °C
- 14 Atropine is
a *l*-hyoscyamine
b *d*-hyoscyamine
c Racemic mixture of *d*&*l*-hyoscyamine
d *d*-hyoscine
- 15 Etoposide and teniposide are semisynthetic products of
a Vinca alkaloids
b Taxus
c Podophyllotoxin
d Cinnamic acid



- 16 _____ is the sublimed crystals
- Eugenol
 - Menthol
 - Fenchone
 - Caffeine
- 17 The electromagnetic waves with frequency of 0.3-300GHz are called as
- Ultrasonic waves
 - Microwaves
 - Radio waves
 - Sonar waves
- 18 Which of the following property is necessary for microwave assisted extraction
- Moisture should be present in the material to be extracted
 - Solvent used should be non-polar in nature
 - High quantity of solvent
 - Material should be completely dry
- 19 Column chromatography is based on the principle of
- Size exclusion
 - Ion exchange
 - Adsorption
 - Substitution
- 20 Gas liquid chromatography is used for
- Stable compounds
 - Thermolabile and volatile compounds
 - Non-volatile compounds
 - Heat non-resistant compounds
- Q. II A Answer any TWO out of THREE** 20
- 1 Write a note on biological source, chemical constituents, chemical tests & uses of Asafoetida. 10
- 2 Write a short note on the following 10
- Thin layer chromatography
 - UV spectroscopy in drug identification
- 3 Write a short note on source, industrial production, estimation and uses of the following. 10
- Diosgenin
 - Forskolin
- Q. II B. Answer any SEVEN out of NINE** 35
- 1 Illustrate pathway for biosynthesis of Shikimic acid with suitable structures. 5
- 2 Write a note on various methods for feeding radioactive precursors. 5
- 3 Discuss source, chemistry & test of an anti-hypertensive Indole alkaloid. 5
- 4 Write a note on source, chemistry (with structures), chemical test & uses of Liquorice. 5
- 5 Write a note on carotenoids 5
- 6 Discuss the following phytoconstituents with respect to their isolation and identification. 5
- Quinine
 - Curcumin



- 7 Write a note on the analysis of following phytoconstituents 5
a. Menthol
b. Atropine
- 8 Write a note on continuous extraction method. 5
- 9 Discuss principle and applications of supercritical fluid extraction. 5

