

PHB Education

**Government Exam and D. Pharm Exit Exam Preparation
Questions Bank**

Subject: Pharmacognosy
Chapter -5.1: Laxative and Purgative Crude drugs
Topic: Pharmacognosy – Castor Oil

1–10: General Information & Synonyms

1. The biological source of Castor Oil is:

- a) Seeds of *Ricinus communis*
- b) Fruits of *Ricinus communis*
- c) Roots of *Ricinus communis*
- d) Leaves of *Ricinus communis*

Answer: a) Seeds of *Ricinus communis*

2. The botanical name of Castor plant is:

- a) *Ricinus communis*
- b) *Croton tiglium*
- c) *Aloe vera*
- d) *Cassia angustifolia*

Answer: a) *Ricinus communis*

3. The family of Castor plant is:

- a) Euphorbiaceae
- b) Leguminosae
- c) Apocynaceae
- d) Liliaceae

Answer: a) Euphorbiaceae

4. The common name of Castor Oil is:

- a) Erand Taila
- b) Neem Oil
- c) Linseed Oil
- d) Olive Oil

Answer: a) Erand Taila

5. The synonym of Castor Oil in Ayurveda is:

- a) Eranda
- b) Aritha
- c) Haritaki
- d) Triphala

Answer: a) Eranda

6. The English name of Castor Oil is:

- a) Linseed Oil

- b) Palma Christi Oil
- c) Mustard Oil
- d) Cod Liver Oil

Answer: b) Palma Christi Oil

7. Castor plant is commonly cultivated in:

- a) India and Brazil
- b) USA and Japan
- c) Australia and Russia
- d) Egypt and Italy

Answer: a) India and Brazil

8. The part of *Ricinus communis* used medicinally is:

- a) Seed
- b) Root
- c) Leaf
- d) Bark

Answer: a) Seed

9. The botanical synonym of *Ricinus communis* is:

- a) *Ricinus africanus*
- b) *Ricinus niger*
- c) *Ricinus indica*
- d) *Ricinus orientalis*

Answer: c) *Ricinus indica*

10. The natural habitat of *Ricinus communis* is:

- a) Tropical and subtropical regions
- b) Cold temperate regions
- c) Polar regions
- d) Alpine mountains

Answer: a) Tropical and subtropical regions

11–20: Morphology

11. Castor plant is a:

- a) Herb
- b) Shrub or small tree
- c) Climber
- d) Creeper

Answer: b) Shrub or small tree

12. Leaves of *Ricinus communis* are:

- a) Palmately lobed
- b) Pinnately compound
- c) Simple
- d) Linear

Answer: a) Palmately lobed

13. The leaf arrangement in Castor plant is:

- a) Alternate
- b) Opposite
- c) Whorled
- d) Spiral

Answer: a) Alternate

14. Shape of Castor seeds is:

- a) Oval, smooth, shiny
- b) Round, rough
- c) Cylindrical
- d) Flat and thin

Answer: a) Oval, smooth, shiny

15. The seed coat of Castor seed is:

- a) Hard and mottled
- b) Soft and transparent
- c) Rough and dull
- d) Smooth and colorless

Answer: a) Hard and mottled

16. The hilum of Castor seed bears a small outgrowth known as:

- a) Caruncle
- b) Cotyledon
- c) Testa
- d) Hilum body

Answer: a) Caruncle

17. The color of Castor seeds varies from:

- a) White to grey
- b) Black to brown with markings
- c) Red to yellow
- d) Blue to green

Answer: b) Black to brown with markings

18. Castor seeds contain:

- a) Oil and a toxic protein
- b) Alkaloid
- c) Carbohydrate only
- d) Resin only

Answer: a) Oil and a toxic protein

19. Castor oil is obtained by:

- a) Cold expression from seeds
- b) Distillation
- c) Solvent extraction
- d) Steam distillation

Answer: a) Cold expression from seeds

20. The seeds are decorticated before oil extraction to:

- a) Remove testa and toxins
- b) Increase bitterness
- c) Decrease viscosity
- d) Add aroma

Answer: a) Remove testa and toxins

21–30: Chemical Constituents

21. The chief constituent of Castor oil is:

- a) Ricinoleic acid
- b) Linoleic acid
- c) Oleic acid
- d) Palmitic acid

Answer: a) Ricinoleic acid

22. Ricinoleic acid is a:

- a) Hydroxy fatty acid
- b) Saturated fatty acid
- c) Polyunsaturated acid
- d) Aromatic acid

Answer: a) Hydroxy fatty acid

23. Percentage of Ricinoleic acid in Castor oil is about:

- a) 60–65%
- b) 70–90%
- c) 40–50%

d) 20–25%

Answer: b) 70–90%

24. Other fatty acids present in Castor oil include:

a) Oleic, Linoleic, and Stearic acids

b) Citric and Tartaric acids

c) Formic and Acetic acids

d) Butyric and Propionic acids

Answer: a) Oleic, Linoleic, and Stearic acids

25. The toxic protein found in Castor seed is:

a) Ricin

b) Abrin

c) Lectin

d) Coniine

Answer: a) Ricin

26. The enzyme present in Castor seed that hydrolyzes fat is:

a) Lipase

b) Protease

c) Amylase

d) Oxidase

Answer: a) Lipase

27. The oil content in Castor seeds is about:

a) 15–25%

b) 30–50%

c) 60–70%

d) 5–10%

Answer: b) 30–50%

28. Ricin is located in:

a) Endosperm

b) Seed coat

c) Cotyledons

d) Testa

Answer: a) Endosperm

29. The poisonous principle in Castor seed is inactivated by:

a) Heat treatment during oil extraction

b) Cold storage

c) Alcohol washing

d) Acid treatment

Answer: a) Heat treatment during oil extraction

30. The oil obtained after extraction is:

a) Colorless or pale yellow

b) Deep red

c) Greenish-black

d) Brownish-green

Answer: a) Colorless or pale yellow

31–40: Chemical Tests

31. Solubility test for Castor oil:

a) Soluble in alcohol, ether, chloroform

b) Insoluble in alcohol but soluble in ether

c) Soluble in water

d) Soluble in acetone only

Answer: b) Insoluble in alcohol but soluble in ether

32. When shaken with water, Castor oil forms:

a) Milky emulsion

b) Clear solution

c) Precipitate

d) Suspension

Answer: a) Milky emulsion

33. The test for unsaturation in Castor oil is:

a) Bromine water test

b) Ferric chloride test

c) Ninhydrin test

d) Fehling's test

Answer: a) Bromine water test

34. Positive result in bromine water test indicates:

a) Unsaturation

b) Ester presence

c) Alcoholic group

d) Carboxylic acid

Answer: a) Unsaturation

35. The test for ricinoleic acid in Castor oil is:

a) Sodium hydroxide and acidification test

b) Borax test

c) Salkowski test

d) Phenol test

Answer: a) Sodium hydroxide and acidification test

36. Heating Castor oil with strong alkali produces:

a) Sodium ricinoleate (soap)

b) Glycerol only

c) Stearic acid

d) Palmitic acid

Answer: a) Sodium ricinoleate (soap)

37. The rancidity of Castor oil can be checked by:

a) Acid value determination

b) Iodine test

c) Melting point

d) Saponification value

Answer: a) Acid value determination

38. Specific gravity of Castor oil is approximately:

a) 0.95–0.97

b) 0.96–0.98

c) 1.0

d) 0.85

Answer: b) 0.96–0.98

39. The presence of hydroxyl group in Ricinoleic acid is confirmed by:

a) Acetylation reaction

b) Fehling's test

c) Benedict's test

d) Molisch test

Answer: a) Acetylation reaction

40. When Castor oil is mixed with alcohol and boiled, it produces:

a) Ethyl ricinoleate

b) Methyl salicylate

c) Ethyl acetate

d) Ethyl oleate

Answer: a) Ethyl ricinoleate

41–50: Uses and Applications

41. The primary pharmacological use of Castor oil is as a:

a) Laxative

- b) Sedative
- c) Antipyretic
- d) Antiseptic

Answer: a) Laxative

42. Castor oil acts as:

- a) Stimulant purgative
- b) Bulk purgative
- c) Saline purgative
- d) Lubricant purgative

Answer: a) Stimulant purgative

43. Castor oil decomposes in the intestine to produce:

- a) Ricinoleic acid
- b) Oleic acid
- c) Stearic acid
- d) Linoleic acid

Answer: a) Ricinoleic acid

44. Ricinoleic acid acts by:

- a) Stimulating peristalsis
- b) Reducing intestinal absorption
- c) Slowing bowel movement
- d) Inhibiting bile flow

Answer: a) Stimulating peristalsis

45. The onset of Castor oil action is within:

- a) 1–3 hours
- b) 4–6 hours
- c) 8–12 hours
- d) 24 hours

Answer: a) 1–3 hours

46. Castor oil is used externally as:

- a) Emollient
- b) Rubefacient
- c) Counter-irritant
- d) Vesicant

Answer: a) Emollient

47. In industry, Castor oil is used for the manufacture of:

- a) Lubricants and soaps
- b) Explosives

- c) Perfumes
- d) Detergents only

Answer: a) Lubricants and soaps

48. Hydrogenation of Castor oil yields:

- a) Hardened oil
- b) Glycerin
- c) Alcohol
- d) Ricin

Answer: a) Hardened oil

49. Castor oil is contraindicated in:

- a) Pregnancy (due to uterine stimulation)
- b) Constipation
- c) Cold
- d) Fever

Answer: a) Pregnancy (due to uterine stimulation)

50. Castor oil is official in:

- a) IP, BP, and USP
- b) Only IP
- c) Only USP
- d) None

Answer: a) IP, BP, and USP