

QUESTION BANK
BPH_E_508_T – NUTRACEUTICALS AND DIETARY SUPPLEMENTS

1. Grapes are considered functional foods because they contain these substances:

- A. Proteins
- B. Carbohydrates
- C. Phytochemicals
- D. None of the above

2. Omega-3 fatty acids are naturally high in salmon. Therefore, salmon can be classified as this type of food?

- A. Fortified food
- B. Functional Food
- C. Dietary supplement
- D. Nutraceutical

3. Which of the following is defined as food, or parts of food, that provide medical or health benefits, including the prevention and treatment of disease?

- A. Nutraceuticals
- B. Functional Foods
- C. Dietary supplements
- D. Pharmaceuticals

4. Which of the following would be considered components of Public Health Nutrition?

- A. Dietary guidelines
- B. Nutritional epidemiology
- C. Fortification of foods with vitamins and minerals
- D. All of the options listed are correct

5. Which of the following statement is correct?

- A. The flavonoid class comprises flavonoids and isoflavonoids.
- B. The digestibility and bioavailability of isoflavones in soya food products are not changed by processing.
- C. β -Carotene and lycopene can both act as provitamin A.
- D. Carotenoids and flavonoids both belong to the polyphenol class.

6. Are GM foods a valuable tool with which to address global food security and climate change?

- A. No, because they may cause cancer and have other unknown health effects thus making them unacceptable to consumers
- B. Yes, because they can provide us with a more abundant and economical food supply for the world as well as continued improvement in nutritional quality
- C. Yes, because they are cheaper than non-GM foods
- D. No, because GM foods cannot adapt to the rate of climate change

7. Which active non-nutrient is a common component of yoghurt?

- A. Fibre
- B. Probiotics
- C. Antioxidants
- D. Phytochemicals

8. Which of the following enhances gut functioning?

- A. Phytoestrogens
- B. Probiotics
- C. Antioxidants
- D. Omega 3 fatty acids

9. Bread which has been fortified with vitamins and minerals, is classified as which type of food?

- A. Organic
- B. Genetically modified
- C. Functional
- D. Specialised

10. Alpha linoleic acid is written as 18:3, which means

- A. 18 carbon atoms and double bond at C-3
- B. 18 hydrogen atoms and 3 carbon atoms
- C. 18 carbon atoms and 3 double bonds
- D. 18 single bonds and 3 double bonds

11. Which of the following is not PUFA?

- A. Linolenic acid
- B. Oleic acid
- C. Linoleic acid
- D. Arachidonic acid

12. Which of the following is present in flaxseed?

- A. Secoisolariciresinol, isolariciresinol and lariciresinol
- B. Metaresinol
- C. Pinoresinol
- D. All of the above

13. Carotenoids are not responsible for the following hue in plants:

- A. Yellow
- B. Orange
- C. Pink
- D. Red

14. Which of the following carotenoid is found in flamingo?

- A. Zeaxanthin
- B. Cryptoxanthin
- C. Astaxanthin
- D. Lutein

15. Which one of the following is the herbomineral drug?

- A. Melatonin
- B. Glutathione
- C. Shilajit
- D. Carnitine

16. Which class of molecules consists of two aromatic rings (A and B) joined by an oxygenated C-ring?

- A. Flavonoids
- B. Stilbenes
- C. Glucosinolates
- D. Phenolic acids

17. Lignans are part of which family of compounds?

- A. Carotenoids
- B. Polyphenols
- C. Phytosterols
- D. None of the above

18. As part of their molecular structures, hydrocarbon carotenoids contain:

- A. No hydroxyl groups
- B. 1 hydroxyl group
- C. 2 hydroxyl groups
- D. >2 hydroxyl groups

19. Which forms of flavonoids are also known as phyto-oestrogens?

- A. Flavanols
- B. Flavones
- C. Isoflavones
- D. Anthocyanidins

20. A flavonoid glycone is one that has:

- A. An amino acid attached
- B. A fatty acid attached
- C. A sugar attached
- D. None of the above

21. Catechin and epicatechin are:

- A. Flavanols
- B. Anthocyanidins
- C. Phenolic acids
- D. Carotenoids

22. Which one of the following is not part of the usual definition for a functional food?

- A. It is consumed as part of a normal food pattern
- B. It is not a pill, a capsule or any form of dietary supplement
- C. It has physiological benefits and/or reduces the risk of chronic disease beyond basic nutritional requirements
- D. None of the above

23. Which one of the following carotenoids is present in high concentrations in the macula?

- A. Lycopene
- B. Lutein
- C. α -Carotene
- D. β -Carotene

24. Which unsaturated fatty acid is present in high concentrations in the rod cells of the retina?

- A. Oleic acid
- B. Linoleic acid
- C. Linolenic acid

D. Docosahexaenoic acid

25. The essential fatty acids include:

- A. Stearic acid and oleic acid
- B. Oleic acid and linoleic acid
- C. Palmitic acid and linolenic acid
- D. Linoleic acid and linolenic acid

26. Which vitamin may interact with the anti-coagulant warfarin and increase the risk of excessive bleeding?

- A. Vitamin A
- B. Vitamin E
- C. Vitamin B₆
- D. Vitamin B₁₂

27. The most biologically active form of vitamin E is:

- A. *all-rac* α -tocopherol
- B. *RRR*- α -tocopherol
- C. *all-rac* α -tocotrienol
- D. *RRR*- γ -tocopherol

28. Which one of the following statements is incorrect?

- A. Tocopherols have a saturated hydrocarbon chain, whereas tocotrienols are unsaturated
- B. Tocopheryl esters are more stable than free tocopherols
- C. α -, β -, γ - and δ -tocopherols differ from each other on the hydrocarbon chain
- D. Vitamin E acts as an antioxidant in the lipid environment of cells

29. Retinopathy of prematurity is associated with a deficiency of which nutrient:

- A. Retinol
- B. Tocopherol
- C. Cholecalciferol
- D. None of the above

30. Tea is a major dietary source of which one of the following trace elements?

- A. Manganese
- B. Zinc

- C. Copper
- D. Selenium

31. Keshan and Kashin–Beck diseases in China are associated with a deficiency of what mineral in the soil:

- A. Cobalt
- B. Molybdenum
- C. Copper
- D. Selenium

32. Diets high in fibre have been proposed to protect against colorectal cancer by which one of the following mechanisms?

- A. Antioxidant effect, which quenches free radicals
- B. Increased repair of damaged DNA
- C. Increased induction of detoxifying enzymes
- D. More rapid removal of potential carcinogens

33. Which one of the following statements is incorrect?

- A. SFAs with 14 and 16 fatty acids are strongly associated with raised LDL levels
- B. Replacement of SFAs with n-6 PUFAs reduces plasma LDL levels
- C. For optimal plasma lipid profiles, n-6 PUFAs should contribute at least 10% of dietary energy
- D. None of the above

34. FPO stands for:

- A. Food Products Order
- B. Fruit Products Order
- C. Food and Fruit Products Order
- D. None of the above

35. MPO stands for:

- A. Meat Products Order
- B. Milk Product Order
- C. Milk and Milk Products Order
- D. None of the above

36. Curcumin is:

- A. Terpenoid
- B. Anthocyanin
- C. Diaryl heptanoid
- D. Flavonoid

37. Which of the following is protein?

- A. Glutathione
- B. Melatonin
- C. Carnitine
- D. Collagen

38. Which of the following is Prebiotic food?

- A. Chicory root
- B. Tomato
- C. Banana
- D. All of the above

39. Which of the following is Prebiotic?

- A. Fructo-oligosaccharide
- B. Galacto-oligosaccharide
- C. Xylo-oligosaccharide
- D. All of the above

40. Which of the following is Probiotic?

- A. Bifidobacterium species
- B. Lactobacillus species
- C. Yogurt
- D. All of the above