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## Text Book Questions and Their Answers

### Multiple Choice Type Questions

The pathogen of naru disease is

- (a) Bacterium
- (b) Worm
- (c) Virus
- (d) Protozoa

Normal blood pressure of an adult healthy man is

- (a) 120/80
- (b) 100/60
- (c) 140/100
- (d) None of the above

To which family tobacco plant belongs.

- (a) Malvaceae
- (b) Liliacy
- (c) Solanaceae
- (d) Fabaceae

Main component of wine is

- (a)  $C_2H_5OH$
- (b)  $CH_3OH$
- (c)  $CH_3COOH$
- (d)  $C_6H_{12}O_6$

The disease caused due to deficiency of iodine is

- (a) Night blindness
- (b) Rickets
- (c) Infertility
- (d) Goitre

### ◆ Very Short Answer Type Questions

Q.6. What is the scientific name of opium plant?

Ans. *Papaver somniferum*

Q.7. What causes fatty liver disease?

Ans. Excessive consumption of alcohol is the cause of fatty liver disease.

Q.8. Which harmful substance is found in tobacco?

Ans. The main harmful substance of tobacco is nicotine.

Q.9. Name the instrument which is used to measure blood pressure?

Ans. Sphygmomanometer.

Q.10. Write the name of pathogen of naru of guinea worm disease.

Ans. Round worm *Dracunculus medinensis*

### ◆ Short Answer Type Questions

Q.11. What is meant by balanced diet and malnutrition?

Ans. **Balanced diet** : A diet which contains all the components of food in right amount and proportion is called balanced diet. It not only contains carbohydrates, proteins fats, vitamins and minerals but also has dietary fibres and water.

**Malnutrition** : It is condition that results from eating a diet in which nutrients are either not enough or are too much such that the diet conser health problems.

Q.12. How do protein deficiency diseases affect human body?

Ans. Proteins are important nutrient for normal body growth and development. Lack of proteins in diet may lead to **Kwashiorkar** in children. The main symptoms of the disease are oedema, pot belly (swollen abdomen) skin thick, pale, patchy, thin hairs and characteristic crying of child.

Deficiency of proteins and calories both results in **Marasmus** disease of children. This impairs physical growth and retrads mental

development Subcutaneous fat disappears, ribs become prominent, limbs become thin and skin becomes dry, thin and wrinkled.

**Q.13. What should be the qualities of drinkable water?**

**Ans.** The drinkable or potable water should have following qualities.

(i) It must be clean, clear, perfectly transparent, free from impurities and odourless

(ii) It's pH should be 7 (seven).

(iii) Potable water should have adequate amount of dissolved oxygen.

(iv) It must be free from all microbes or algae.

**Q.14. State the harmful effects of polluted or contaminated water.**

**Ans.** Consumption of contaminated or polluted water may lead to many diseases. These diseases are caused by pathogens which are found in polluted water. Common water-borne diseases are cholera, amoebic dysentery, typhoid etc. There are water borne viral diseases also like hepatitis (jaundice) and polio etc. In Rajasthan naru (guinea worm) disease also spreads due to contaminated water.

**Q.15. Which alkaloids are found in milk (latex) of opium?**

**Ans.** Following alkaloids are found in the milk of opium.

Morphine

Codeine

Papaverine

Thebaine

**Q.16. State the harms caused due to tobacco.**

**Ans.** Tobacco leaves are used in various ways like chewing, as smoke of cigarette and *bidi*, Gutkha, as tooth paste or tooth powder, etc. Its use in any form is injurious and harmful to health.

Nicotine present in tobacco makes the wall of arteries stiff thereby increases blood pressure leading to hypertension. It increases heart beat. Tobacco is a proved carcinogen *i.e.*, causes cancer. Tar and other chemicals present in smoke of tobacco increase the chances of cancer of throat.

lungs and tongue. The carbon monoxide present in smoke reduces the oxygen carrying capacity of haemoglobin. Use of tobacco by pregnant lady adversely affects embryonic development.

**Q.17. Write the cause and symptoms of disease submucous fibrosis.**

**Ans. Submucous fibrosis : Causes**

The main cause of oral submucous fibrosis is prolonged use of Gutkha, panmasala, areca nut and, tobacco chewing etc.

**Symptoms of submucous fibrosis :** Due to stiffening of the jaw muscles, the jaw does not move or open adequately. As a result mouth can not be opened properly. There may be inflammation (swelling), blisters or ulcers in mouth which may turn into cancer.

### ◆ Long Answer Type Questions

**Q.18. What is meant by disease Kwashiorkar? Write its symptoms and preventive measures.**

**Ans.** Kwashiorkar is a serious protein deficiency disease of children.

#### **Symptom of Kwashiorkar**

(i) The condition of the child becomes miserable and he/she cries in a characteristic manner by producing mewing sound.

(ii) The skin becomes pale, patchy and dull.

(iii) Pot belly or swollen abdomen, limbs are thin, lower part of limbs have swellings.

(iv) Oedema due to retention of water in body.

(v) Thin, discoloured or pigmented hair which fall easily.

(vi) Child becomes lethargic or dull and avoid playing.

(vii) The patient becomes easily irritable and loses appetite.

(viii) Child becomes prone to infection.

#### **Preventive measures**

This disease affects the children after the age of one year when they are weaned off from mother's milk. Therefore, the children should be given easily digestible protein rich food. Cow's milk is a good substitute.

All children after the age of 6 months should be given pulses water, paneer, cereals etc.

People should be made aware about the importance of balanced diet.

**Q.19. How can you check the tradition of consumption of opium prevalent in society?**

**Ans. Method of checking the tradition of consumption of opium in society :**

(i) The best way to do this is by educating people about the harmful effects of opium consumption. The ignorant and illiterate people of villages do not know the serious ill effects of opium consumption. They use this under the name of tradition.

Opium is an addictive substance. It produces an artificial or false sense of well being. It has analgesic properties also. It is a depressant and makes brain dull, memory blunt and reduces immunity.

Children have more serious effects.

(ii) The cultivation and marketing of opium must be done under strict surveillance.

(Opium is grown in fields to get analgesic drug)

(iii) By providing good treatment and rehabilitation to opium addicts.

(iv) By inculcating good habits in people, making them really educated, enlightened and by providing employment to all.

(v) By ensuring strict enforcement of available laws.

**Q.20. Write the names and symptoms of diseases related to malnutrition of vitamins.**

**Ans. Diseases related to malnutrition of vitamin :** Vitamin deficiency diseases and their symptoms are given below :

(a) **Disease caused due to deficiency of vitamin A :** Night blindness.

**Symptoms :** Inability to see in dim light or at night. Deficiency of vitamin A also causes dryness in eyes and skin.

(b) **Disease caused due to deficiency of vitamin B<sub>1</sub> (Thiamine) :** Beri-beri

**Symptoms :** Weak muscles and nerves, slow heart rate, poor metabolism.

**(c) Deficiency of vitamins B<sub>2</sub> (Riboflavin) :**  
Ariboflavinosis

**Symptoms :** Cracks in skin at the corners of mouth and lips, blisters in mouth, reduced memory.

**(d) Deficiency of vitamin : B<sub>3</sub> (Niacin) -**  
Pellagra

**Symptoms :** Dermatitis, Scaly skin, Mental weakness, Swollen tongue etc.

**(e) Deficiency of vitamin C : (Ascorbic acid)**  
- Scurvy

**Symptoms :** Bleeding of gums, patchy skin, joint pain, reduced immunity.

**(f) Deficiency of vitamin D : (Calciferol) -**  
Rickets in children, osteomalacia in adults.

**Symptoms :** Bowed leg (knees come closer), pigeon chest or deformed chest, bones become weak fragile and brittle.

**Q.21. Describe the harmful effects of cold drinks on our body.**

**Ans.** Following are the harmful effects of cold drinks on our body.

(i) Phosphoric acid added in cold drinks directly affects our teeth. This acid has the ability to dissolve even iron.

(ii) Ethylene glycol which is mixed in cold drink to avoid freezing of water even at zero degree celsius is called sweet poison.

(iii) Boric acid, benzoic acid make the cold drink acidic. It leads to hyperacidity in stomach, stomach pain, acid reflux, irritability and development of bones is adversely affected.

(iv) Caffeine creates problems of sleeplessness (insomnia) and headach.

(v) Some lead has been detected in cold drinks which is dangerous for liver, kidneys, brain and muscles of the body.

(vi) Some investigations have shown the presence of pesticide residue in cold drinks. These synthetic chemicals adversely affect human health.

(vii) Too much consumption of cold drinks affects rate of metabolism.

(viii) Unnecessary calories lead to obesity and obesity related problems.

(ix) They stimulate ageing. It means cold drinks if become habit it later on stimulate the process of growing old.

(x) Synthetic colours, flavouring agents (ingredients), artificial sweetness affect liver and kidneys.

**Q.22. Write an essay on adulteration of food.**

**Ans. Food adulteration.**

**Definition :** Mixing of cheap/inexpensive, unedible or toxic or inferior substances in any food item to increase its quantity or to make it attractive is called food adulteration. This adulteration of food not only degrades the quality of food but also makes it harmful to human health. Extraction of important ingredients/components of food is also included in this category.

Some food items are adulterated deliberately by dishonest businessmen to earn unscrupulous profit. Some food items get adulterated unknowingly by chance or by carelessness.

### Important food items, their adulterants and harmful effects on body

S. No.	Food item	Adulterants	Harmful effects/remarks
1.	Wheat, rice	Pebbles, dirt	Degraded quality
2.	Arhar dal (pigeon pea)	Khesari dal (Lathyrus seeds)	Degraded quality, lathyrism, Paralysis
3.	Mustard	Seeds of argemone	Toxicity
4.	Mustard oil	Cheap palm oil	Kidneys, heart affected adversely

5.	Turmeric powder	Lead chromate, yellow soil	Liver and kidneys are affected, brain is also affected
6.	Gram flour (Besan)	Maize flour	Degraded quality
7.	Pure ghee (clarified butter)	Margarine, vegetable ghee, sesame oil	Degraded quality
8.	Milk	Urea, detergent, soda, refined oil, glucose	Whole body is affected specially liver and kidneys have serious effects
9.	Chilli powder	Red brick powder	Gastric problems
10.	Black pepper	Papaya seeds	Degraded quality, infertility
11.	Fruits, vegetables	Artificial colour	Liver and kidneys are affected
12.	Mawa	Starch	Degraded quality

**Adulteration of food and law :** For safety of food the main law in India is the Prevention of Food Adulteration Act. PFA 1954. This law regulates or speaks about adulteration of 65 food items. It has been observed that this law alone is not sufficient to penalise the culprits. There is an urgent need of a more strict law and its serious implementation/execution.

**Q.23. Describe the harmful effects of mineral malnutrition.**

**Ans. Diseases/disorders related to deficiency of minerals**

Minerals are important nutrients of our food. Some of these form structural components of our body, while some are important for life processes and metabolism of the body. Lack of these minerals cause deficiency diseases. Main mineral deficiency diseases are given here :

**(i) Calcium :** Calcium is essential for providing strength to our bones and teeth. Lack of calcium in diet may lead to **Rickets** in children and **Osteomalacia** in adults. In these diseases bones become deformed, weak and brittle.

**(ii) Iron :** Iron is an important component of haemoglobin of our blood. Lack of iron in our diet leads to **anaemia**. The symptoms are pale body, early fatigue, breathlessness, etc are common.

**(iii) Iodine :** Lack of iodine in our diet causes **goitre**. Iodine is required in the formation of hormone thyroxine. Lack of iodine in the diet of

pregnant lady has serious consequences. child born is physically stunted and mentally retarded.

**(iv) Phosphorus :** In deficiency of phosphorus the bones and teeth become weak. Growth and development are also affected. Actually calcium and phosphorus both are needed for healthy bones and teeth.

**(v) Sodium/potassium :** Correct balance of sodium and potassium in our body is essential for maintaining the right pace of metabolism. Actually these two minerals play a crucial role in maintaining the living state of the cell. Lack of sodium leads to dehydration of body. These minerals are needed for muscle construction and conduction of nerve impulse.

### Other Important Questions and their Answers

#### ◆ Multiple Choice Questions

- The disease caused by deficiency of vitamin B<sub>1</sub> is
  - Kwashiorkar
  - Anaemia
  - Beri-beri
  - Goitre
- Which of the following makes bones and teeth strong.
  - Sodium-potassium
  - Calcium-phosphorus
  - Iron-iodine
  - Carbohydrates-fats