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3. Mindful Eating: A Path to a Healthy Body

Word Meaning

S.No.	Word (शब्द)	Meaning (हिंदी अर्थ)
1.	Food Diversity	खाद्य विविधता – हमारे भोजन में अलग-अलग प्रकार के पकवानों और सामग्रियों का होना।
2.	Nutrients	पोषक तत्व – भोजन में मौजूद आवश्यक घटक जो ऊर्जा, वृद्धि और सुरक्षा प्रदान करते हैं।
3.	Carbohydrates	कार्बोहाइड्रेट – शरीर को तुरंत ऊर्जा देने वाला मुख्य पोषक तत्व।
4.	Fats	वसा – शरीर में ऊर्जा संचित करने और शरीर को गर्म रखने वाला पोषक तत्व।
5.	Proteins	प्रोटीन – शरीर की वृद्धि, विकास और ऊतकों की मरम्मत करने वाले तत्व (बॉडी-बिल्डिंग भोजन)।
6.	Vitamins	विटामिन – शरीर को रोगों से बचाने और स्वस्थ रखने वाले सुरक्षात्मक तत्व।
7.	Minerals	खनिज – हड्डियों, दांतों और रक्त के निर्माण के लिए आवश्यक सूक्ष्म तत्व (जैसे कैल्शियम, आयरन)।
8.	Dietary Fibre / Roughage	रुक्षांश / आहारीय रेशा – बिना पचने वाला पादप भाग जो पाचन और मलत्याग को सुगम बनाता है।
9.	Balanced Diet	संतुलित आहार – ऐसा आहार जिसमें सभी आवश्यक पोषक तत्व, रुक्षांश और जल सही मात्रा में उपलब्ध हों।

10.	Starch	मंड – कार्बोहाइड्रेट का जटिल रूप जो आलू, चावल और गेहूं में पाया जाता है।
11.	Energy-giving foods	ऊर्जा देने वाले भोजन – कार्बोहाइड्रेट और वसा से भरपूर खाद्य पदार्थ।
12.	Body-building foods	शरीर-वर्धक भोजन – प्रोटीन से भरपूर खाद्य पदार्थ जो वृद्धि और मरम्मत करते हैं।
13.	Protective foods	सुरक्षात्मक भोजन – विटामिन और खनिज से भरपूर खाद्य पदार्थ जो बीमारियों से बचाते हैं।
14.	Hydration	जलयोजन – शरीर में जल की पर्याप्त मात्रा बनाए रखना।
15.	Millets	मोटे अनाज / श्री अन्न – पोषक तत्वों से भरपूर अनाज (जैसे ज्वार, बाजरा, रागी, सांवा)।
16.	Deficiency Disease	हीनावस्थाजन्य रोग – किसी पोषक तत्व की लंबे समय तक कमी से होने वाली बीमारी।
17.	Night Blindness	रतौंधी – विटामिन A की कमी से अंधेरे या कम रोशनी में दिखाई न देना।
18.	Beriberi	बेरी-बेरी – विटामिन B1 की कमी से होने वाला रोग (तंत्रिकाएं कमजोर होना)।
19.	Scurvy	स्कर्वी – विटामिन C की कमी से होने वाली बीमारी (मसूड़ों से खून आना)।
20.	Rickets	रिकेट्स / सूखा रोग – विटामिन D की कमी से हड्डियों का नरम होकर मुड़ जाना।
21.	Bone and Tooth Decay	अस्थि और दंत क्षय – कैल्शियम की कमी से हड्डियाँ और दाँत कमजोर होना।
22.	Goitre	घेघा / गलगंड रोग – आयोडीन की कमी से गर्दन की थायरॉयड ग्रंथि में सूजन आना।

23.	Anaemia	एनीमिया / रक्ताल्पता – आयरन (लोह तत्व) की कमी से खून की कमी होना।
24.	Pernicious Anaemia	घातक रक्ताल्पता – विटामिन B12 की कमी से होने वाला गंभीर रक्ताल्पता रोग।
25.	Hypomagneseemia	हाइपोमैग्नेसीमिया – मैग्नीशियम की कमी से मांसपेशियों में ऐंठन होना।
26.	Obesity	मोटापा – अत्यधिक वसा और कैलोरी के सेवन से शरीर में वसा जमा होना।
27.	Fatigue	थकान / सुस्ती – पोषक तत्वों या ऊर्जा की कमी से होने वाली शारीरिक कमजोरी।
28.	Traditional Foods	पारंपरिक भोजन – स्थानीय फसलों और संस्कृति पर आधारित पारंपरिक व्यंजन।
29.	Cooking Practices	पाक कला / खाना पकाने की पद्धतियाँ – भोजन पकाने के तरीके और उपकरण।
30.	Fortified Foods	पोषित खाद्य पदार्थ – वे खाद्य पदार्थ जिनमें अतिरिक्त पोषक तत्व मिलाए जाते हैं।
31.	Junk Food	जंक फूड – उच्च कैलोरी, वसा और शर्करा युक्त भोजन जिसमें पोषक तत्व कम होते हैं।
32.	Food Miles	फूड माइल्स – खेत से थाली तक पहुँचने में भोजन द्वारा तय की गई दूरी।
33.	Iodised Salt	आयोडीन युक्त नमक – आयोडीन मिला हुआ साधारण नमक।
34.	Translucent Patch	पारभासी धब्बा – कागज पर तेल लगने से बनने वाला धुंधला धब्बा।
35.	Preservation	संरक्षण – भोजन को खराब होने से बचाकर सुरक्षित रखना।
36.	Raw Food	कच्चा आहार – बिना पकाया हुआ भोजन (जैसे फल और सलाद)।

37.	Threshing	दवनी / गहाई – फसल के डंठल से अनाज के दानों को अलग करना।
38.	Winnowing	निष्पावन / ओसाई – हवा की मदद से अनाज से भूसे को अलग करना।
39.	Chulha	चूल्हा – मिट्टी से बना पारंपरिक चूल्हा।
40.	Sil-batta	सिल-बट्टा – मसाले पीसने का पारंपरिक पत्थर का उपकरण।
41.	Mindful Eating	सचेत खान-पान – स्वास्थ्य और पोषक मूल्यों को ध्यान में रखकर समझदारी से खाना।
42.	FSSAI	भारतीय खाद्य सुरक्षा और मानक प्राधिकरण – खाद्य सुरक्षा मानक तय करने वाली संस्था।
43.	Agariyas	अगरिया – गुजरात में नमक उत्पादन करने वाला पारंपरिक समुदाय।
44.	Assertion	अभिकथन / कथन – दिया गया कोई तर्क या बात।
45.	Reason	कारण – कथन के पीछे की व्याख्या या वजह।
46.	Higher-Order Thinking (HOTS)	उच्च स्तरीय चिंतन प्रश्न – विश्लेषणात्मक और व्यावहारिक सोच पर आधारित प्रश्न।
47.	Life Skills	जीवन कौशल – दैनिक जीवन में सही निर्णय लेने की क्षमता।
48.	Adulteration	मिलावट – खाद्य पदार्थों में अशुद्ध या हानिकारक चीजें मिलाना।
49.	Sustainable Agriculture	सतत / टिकाऊ कृषि – पर्यावरण को नुकसान पहुँचाए बिना की जाने वाली खेती।
50.	Nutritional Label	पोषण संबंधी लेबल – पैकेट पर छपी हुई पोषक तत्वों की जानकारी।

1. GETTING READY (Page 37)

Write the names of three food items obtained from plants and three food items obtained from animals:

S.No.	Food items obtained from plants	Food items obtained from animals
1.	Rice / Wheat	Milk
2.	Pulses (Dal) / Vegetables	Eggs
3.	Fruits (Apple / Mango)	Fish / Meat

2. INTEXT QUESTIONS (Page 41)

Fill in the blanks:

1. The variety in what we eat is called **food diversity**.
2. People in Gujarat often enjoy a traditional dish called **dhokla**.
3. In Karnataka, rice and **ragi** are commonly used in traditional dishes.
4. Over time, cooking tools have evolved from the traditional **chulha** to modern gas stoves.
5. The traditional foods of a region are closely linked to the **crops** that grow well in that area's soil and climate.

3. INTEXT QUESTIONS (Page 46)

Answer the following questions in one sentence:

1. **Which nutrient is found in citrus fruits like oranges and lemons?**
 - **Answer:** Vitamin C is found in citrus fruits like oranges and lemons.
2. **Which vitamin helps keep our eyes and skin healthy?**
 - **Answer:** Vitamin A keeps our eyes and skin healthy.
3. **Name a food source rich in carbohydrates.**
 - **Answer:** Rice (or wheat / potato) is a food source rich in carbohydrates.
4. **What is the main function of proteins in our body?**
 - **Answer:** The main function of proteins is body growth and repair of damaged tissues.

5. Which mineral is added to salt to prevent goitre?

- **Answer:** Iodine is added to salt to prevent goitre.

4. INTEXT QUESTIONS (Page 48)

Answer the following questions in one sentence:

1. Which food component is often tested to see if it leaves an oily patch on paper?

- **Answer:** Fats are tested to see if they leave an oily patch on paper.

2. Which vitamin deficiency causes night blindness?

- **Answer:** Vitamin A deficiency causes night blindness.

3. What is the common carbohydrate found in bread and rice?

- **Answer:** Starch is the common carbohydrate found in bread and rice.

4. What component of food is tested using an iodine solution?

- **Answer:** Starch is tested using an iodine solution.

5. What do you call the part of food that helps in the smooth passage of stools?

- **Answer:** Dietary fibre (or roughage) helps in the smooth passage of stools.

5. INTEXT QUESTIONS (Page 51)

Write T for true and F for false Statements:

1. Potato wafers have more dietary fibre than roasted chana. **(False)** (Potato wafers have 4.8g while roasted chana has 16.8g)
2. Millets like jowar and bajra are good sources of vitamins and minerals. **(True)**
3. Eating junk food regularly is beneficial for our health. **(False)**
4. Fortified foods have added nutrients to make them healthier. **(True)**
5. Reducing food miles can help cut pollution and support local farmers. **(True)**

EXERCISES

A. Choose the correct option

1. What is the variety in what we eat called?

- **Answer: a. Food diversity**

2. Which vitamin helps keep our eyes and skin healthy?

- **Answer: a. Vitamin A**

3. Which mineral is added to salt to prevent goitre?
 - **Answer: c. Iodine**
4. Which food component is tested using an iodine solution?
 - **Answer: c. Carbohydrates** (*specifically Starch*)
5. Which of the following is considered junk food?
 - **Answer: b. Potato wafers**

B. Fill in the Blanks

1. The traditional foods of a region are closely linked to the **crops** that grow well in that area's soil and climate.
2. In Gujarat, people often enjoy a traditional dish called **dhokla**.
3. Proteins are essential for **growth** and **repair of body tissues**.
4. Dietary fibres, also called **roughage**, help ensure the smooth passage of stools.
5. Packaged food items usually have labels showing their **nutritional** content.

C. Write T for true and F for false statements

1. Cooking can cause the loss of some vitamins like Vitamin C. **(True)**
2. Fats do not provide any energy to our bodies. **(False)** (Fats provide stored energy)
3. Proteins are not found in plant-based sources. **(False)** (Pulses and beans are rich in plant protein)
4. Iodised salt was introduced to combat goitre in the 1960s. **(True)**
5. Junk food is high in essential nutrients like vitamins and minerals. **(False)**

D. Match the following columns

Column A	Column B

1. Carbohydrates	b. Provides energy
2. Fats	d. Provides stored energy and warmth
3. Calcium	e. Keeps bones and teeth healthy
4. Proteins	c. Helps in growth and repair
5. Vitamin C	a. Helps fight diseases

E. Answers the following questions in 20–30 words

- 1. What is the significance of food diversity?**
 - **Answer:** Food diversity ensures that our body receives a complete range of essential nutrients required for growth, energy, and health while providing varied choices in our daily meals.
- 2. How have cooking practices changed over time?**
 - **Answer:** Traditional tools like clay stoves (*chulhas*) and stone grinders (*sil-battas*) have been largely replaced by modern gas stoves and electric grinders, making cooking faster and easier.
- 3. What is the main function of proteins in our body?**
 - **Answer:** Proteins help in the growth, development, and repair of body cells and tissues. They build muscles, which is why they are called body-building foods.
- 4. Name two sources of plant-based protein.**
 - **Answer:** Two plant-based sources of protein are pulses (such as dal and chickpeas) and nuts (such as almonds and peanuts).
- 5. Why is it important to include raw fruits and vegetables in our diet?**
 - **Answer:** Cooking can destroy heat-sensitive nutrients like Vitamin C. Eating raw fruits and vegetables preserves these essential vitamins, minerals, and dietary fibres intact.
- 6. What happens when we test for starch using an iodine solution?**
 - **Answer:** When a few drops of diluted iodine solution are added to a food item containing starch, the item turns to a blue-black color.
- 7. How can we test for the presence of fats in a food item?**
 - **Answer:** Wrap and press the food item in a piece of paper. If an oily, translucent patch appears on the paper after drying, fats are present.

8. **What nutrient deficiency can lead to night blindness?**

- **Answer:** Deficiency of **Vitamin A** in the diet leads to poor vision in darkness, commonly known as night blindness.

9. **Why is it important to choose foods wisely and read labels?**

- **Answer:** Reading labels helps verify the nutrient content, check for added nutrients in fortified foods, and avoid junk foods high in unhealthy fats and sugars.

10. **How do millets benefit the environment?**

- **Answer:** Millets consume less water, thrive in poor quality soils, and adapt well to harsh climate conditions, making them environmentally sustainable crops.

F. Answers the following questions in 60–80 words

1. **Explain the importance of carbohydrates, fats, and proteins in our diet. How do these nutrients provide energy, support growth, and contribute to overall health?**

- **Answer:**
 - **Carbohydrates** serve as the body's primary and instant source of energy needed for daily physical and mental functions.
 - **Fats** act as a concentrated energy reserve and help maintain body warmth.
 - **Proteins** are vital body-builders that facilitate growth, repair damaged cells, and build muscular strength. Together, they ensure the body stays energetic, structural tissues remain healthy, and normal biological functions proceed properly.

2. **Describe the different types of vitamins and minerals and their specific functions in maintaining health. Give examples of diseases caused by their deficiencies.**

- **Answer:**
 - **Vitamins:** Vitamin A maintains vision and skin (deficiency: Night Blindness); Vitamin C boosts immunity and heals wounds (deficiency: Scurvy); Vitamin D ensures strong bones (deficiency: Rickets).
 - **Minerals:** Calcium keeps bones and teeth strong (deficiency: Bone/Tooth decay); Iodine aids physical and mental activity (deficiency: Goitre); Iron forms blood hemoglobin (deficiency: Anaemia). Vitamins and minerals act as protective nutrients, guarding the body against systemic disorders.

3. **Discuss how technological advancements and lifestyle changes have influenced cooking practices over time.**

- **Answer:** Traditional cooking relied on labor-intensive tools like clay stoves (*chulhas*) fueled by wood and stone grinders (*sil-battas*) for crushing spices. Rapid urbanization, technological advancements, and modern lifestyles led to modern appliances like gas stoves, microwave ovens, and electric mixers. These innovations make meal preparation quicker, reduce physical toil, and allow people to experiment with international cuisines and diverse ingredients easily.

4. **Compare the nutritional values of potato wafers and roasted chana. Explain why roasted chana is a healthier snack option than potato wafers.**

- **Answer:**
 - **Potato Wafers:** High in calories (536 kcal) and fats (35g), but low in proteins (7g) and dietary fibre (4.8g).
 - **Roasted Chana:** Lower in calories (355 kcal) and fats (6.26g), but significantly higher in proteins (18.64g) and dietary fibre (16.8g). Roasted chana provides better nutrition, keeps us full longer, and prevents obesity, making it a much healthier alternative.

5. **Discuss the benefits of including millets in our diet. Why are they considered as "nutri-cereals"?**

- **Answer:** Millets (jowar, bajra, ragi, sanwa) are rich in vitamins, minerals (iron, calcium), and dietary fibre. They provide sustained energy, improve digestion, and guard against chronic diseases, earning them the title "nutri-cereals". Environmentally, they require minimal water and grow well in poor soil conditions without heavy pesticides, making them sustainable for agriculture.

6. **Sugar is a type of carbohydrate. When sugar is tested with an iodine solution, the colour does not change to blue-black. What could be the reason for this?**

- **Answer:** Iodine solution reacts specifically with **starch** (a complex carbohydrate) to produce a blue-black color complex. Table sugar (sucrose or glucose) is a **simple carbohydrate**, not starch. Because simple sugars do not form the specific molecular structure required to react with iodine, no color change occurs during the test.

7. **Describe the food production process from farm to plate and the significance of reducing food miles.**

- **Answer:**
 - **Process:** Sowing seeds - harvesting - threshing and winnowing - storage in godowns - grinding/processing - transport to retail shops - cooking and serving on plates.
 - **Significance of reducing food miles:** Consuming locally produced food lowers fuel usage in transportation, reduces greenhouse gas emissions, cuts food costs, supports local farmers, and ensures fresher, nutrient-dense food on our plates.

8. **While working in the lab, Megha accidentally spilt some iodine on her socks and her teacher's saree. The iodine on the saree turned blue-black, but the colour of her socks stayed the same. What can explain this difference?**

- **Answer:** Iodine turns blue-black only when it comes in contact with starch. The teacher's saree was likely starched (a common practice for crisp cotton clothing), causing the iodine to turn blue-black. Megha's socks were made of synthetic or unstarched material containing no starch, so the iodine color remained unchanged.

9. **Discuss the role of FSSAI in ensuring the safety and quality of the food we consume.**

- **Answer:** The Food Safety and Standards Authority of India (FSSAI) sets quality and hygiene standards for food processing and packaging in India. It regulates food fortification, mandates nutritional labeling on packaged items, inspects food manufacturers, and prevents adulteration to ensure that food sold to consumers is safe, pure, and nutritious.

10. **Rashika says, "all starches are carbohydrates, but not all carbohydrates are starches." What do you think about her statement? Suggest an activity to verify your answer.**

- **Answer:**
 - **Validation:** Her statement is correct. Carbohydrates include simple sugars (glucose, sucrose) and complex forms like starch. Thus, starch is a sub-category of carbohydrates.
 - **Activity:** Test boiled rice (starch) and glucose water (simple sugar) with diluted iodine solution. Boiled rice turns blue-black, proving it contains starch. Glucose water does not turn blue-black, proving it is a non-starch carbohydrate.

G. Assertion/Reason Questions (Page 54–55)

Options:

- **a.** Both A and R are true, and R is the correct explanation of A.
- **b.** Both A and R are true, but R is not the correct explanation of A.
- **c.** A is true, but R is false.
- **d.** A is false, but R is true.

1. **Assertion:** Vitamins and minerals are known as protective nutrients.

Reason: Vitamins and minerals help protect our bodies from diseases and keep us healthy.

- **Answer: a. Both A and R are true, and R is the correct explanation of A.**

2. **Assertion:** Junk foods are not healthy for regular consumption.

Reason: Junk foods are high in calories due to high sugar and fat content but low in essential nutrients.

- **Answer: a. Both A and R are true, and R is the correct explanation of A.**

3. **Assertion:** Millets are considered good for the environment.

Reason: Millets need less water and can grow in poor soil.

- **Answer: a. Both A and R are true, and R is the correct explanation of A.**

H. Higher-Order Thinking Questions (HOTS)

1. **Suggest ways by which families can change their diets to ensure they are getting all the nutrients they need.**

- **Answer:**

- Incorporate seasonal, locally grown fruits and green leafy vegetables.
- Replace refined flour with whole grains and millets like bajra or jowar.
- Include plant-based or animal-based proteins in every meal (pulses, milk, paneer, eggs).
- Avoid deep-fried junk foods and substitute them with healthy snacks like roasted chana, nuts, and seeds.

2. **Discuss the potential long-term impacts of regularly consuming a diet high in junk food.**

- **Answer:** Regular junk food intake leads to obesity, dental cavities, nutritional deficiencies, chronic fatigue, digestive issues due to lack of fibre, and increases the long-term risk of conditions like diabetes, hypertension, and cardiovascular diseases.

J. Life Skills (Page 55)

Which step would you take to ensure your family's weekly meals include a variety of nutrients from different food groups?

- **Answer: c. Incorporate locally grown, seasonal produce and whole grains**