

## Contrôle de l'emballage et conditionnement

### **1<sup>st</sup> Part: Answer briefly these questions:**

1. What is meant by “barrier packaging” ? ; explain its preservation importance
2. Give two examples of natural packaging used in prehistoric times.
3. Explain the difference between **technical role** and **marketing role** of food packaging.
4. Why is aluminum considered an efficient thermal conductor?
5. Define thermoplastic materials.
6. Mention two disadvantages of plastic packaging.
7. Explain how packaging contributes to food security and reduction of food losses.
8. Discuss the SWOT analysis importance for food packaging development in developing countries.
9. Describe the role of packaging in preservation of food quality and shelf life.
10. Mention the **three types of packaging** with one example for each.
11. State two technical roles of food packaging.
12. Give two marketing functions of packaging.

### **2<sup>nd</sup> Part: Write whatever the following statements are True or False:**

1. Aluminum packaging protects against ultraviolet light.
2. Transport packaging includes shipping containers.
3. Paperboard is completely resistant to moisture.
4. Plastic packaging is always recyclable.
5. Glass is chemically inert.

### **3<sup>rd</sup> Part: Choose the correct answer**

1. Which layer in Tetra Pack protects against oxygen and light?  
A. Carton                    B. Polyethylene  
C. Aluminum film        D. Ink layer
2. Which packaging is removed without affecting the product?  
A. Primary                B. Secondary  
C. Tertiary                D. Transport container
3. Cast iron is mainly used because of:  
A. Low heat capacity  
B. High corrosion rate  
C. Good heat retention  
D. Light weight
4. Thermosetting plastic is characterized by:  
A. Low melting point  
B. Weak molecular bonds  
C. Strong cross-linked structure  
D. Easy recycling
5. The first glass containers were used by:  
A. Romans                B. Egyptians  
C. Greeks                 D. Chinese
6. Primary packaging is also called:  
A. Transport packaging  
B. Bundled packaging  
C. Sales packaging  
D. Shipping packaging
7. PET bottles were first sold by:  
A. Vittel                B. Pepsi-Cola  
C. Tetrapak            D. Lesieur
8. Tetrapak packaging was first invented in:  
A. 1934                B. 1951  
C. 1969                D. 2000
9. Nicolas Appert is known for:  
A. Inventing PET bottles  
B. Discovering heat preservation in glass  
C. Inventing corrugated cardboard  
D. Creating Tetra Pack
10. Which material provides a barrier against light and oxygen?  
A. Glass                B. Aluminum  
C. Cardboard            D. PVC

## Correction

### **1st Part: Short Answers**

#### **1. Barrier packaging**

Barrier packaging is packaging that prevents the passage of oxygen, moisture, light, or gases.

It is important for preservation because it protects food from spoilage, oxidation, and contamination, thus extending shelf life.

#### **2. Natural packaging in prehistoric times**

Animal skins and Leaves or tree bark ;;;;;;;;

#### **3. Difference between technical and marketing roles**

Technical role: Protects food, preserves quality, and ensures safety.

Marketing role: Attracts consumers and promotes the product.

#### **4. Why aluminum is an efficient thermal conductor**

Because it allows heat to pass through quickly due to its high thermal conductivity.

#### **5. Thermoplastic materials**

Materials that soften when heated and can be reshaped repeatedly.

#### **6. Two disadvantages of plastic packaging**

Environmental pollution and Difficult recycling for some plastics

#### **7. Packaging and food security**

Packaging reduces food losses by protecting food during storage and transport, helping ensure food availability.

#### **8. Importance of SWOT analysis in developing countries**

It helps identify strengths, weaknesses, opportunities, and threats to improve packaging development and decision-making.

#### **9. Role of packaging in food quality and shelf life**

It protects food from physical, chemical, and biological damage, preserving freshness and extending shelf life.

#### **10. Three types of packaging (with examples)**

Primary: Bottle

Secondary: Carton box

Tertiary: Pallet

11. Two technical roles of food packaging

Protection from contamination and Preservation of food quality

12. Two marketing functions of packaging

Product identification

Product promotion

### **2nd Part: True or False**

Aluminum packaging protects against ultraviolet light. True

Transport packaging includes shipping containers. True

Paperboard is completely resistant to moisture. False

Plastic packaging is always recyclable. False

Glass is chemically inert. True

### **3rd Part: Multiple Choice**

Which layer in Tetra Pack protects against oxygen and light?

↙C. Aluminum film

Which packaging is removed without affecting the product?

↙B. Secondary

Cast iron is mainly used because of:

↙C. Good heat retention

Thermosetting plastic is characterized by:

↙C. Strong cross-linked structure

The first glass containers were used by:

↙B. Egyptians

Primary packaging is also called:

↙C. Sales packaging

PET bottles were first sold by:

↙B. Pepsi-Cola

Tetrapak packaging was first invented in:

↙B. 1951

Nicolas Appert is known for:

↙B. Discovering heat preservation in glass

Which material is a barrier against light and oxygen?

↙B. Aluminum