

Multiple Choice Questions:**Definition and Classification:**

1. _____ is the science, art and technology of enclosing or protecting products for distribution, storage, sale, and use.

A. Tablet

B. Packaging

C. Size Reduction

D. Size Separation

2. Which is/are the type of packaging:

A. Primary Packaging

B. Secondary Packaging

C. Tertiary Packaging

D. All of the above

3. The container used to protect the product from contamination and as well as from loss of contents during use are called:

A. Well-closed containers

B. Air tight containers

C. Light-resistant container

D. Multiple dose container

4. Which of the following materials are used in pharmaceutical packaging?

A. Glass

B. Plastic

C. Metal

D. All of the above

5. Type III glass is also known as:

A. Soda-lime glass

B. General purpose soda-lime glass

C. Borosilicate glass

D. Treated Soda Lime glass

6. Type-1 glass is also known as:

A. Borosilicate glass

B. Regular soda-lime glass

C. Treated soda-lime glass

D. None of the above.

7. Regular Soda-Lime Glass is:

A. Cost-Effective

B. Type-III

C. Type-II

D. Type-I

8. Borosilicate Glass is:

A. Type-IV

B. Type-III

C. Type-II

D. Type-I

9. Treated Soda-Lime Glass is:

A. Type-IV

B. Type-III

C. Type-II

D. Type-I

10. The ideal requirement for packaging is:

A. Toxic

B. FDA approved

C. Reactive with the product

D. Cause of product degradation

11. Which type of glass is suitable for non-aqueous preparations for parenteral use?

A. Type-IV

B. Type-III

C. Type-II

D. Type-I

12. Which packaging material is used mainly for the construction of closure meant for vials, transfusion fluid bottles, dropping bottles and as washers in many other types of product.

- A. Glass
- B. Plastic
- C. Metal
- D. Rubber**

13. Which element is/are used for metal container?

- A. Tin
- B. Aluminium
- C. Lead
- D. Iron

E. All of the above

14. Which is the thermosetting type plastic?

- A. Phenol-formaldehyde
- B. Urea formaldehyde
- C. Melamine formaldehyde

D. All of the above

Composition of Packaging Materials:

1. Composition of glass is:

- A. Sand
- B. Soda ash
- C. Lime stone & cullet

D. All of the above

2. Plastic containers are generally made from the following material:

- A. Polyethylene
- B. Polypropylene
- C. Polystyrene

D. All of the above

3. Which of the following is used as Vulcanizing agent in the manufacture of rubber closure?

- A. Sulphur**
- B. Activated carbon black
- C. Tale
- D. Stearic acid

4. The package composed of a base layer having cavities that hold the pharmaceutical product and a lid is called:

- A. Strip Package
- B. Child resistant package
- C. Blister Package**
- D. Well closed package

5. Soda ash is also known as:

- A. Pure silica
- B. Sodium carbonate**
- C. Lime Stone
- D. Calcium carbonate

6. Type – I glass consist of:

- A. SiO_2 - 80%
- B. B_2O_3 - 12
- C. Al_2O_3 - 2%
- D. $\text{Na}_2\text{O}+\text{CaO}$ - 6%

E. All of the above

7. Which additive used in manufacturing of plastics?

- A. Antioxidant
- B. Plasticizers
- C. Pigments

D. All of the above

Manufacturing Methods:

1. Which of the following methods are used in the production of glass:

- A. Blowing
- B. Drawing
- C. Pressing & casting

D. All of the above

Properties of Packaging Materials:

1. To protect the contents of a bottle from the effects of sunlight by UV rays, which glass is used?

A. Amber Coloured glass

B. Red-coloured glass

C. Both of the above

D. All of the above

2. The Function of packaging is:

A. Target identification

B. Target validation

C. Product Identification

D. Optimization

3. Which type of glass shows, high hydrolytic resistance, suitable for most preparations, not for parenteral use.

A. Type-IV

B. Type-III

C. Type-II

D. Type-I

4. Which type of glasses are resistant to heat so they can be readily sterilized by heat.

A. Type-IV

B. Type-III

C. Type-II

D. Type-I

5. Which metallic container is most expensive?

A. Tin

B. Aluminium

C. Lead

D. Iron

E. All of the above

6. Which containers are preferred for foods, like milk powder containers are coated with tin?

A. Tin

B. Aluminium

C. Iron

D. All of the above

7. Metal is used for inner lining of tubes which are used for such product as fluoride tooth paste?

A. Tin

B. Aluminium

C. Lead

D. Iron

8. Thermoplastic on heating, they soften to a viscous fluid which hardens again on cooling. Example is/ are:

A. Polyethylene

B. Polypropylene, polyvinylchloride

C. Nylon (polyamide)

D. All of the above

9. Chemical used for manufacturing, carbonated waters Bottle, mineral waters Bottle, mouth washes, cosmetics.

A. Polyethylene terephthalate (PET)

B. Poly ethylene

C. Rigid polyvinylchloride (PVC)

D. All of the above

10. Which packaging material used for collapsible tubes?

A. Glass

B. Plastic

C. Rubber

D. Metal

Advantages of packaging materials:

1. The advantages of plastic containers over glass containers are:

A. Easy formation

B. Resistance to breakage

C. Freedom of design

D. All of the above

2. Which of the following packaging material is protect the drug content against the light?

A. Plastic containers

B. Amber coloured glass containers

C. Both of the above

D. None of the above

3. Which packaging material shows have good protection for powder because powder very sensitive against the moisture and Temperature.

A. Glass

B. Plastic

C. Metal

D. All of the above

4. Which is the lowest cost metal used in packaging material?

A. Tin

B. Aluminium

C. Lead

D. Iron

Disadvantages of packaging materials:

1. Major disadvantages of glass as a packaging material are:

A. Fragility

B. Weight

C. Both of the above

D. None of the above

Evaluation of packaging materials:

1. The test for packaging is:

A. Drop test

B. Vibration test

C. Shock test:

D. All of these

2. Method used for plastic container evaluation:

A. Permeation

B. Leaching

C. Sorption

D. Chemical reaction

E. All of the above