

Name : .....  
Roll No. : .....  
Invigilator's Signature : .....

**CS/B.PHARM/SEP.SUPPLE/SEM-7/PT-709A/2012**

**2012**

**PACKAGING TECHNOLOGY**

Time Allotted : 3 Hours

Full Marks : 70

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**GROUP - A  
( Multiple Choice Type Questions )**

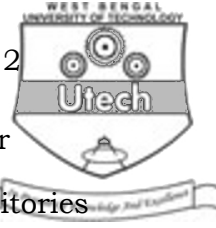
1. Choose the correct alternatives for any *ten* of the following :

10 × 1 = 10

- i) Which of the following metal containers is not suitable for packaging of drugs & cosmetics ?
- a) Shallow drawn containers
  - b) Deep drawn containers
  - c) Formed aluminium foil containers
  - d) Impact extruded containers.
- ii) Which of the following tests is not done over Rubber closures for Injectables ?
- a) Sterilization test
  - b) Leakage test
  - c) Fragmentation test
  - d) Self-sealability test.

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- iii) Polyvinyl Chloride packaging is useful for
- a) cosmetics                      b) suppositories  
c) parenterals                    d) ophthalmics.
- iv) Example of Thermoplastic polymer is
- a) polyester                      b) polyurethane  
c) polyether                        d) polyethylene.
- v) Which of the following is a rigid, crystal clear plastic ?
- a) HDPE                            b) LDPE  
c) Polypropylene                d) Polystyrene.
- vi) Amber colour in glass is produced by using
- a) calcium oxide                b) iron oxide  
c) zinc oxide                      d) alumina.
- vii) Glass bottles can be substituted by polymeric
- a) polypropylene bottle        b) polystyrene bottle  
c) polycarbonate bottle        d) nylon bottle.
- viii) Blooming is a common problem in the containers made up of
- a) borosilicate glass            b) polyethylene  
c) soda lime glass                d) metal.
- ix) Sulphur treatment is generally done for
- a) plastic containers            b) glass containers  
c) metal containers                d) none of these.

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- x) Collapsible tubes made from lead are not used for pharmaceutical packaging because
- a) inferior metal                      b) soft in nature
- c) risk of lead poisoning      d) poor appearance.
- xi) Conditions for testing paper and board packaging material are
- a) 23°C ± 1°C, 50% RH      b) 29°C ± 1°C, 60% RH
- c) 33°C ± 1°C, 80% RH      d) 43°C ± 1°C, 40% RH.
- xii) Air-tight sealed containers are used for
- a) Tablets                                  b) Capsules
- c) Injectables                              d) Liquid preparations.

**GROUP – B**

**( Short Answer Type Questions )**

Answer any *three* of the following.                      3 × 5 = 15

2. Write down the principles of Blister Packaging.
3. Write a note on wastage control for packaging materials.
4. Write a note on polyethylene as packaging material.
5. Explain the parameters of drug plastic considerations.
6. Write a note on impact extended containers.



**GROUP – C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

7. a) What do you mean by Tamper resistant packaging ?  
Give examples.
- b) Write a note on Strip packaging Technology.
8. Explain in detail about the regulatory requirements for packaging materials.
9. Which glass is preferred as packaging material ? What are its drawbacks ? Give a brief note on Type-I and Type-II glasses. What do you mean by light-resistant containers.  $5 + 7 + 3$
10. Give a detailed account of packaging of solid oral dosage forms.
11. a) Write a note on Aluminium as a packaging material.
- b) Write about the containers used for packaging parenterals.  $2 \times 7\frac{1}{2}$

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