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CS/B.Tech(FT)/SEM-7/FT-701/2009-10					
2009					
FOOD 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)					
(Multiple Choice Type guestions)					
1.	. Choose the correct alternatives for any <i>ten</i> of the following :				
					$10 \propto 1 = 10$
	i)	Benzophenone is actually			
		a)	Dibenzyl alcohol	b)	Diphenyl ketone
		c)	Propyl benzene	d)	Phenyl propane.
	ii)	The principal ingredient of GLASS is			
		a)	Calcium oxide	b)	Alumina

d)

b)

d)

Potash alum.

PVC

LDPE.

Silica

BHT

ETP

An example of antioxidant is

c)

a)

c)

iii)

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- iv) The full name of PET is
 - a) Polyester terephthalate
 - b) Polyester trimethylene
 - c) Polyethylene terephthalate
 - d) None of these.
- v) The unit of "Diffusion coefficient" is
 - a) cm/sec
- b) cm^2/sec
- c) cm^2/sec^2
- d) none of these.
- vi) "One volume" CO $_2$ means
 - a) $1 \text{ gm/lit. of CO}_{2}$
- b) $2 \text{ gm/lit. of CO}_2$
- c) $3 \text{ gm/lit. of CO}_2$
- d) none of these.
- vii) Inner layer of a laminate for food pouches preferably consists of
 - a) LDPE

- b) PP
- c) Nylon film
- d) all of these.
- viii) The most ideal packaging material for instant tea is
 - a) Al foil

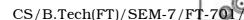
b) PET

c) LDPE

- d) paper.
- ix) Gas of a flexible packaging film increases with the thickness of packaging film.
 - a) permeability
- b) MVTR

c) gloss

d) gsm.



- x) An ideal shipping container for biscuit is
 - a) Paperboard/cardboard box
 - b) Fleibel pouch
 - c) Glass jar
 - d) Aluminium container.
- xi) Role of nylon in laminates is basically due to
 - a) stiffness and printability
 - b) strength, grease and oil resistability
 - c) clarity
 - d) low moisture permeability.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following.

 $3 \propto 5 = 15$

- "Two products of the same acidity will not necessarily be equally corrosive." Give reason(s) with suitable examples.
- 3. Name four metals or metal alloys which are used for the packaging of foods. Why Aluminium foil is so important for packaging of food products? 2+3
- 4. Write a short note on "shrink films".

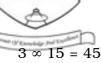
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- 5. Briefly discuss about flexible and rigid packaging.
- 6. What is co-extrution in making laminates?

GROUP - C

(Long Answer Type Questions)

Answer any three of the following.



- 7. Describe the packaging materials used in carbonated soft drinks. What are the factors influencing the taste & odours of carbonated beverages packaged in plastic containers? 9 + 6
- 8. Describe the primary, secondary & tertiary packaging.

 Mention four main packaging functions. Describe package environment. Describe few packaging regulations.

3 + 4 + 3 + 5

- 9. Explain different techniques of aseptic packaging of foods.
- 10. Recommend suitable packaging material for the following food items and justify:
 - a) Bread and biscuits
 - b) Fruit beverage
 - c) Cheese and milk
 - d) Fresh apple
 - e) Black pepper powder.
- 11. What is modified atmosphere packaging (MAP)? What are the packaging films commonly used for MAP? Is there any difference in Controlled atmosphere packaging and MAP? What are the different steps involved in aseptic packaging? Discuss the role of aluminium in packaging. How are irradiated food packed?

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