

B.E. PRINTING ENGINEERING SECOND YEAR SECOND SEMESTER – 2017**Subject: PACKAGING TECHNIQUES- I****Time: 3hr.****Full Marks: 100****Answer any 4 questions**

1. a) Describe the protection and convenience aspects of packaging with suitable examples. 15
b) Briefly write on MAP. 10
2. a) Describe the different treatments normally performed on packaging papers. 10
b) Show the structure of a glass bottle and describe the advantages and disadvantages of glass as packaging material. 10
c) Briefly write on different types of active packaging systems. 5
3. a) Explain the DRD and DWI can making process with required diagrams. State the major differences between DRD and DWI cans. 15
b) Write on following plastics in packaging context; LDPE, PVC, PS, PET 10
4. a) Describe the advantages and disadvantages of wood as packaging material. State few important reasons for wood drying. 8
b) Describe the thermoforming process and state few applications of the same. 8
c) Write on different agents that can cause degradation of food products. 9
5. a) Write on following type of papers with their applications in packaging; greaseproof paper, glassine paper, microcreping paper, vegetable parchment, tissue paper. 15
b) Describe on extrusion moulding process with both fixed and stretchable stick. 10
6. a) Describe the vertical FFS process with required diagrams. 8
b) Write on different types of paper boards used for packaging. 8
c) Discuss different types of closures commonly used for glass and plastic bottles. 9