

Note:

1. Question No. 1 is compulsory.
2. Attempt any three questions out of remaining five questions.
3. Figures to right indicate full marks.

- Q.1 Answer the following
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| a. Define (i) Glass (ii) Glass transition temperature (iii) Gob (iv) Blank mould (v) Annealing | 05 |
| b. Draw and name the different body parts of glass bottle.                                     | 05 |
| c. Explain Hall Herault process for aluminium extraction                                       | 05 |
| d. Write a short note on FIBC  | 05 |
- Q.2
- |  |    |
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| a. Draw the flow diagram of glass manufacturing process. Explain.                                      | 10 |
| b. Give the detailed information about the reactions taking place in the melting reactions in furnace. | 10 |
- Q.3
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|---|----|
| a. What is fluxing and fining of glass?         | 10 |
| b. Explain aluminium foil manufacturing process | 10 |
- Q.4
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|---|----|
| a. Explain in detail 3 piece can manufacturing process.   | 10 |
| b. Identify and state the four basic parts of can seamer which are directly involved in forming the double seam and explain the role of each. | 10 |
- Q.5
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| a. Explain draw and redraw and draw and iron process of can manufacturing. | 10 |
| b. How the end making of metal cans are made? Explain.                     | 10 |
- Q.6
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| a. What are the different categories of textile packaging material? Explain with applications | 10 |
| b. Explain the manufacturing process of PP woven sacks.                                       | 10 |

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