

Department of Media Technology
MED 4055 Packaging Material Sciences End Semester
VI semester [Regular] June 2022

Type: DES

Q1. Explain the different steps involved in paper and board making. (3)

Q2. M/s Prime Print was into commercial printing over few decades. Since 2020, after the COVID Pandemic, majority of the education programs got converted into online / digital mode. This shift from offline to online, gave a huge negative impact on the commercial printing activities. To take care of the company and its extended family, the management decided to diversify the existing commercial printing into package printing. The company started making small carton printing and was very much successful, however after some time the job started to increase and the time came when the Quality department encountered the following problem with the substrate used for making carton.

- Surface was not receiving the ink properly
- More abrasion on the surface
- Texture of the substrate was not uniform
- Pores on the substrate
- Carton required a good appeal

As a packaging expert, what is your solution for the above problems? Explain. (3)

Q3. Explain the theories of Adhesion and also give examples for adhesive under each theories. (4)

Q4. When compared with rigid packaging materials, why plastic has become very popular packaging material? Explain. (3)

Q5. What are the qualities of BOPP film? Give its applications (3)

Q6. Explain the plastic which is tough, slightly translucent material and is waxy to touch. Also give the application of the same. (4)

Q7. Which rigid packaging material is considered as high value package? Explain the steps involved in the production of the same. (3)

Q8. M/s Rampa is venturing into wooden packaging containers, which is known for quality production. In order to make a quality wooden package, what are the qualities the manager should consider in the material? And Why? (4)

Q9. Amongst the electrolytic tinning and hot dip tinning, which is better? Explain. (3)

Q10. M/s Manipal Pack is developing packing for export jobs, in this regards, it is now in the process of selecting the cushioning material, which can help the package in passing the drop test. For this,

what are the characteristic the cushioning materials should contain / poses? Explain each of them. (4)

Q11. While selecting the cushioning material, it is very important to consider the function of the Cushioning material – Why? Explain. (3)

Q12. To protect the packaged product from repeated shock, which type of cushioning material is required? Explain anyone type of the same. (3)

Q13. It is required to select packaging material for FMCG products, which can perform similar to that of tin can or glass bottle – Which will you suggest and why? Explain. (3)

Q14. Give the sketch of flexible packaging film cross section. Also explain the films used in lamination process. (3)

Q15. Explain the lamination process, which is extremely fast, economical, used only for aluminium foil / plastic combination (4)