Jimma Institute of Technology

B.Sc. Materials Science and Engineering

Tutorial - Multiple Choice Questions

Model Exam – 4 **12.06.2023**

Name of the student	Register number

Answer the following questions.

1. Which of the following polymer processing methods is commonly used to produce plastic bottles?
   (a).Extrusion (b). Injection molding (c). Thermoforming (d). Blow molding
2. Which polymer processing method involves the simultaneous extrusion of multiple polymers?
   (a). Compression molding (b). Coextrusion (c). Transfer molding (d). Rotational molding
3. What is the primary purpose of injection molding?
   (a). Producing fibers and filaments (b). Creating three-dimensional shapes (c). Coating surfaces with a thin polymer layer (d). Blowing air into a polymer tube
4. Which of the following polymer processing methods is commonly used to produce plastic films and sheets?
   (a). Blow molding (b). Calendering (c). Pultrusion (d). Dip coating
5. What is the primary advantage of rotational molding?
   (a). High production speed (b). Precise control of part dimensions (c). Ability to create hollow parts with complex shapes (d). Low cost of equipment
6. Which polymer processing method involves pouring liquid polymer into a mold and allowing it to solidify?
   (a). Extrusion (b). Injection molding (c). Polymer casting (d). Film blowing
7. What is the primary purpose of thermoforming?

(a). Creating fibers and filaments (b). Producing thin polymer films (c). Shaping thermoplastic sheets into three-dimensionalobjects (d). Coating surfaces with a polymer

8. Which polymer processing method uses a combination of heat and pressure to shape a polymer between two mold halves?
   (a). Compression molding (b). Transfer molding (c). Injection molding (d). Calendering
9. What is the primary purpose of film blowing?
   (a). Producing plastic bottles (b). Creating fibers and filaments (c). Manufacturing plastic films and sheets (d). Shaping thermoplastic sheets into three-dimensional objects
10. Which polymer processing method is commonly used to produce rubber products?
    (a). Extrusion (b). Blow molding (c). Injection molding (d). Reaction injection molding
11. What is the primary advantage of extrusion?
    (a). Ability to create complex shapes (b). High production speed

    (c). Precise control of part dimensions (d). Low cost of equipment
12. Which polymer processing method involves the use of molds and a chemical reaction to produce complex parts?
    (a). Thermoforming (b). Reaction injection molding (c). Coextrusion (d). Pultrusion
13. What is the primary purpose of blow molding?
    (a). Producing fibers and filaments (b). Creating three-dimensional shapes (c). Shaping thermoplastic sheets into objects (d). Coating surfaces with a thin polymer layer
14. Which polymer processing method involves heating and pressurizing a thermosetting resin in a closed mold?
    (a). Transfer molding (b). Compression molding (c). Extrusion (d). Calendering
15. What is the primary advantage of injection molding?

(a). Ability to produce complex shapes with high precision (b). High production speed (c). Low cost of equipment (d). Suitable for producing large objects

16. Which polymer processing method is commonly used to produce composite materials with continuous fiber reinforcement?
(a). Injection molding (b). Compression molding (c). Pultrusion (d). Thermoforming

17. What is the primary purpose of calendering?
(a). Creating fibers and filaments (b). Producing plastic bottles (c). Manufacturing plastic films and sheets (d). Shaping thermoplastic sheets into objects

18. Which polymer processing method involves the use of a heated die to shape a polymer by forcing it through a small opening?
(a). Extrusion (b). Injection molding (c). Blow molding (d).Polymer casting

19. What is the primary advantage of compression molding?
(a). High production speed (b). Precise control of part dimensions (c). Ability to create complex shapes (d). Suitable for producing large objects

20. Which polymer processing method is commonly used to create thin coatings on surfaces?
(a). Thermoforming (b). Dip coating (c). Reaction injection molding (d). Film blowing