Printed Pages: 02 **Sub Code: NPL602**

Paper Id: | 1 | 8 | 7 | 6 | 0 | 2 | **Roll No.** | | | | | | | | | | |

B. Tech.
(SEM VI) THEORY EXAMINATION 2017-18
PLASTICS PROCESSING -II

Time: 3 Hours ***Total Marks: 100***

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 10 = 20

a. Define the term "Plastication"
b. PP has a specific gravity of 0.90.It is to be molded in an injection molding machine with a shot wt. of 80gm(in PS).calculate new shot wt.
c. How do you eliminate weld line in injection molding process.
d. State the various moulds materials used in blow molding.
e. What is Parison programming?
f. Define Pultrusion.
g. Write any two defects in Thermoforming process and discuss their remedies.
h. Define rotational molding cycle.
i. Cushion and drooling
j. State the advantages of Hydraulic clamping system.

SECTION B

2. Attempt any *three* of the following: 10 x 3 = 30

a. What are the important process variable used in injection molding process ? Draw the neat sketch of an injection-molding machine along with latest application.
b. Discuss the difference between Extrusion blow molding and Injection blow molding along with application.
c. What do you mean by Stretch blow molding? What are its advantages?
d. What do you mean by Plug assist and drape forming ?How process variable affecting the product quality?
e. Write in brief about welding of platics. What are the advantages & disadvantages of rotational molding?

SECTION C

3. Attempt any *one* part of the following: 10 x 1 = 10

a. Describe the reaction injection molding process with the help of diagram .Discuss the advantages and disadvantageous of RIM process with application.
b. Describe the process of manufacturing of PET bottle of 1 Lit capacity with neat sketch .Give its uses.

4. Attempt any *one* part of the following: 10 x 1 = 10

a. Explain types of injection unit used in injection molding process .How process variable affect the product quality . Compare hydraulic clapping system with Toggle clapping system.
b. Discuss the difference between rotational molding and blow molding along with applications.

5. Attempt any *one* part of the following: 10 x 1 = 10

a. Classify Thermoforming processes. Explain the process of plug-assisted forming with merits over vaccum forming.

b. Explain Rotational molding process with neat sketch . How process variable affect the product quality. Give its application.

6. Attempt any *one* part of the following: 10 x 1 = 10

a. Describe the process of Injection molding of Thermoset with the help of suitable diagram along with its application.

b. What are the various processes of welding of plastics?

7. Attempt any *one* part of the following: 10 x 1 = 10

a. Write Short notes

i. Filament Winding

ii. Joining of Plastics

b. What are FRPs? Explain the process of hand lay up and spray up for manufacturing of FRP.