

Q.21 Explain concept of split moulds in Injection moulding system.

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Roll No. ....

Q.22 Give difference between two plate and three plate mould.

**5th Sem / Mechanical (Tool & Die Design)**

**Subject : Plastic Mould-Design and Drawing**

### **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Write a short note on :

- a) Rotational moulding process.
- b) Classification of cooling and ejection system of Injection moulds.

Q.24 Explain design parameters and calculations:

- a) For gate size, runner size, sprue size, guide pillar size
- b) Blow time, cooling period, and pinch-off selection for any blow mould.

Q.25 Design a multi cavity Injection mould for electric switch with suitable dimensions.

Time : 3 Hrs.

M.M. : 60

### **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 \_\_\_\_\_ is the main criteria to specify the compression moulding machine

- a) Press tonnage
- b) Rate of production
- c) Area of machine
- d) Cost of machine

Q.2 What is the function of a plunger in hand injection moulding machine?

- a) Melt the material
- b) Push and melt material in the mould
- c) Cool the material
- d) Eject the moulded part

Q.3 Which of the following processes of moulding is widely used for the manufacturing of bottle caps and automotive dashboards?

(20)

(4)

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(1)

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- a) Compression moulding
- b) Transfer moulding
- c) Injection moulding
- d) Jet moulding

Q.4 Which media is used to blow the parison in hand blow moulding machine?

- |          |        |
|----------|--------|
| a) Water | b) Air |
| c) Gas   | d) Oil |

Q.5 Core gives internal shape to plastic part.

- |          |                  |
|----------|------------------|
| a) True  | b) False         |
| c) Maybe | d) None of above |

Q.6 During transfer moulding, plastic material is transferred into a chamber called

- |          |                 |
|----------|-----------------|
| a) Sprue | b) Mould cavity |
| c) pot   | d) None         |

### **SECTION-B**

**Note:** Objective/ Completion type questions. All questions are compulsory.  $(6 \times 1 = 6)$

Q.7 Give one application of electroplating.

Q.8 Mould closing and opening depends on size of the component. (True/False)

Q.9 Give two functions of band heaters.

Q.10 \_\_\_\_\_ process is associated with breathing.

Q.11 Define Injection pressure.

Q.12 Name two components made from thermoforming process?

### **SECTION-C**

**Note:** Short answer type questions. Attempt any eight questions out of ten questions.  $(8 \times 4 = 32)$

Q.13 Discuss the selection criteria for injection moulding machine.

Q.14 Explain principle of compression moulding.

Q.15 Discuss various defects and their remedies of blow moulding process.

Q.16 Explain Location and guide system mechanism for injection moulds.

Q.17 Write short note on :

- a) Positive mould
- b) Flash mould

Q.18 Explain application of rotational moulding.

Q.19 Give importance of preheating moulds. in moulding process.

Q.20 Explain Hand Injection moulding with neat sketch.