22351

21819

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following: **10**

a) Define clamping capacity.

b) State the importance of day light opening.

c) State the basic principle of compression moulding.

d) Define the term call pickup.

e) Enlist any four transfer moulded products.

f) List any four types of rotational moulding machines.

g) Define plastic memory in thermoforming.

Marks

2. Attempt any THREE of the following: **12**

a) Explain the construction of screw with neat diagram.

b) Describe phenol formaldehyde as a compression moulding compound.

c) Explain the construction and working of pot type transfer moulding with neat diagram.

d) Explain the working of drape forming with neat diagram.

3. Attempt any THREE of the following: **12**

a) Suggest values of L/D ratio and compression ratio for the following:

(i) PP

(ii) PVC

(iii) PC

(iv) Any thermoset

b) Describe construction and working of infrared preheater used in compression moulding.

c) Name and explain the construction of rotational moulding machine where turret indexes 120.

d) Write any four defects occur in thermoformed product with their causes and remedies.

4. Attempt any THREE of the following: **12**

a) Compare toggle clamping with hychaulic clamping with at least four points.

b) Name and describe moulding compound used in compression moulding which is famous for manufacturing nonbreakable kitchenwares and plates.

c) Suggest and explain the construction and working of transfer moulding technique where sprue does not form.

d) Write only four merits and any four demerits of rotational moulding.

e) Describe construction and working of matched mould forming with neat diagram.

Marks

5. Attempt any TWO of the following: **12**

a) State and explain the processing parameter that affect the quality of injection moulding product.

b) Describe construction and working of down stroke compression moulding with neat labeled diagram.

c) Compare compression moulding and transfer moulding with atleast six points.

6. Attempt any TWO of the following: **12**

a) Draw and explain construction of two stage plunger type injection moulding machine with its working.

b) Write any six defects occur in injection moulded product with their causes and remedies.

c) Explain working of batch type rotation moulding machine in four steps, with diagram.