

CENTRAL INSTITUTE OF PLASTICS ENGINEERING & TECHNOLOGY

HEAD OFFICE : GUINDY, CHENNAI – 600 032.

ACADEMIC CELL

SIXTH SEMESTER EXAMINATION – JUNE 2012

Duration : 3 Hours

Course : DPMT/PD–PMT

Subject : Plastics Mould Design Theory - II

Max. Marks: 60

Date: 26.06.2012

Time : 10.00 a.m. to 01.00 p.m.

PART – A

Answer all questions

10 x 1 = 10

1. Compression Mould used for Thermoplastics material - say true or false.
2. Cooling medium for transfer mould is _____.
3. Wire coating die used in gas injection mould - say true or false.
4. We take _____ watts /Kg for calculation of heat in compression mould imperially.
5. Convergent section angle is _____.
30° - 50° b) 20° - 60° c) 10° - 30° d) 15° - 45°
6. In thermosetting moulds normally cartridge heaters are used - say true or false.
7. In general, the runner wastage in hot runner mould is _____.
minimum b) maximum c) nil d) normal
8. Preform is used in _____.
9. Automatic unscrewing mould is used for _____.
internal thread b) external thread c) Both a & b d) none of these
10. Pot area of Transfer mould is _____.
a) more than the projected area b) less than the projected area
c) equal to projected area d) all of these

PART – B

Answer all questions (Max. 40 words)

5 x 2 = 10

1. What are the types of Compression mould ?
2. What are the heat losses and additions taken into account for heat calculation ?
3. What are the ratios used in extrusion process ?
4. Write the formulae for calculating the clamping tonnage for the following.
a) Compression Mould b) Blow mould
5. What is outsert moulding ?

PART – C

Answer any six questions (Max. 100 words)

6 x 4 = 24

1. What is the difference between Hot runner mould and Insulated runner mould ?
2. What is pinch-off ? What are the types ? Explain any one with simple sketch.
3. What are the types of Hot runner manifolds ? Draw the sketch for any one.
4. What is Die Gap and Die land ?
5. What are the advantages and disadvantages of Transfer mould ?
6. Define bulk factor ? How you find LCD in compression mould ?
7. What do you mean by Approach Section and Land section ?

PART – D

Answer any two questions (Max. 300 words)

2 x 8 = 16

Draw the horizontal flash compression mould drawing for a suitable component and mention all the parts with heat treatment.

2. What are the types of dies for sheet extrusion ? Explain any one with neat sketch.
3. Write short notes on the following:
a) Gas injection mould b) Structural foam mould c) Stretch blow mould

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HEAD OFFICE : GUINDY, CHENNAI – 600 032.
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SIXTH SEMESTER EXAMINATION – JUNE 2012

Duration : 3 Hours
Course : DPT/PD–PT
Subject : Quality Management

Max. Marks: 60
Date : 26.06.2012
10.00 a.m. to 01.00 p.m.

PART – A

Answer all questions

10 x 1 = 10

1. NPC stands for _____.
2. Every manufacturing process is subjected to variability - say true or false.
3. The cost associated with the defective products produced are called as costs of _____.
4. _____ is the Japanese name to JIT.
5. Three distinct meanings may be given to quality namely – quality of design, quality of _____ and quality of _____.
6. TQM means _____.
7. Quality circle is a _____.
 - a) form of participative management
 - b) HRD technique
 - c) problem solving technique
 - d) all of these
8. Membership of quality circle is _____.
 - a) voluntary
 - b) mandatory
 - c) compulsory
 - d) none
9. The Quality of the product means _____.
 - a) degree of brightness
 - b) fitness for use
 - c) degree of perfection at any cost
 - d) fitness for Use at minimum cost
10. Higher quality of conformance costs more, higher quality of design costs less - say true or false.

PART – B

Answer all questions (Max. 40 words)

5 x 2 = 10

1. Define Inspection.
2. What is total Quality Management ?
3. What do you mean by total cost of quality ?
4. Write the three dimensions of TQM.
5. What are the functions of ISO 9000 ?

PART – C

Answer any six questions (Max. 100 words)

6 x 4 = 24

1. Enumerate the various steps involved in launching of Quality circle.
2. What are the quality functions of Quality control ?
3. What do you understand by standards and what are the benefits of ISO 9000 series of standards ?
4. Compare Quality of conformance and quality of performance.
5. State the various stages which need to be controlled for ensuring proper quality of product and for ensuring improvement in quality.
6. What are the various elements and applications of ISO 9000 ?
7. What is quality audit ? Name and describe the various types of quality audits.

PART – D

Answer any two questions (Max. 300 words)

2 x 8 = 16

1. Describe the basic organizational structure of Quality circles. Explain the role of quality circle member.
2. Define quality and its advantages and disadvantages.

1. A cyclist starts from rest and accelerates at 1 m/s^2 for 20 seconds. He then travels with constant velocity for 1 minute and finally decelerates at 2.0 m/s^2 until he stops. Find his maximum velocity and the total distance travelled.
2. State and explain the experiment to verify the Newton's law of cooling.
3. Derive an expression for the maximum horizontal range in oblique projection.

(P.T.O)

PART – C

Answer any six questions (Max. 100 words)

$$6 \times 4 = 24$$

1. Write down the general characteristics and applications of Nylon 6.
2. Write down the properties and applications of Polyphenylene oxide (PPO).
3. Discuss the properties and applications of LCP.
4. Write down the properties and applications of Polyphenylenesulphide (PPS).
5. Discuss the properties and applications of PEEK.
6. What are the methods of polymer blending. What are the advantages of polymer blending ?
7. What is need for Biodegradability in polymer and explain in detail ?

PART – D

Answer any two questions (Max. 300 words)

$$2 \times 8 = 16$$

1. Write short notes on any two of the following.
 - a) Degradation in polymers
 - b) Water Soluble Polymers
 - c) Polyimide
2. Write in details manufacturing, properties and applications of Polycarbonate.
3. Discuss in detail the application of plastics materials in Automotive Industry.

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PART – D

Answer any two questions (Max. 300 words)

2 x 8 = 16

1. Explain working of star delta starter with neat circuit diagram.
2. Write short notes on Preventive Maintenance and prepare a Preventive Maintenance schedule for injection molding machine.
3. With suitable diagram explain the working principle of Piston Pump and Screw Pump.

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SIXTH SEMESTER EXAMINATION – JUNE 2012

Duration : 3 Hours

Course : DPT/PD–PT

Subject : Costing & Industrial Management

Max. Marks: 60

Date : 28.06.2012

Time : 10.00 a.m. to 01.00 p.m.

PART – A

Answer all questions

10 x 1 = 10

1. Freedom of expression is also a type of motivated tool – say true or false.
2. What are the three major elements of cost ?
3. MBO stands for _____.
4. Sensation and perception are same - say true or false.
5. Self - actualizing people have more accurate perceptions about themselves than others - say true or false.
6. The purchase manager has the authority to decide “what”, “where”, and “when”, to buy - say true or false.
7. Attitude reflects the employee’s feelings towards their job - say true or false.
8. Margin = Sales x p/v ratio - say true or false.
9. Values generally influence attitude and behavior – say true or false.
10. _____ type of layout is adopted in the ship building industries

PART – B

Answer all questions (Max. 40 words)

5 x 2 = 10

1. What are the different stages of product life cycle ?
2. Explain the three types of discount.
3. Define attitude.
4. What is EOQ ?
5. Define job enrichment.

PART – C

Answer any six questions (Max. 100 words)

6 x 4 = 24

1. Distinguish between the formal and informal communication.
2. Discuss the Maslow’s theory of motivation.
3. Give one example of the following:
a) Variable cost b) Semi-variable cost c) Controllable cost d) Uncontrollable cost.
4. Explain the concept of ABC analysis.
5. Outline the duties of supervisor.
6. Explain 5’s Programme of Total Quality Management.
7. What is the difference between formal and informal organization ?

PART – D

Answer any two questions (Max. 300 words)

2 x 8 = 16

1. What do you understand by leadership style ? Discuss the main styles of leadership.
2. What is production, planning and control (PPC) ? Explain the various techniques of production, planning and control.
3. Prepare a cost sheet for the period ended 31st March 2011.
Cost of raw material 2,00,000, Productive wages 1,50,000, Indirect labor 10,000, Carriage inward 20,000, Other factory expenses 25,000, Office expenses 40,000, Public relation expenses 10,000, Expenses for testing the quality of goods 5,000, General Manager salary 30,000, Selling expenses 20,000, Profit 20% on total cost.

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