

Scheme G
Sample Test Paper I

Course Name : Diploma in Mechanical Engineering

Course Code : ME/PG/PT/MH/MI/FE/FG

Semester : Fourth

17402

Subject Title : Manufacturing Processes

Marks : 25

Time:1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any THREE

9 Marks

1. State rolling principle with neat sketch
2. Describe bending operation in press with neat sketch
3. Why color coding of pattern is required?
4. Draw any one moulding tool & write its function.

Q2. Attempt any TWO

8 Marks

1. Describe open die forging with neat sketch.
2. What is direct extrusion process? Describe with neat sketch
3. Compare blanking operation with punching operation (At least 4 points each)

Q3. Attempt any ONE

8 Marks

1. What are different types of dies? Explain progressive die with neat sketch
2. Describe centrifugal casting process with neat sketch and state its two applications

Scheme G
Sample Test Paper II

Course Name : Diploma in Mechanical Engineering

Course Code : ME/PG/PT/MH/MI/FE/FG

Semester : Fourth

17402

Subject Title : Manufacturing Processes

Marks : 25

Time:1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any THREE

9 Marks

- 1) Define welding process. State any four types
- 2) Describe principle of turning operation.
- 3) Describe countersinking operation with neat sketch.
- 4) State any three basic properties of thermosetting plastic.

Q2. Attempt any TWO

8 Marks

- 1) Compare TIG welding with MIG welding (Any four points each)
- 2) State any four applications of soldering process.
- 3) State types of taper turning methods and explain form tool process in brief

Q3. Attempt any ONE

8 Marks

1. Define cutting parameters in lathe machine and state its significance.
2. Describe vacuum forming process with neat sketch. Give its two applications

**Scheme G
Sample Question Paper**

Course Name : Diploma in Mechanical Engineering

Course Code : ME/PG/PT/MH/MI/FE/FG

Semester : Fourth

17402

Subject Title : Manufacturing Processes

Marks : 100

Time:3 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. A Attempt any SIX

12 Marks

- a. What is master pattern?
- b. What is core print?
- c. Why blow holes occur in casting?
- d. Why gating system is provided on mould?
- e. What is function of fly wheel in mechanical press?
- f. What is bending in case of press operations?
- g. What is upset forging?
- h. Draw neat sketch of Three Roll rolling mill.

Q1. B Attempt any TWO

8 Marks

- a. Draw a neat & labeled sketch of oxidizing flame. State its two applications.
- b. State any four operations which can be performed on drilling machine. Describe any one in brief
- c. Write types of plastics. State two properties of each.

Q2. Attempt any FOUR**16 Marks**

- a. Draw a neat sketch of blanking operation and describe it in brief.
- b. Compare notching operation with lancing operation (At least 4 points each)
- c. State four types of dies. Describe any one in brief with neat sketch.
- d. State four pattern making allowances? Describe shrinkage allowance in brief.
- e. What is core? What is importance of core in moulding process?
- f. Differentiate between hot chamber die casting and cold chamber die casting (At least four points each)

Q3. Attempt any FOUR**16 Marks**

- a) Describe forward extrusion process with neat sketch.
- b) State any four advantages of metal pattern over wooden pattern
- c) Compare hot rolling with cold rolling process. (At least four points each)
- d) What is tool signature of single point cutting tool? Give one example.
- e) State any four welding defects and give remedies for any two.
- f) Draw a neat sketch of radial drilling machine and name its parts.

Q4. Attempt any FOUR**16 Marks**

- a) Compare open die and closed die forging process. (At least four points each)
- b) Draw a neat sketch of two roll mill and describe its working.
- c) State four functions of flux used in brazing.
- d) Draw a neat sketch of standard twist drill with nomenclature.
- e) State the effects of rake angle and clearance angle of cutting tool on turning process.
- f) What are basic types of plastics? Give two applications of each

Q5. Attempt any FOUR**16 Marks**

- a) Describe rolling principle with sketch
- b) Compare direct and indirect extrusion process. (At least four points each)
- c) Describe drawing operation in press with sketch.
- d) State functions of i) Die block and ii) Guide of die set
- e) Describe pit moulding process in brief. State its two specific applications

f) State causes and remedies of following casting defects

1. Mould shift, 2. Porosity

Q6. Attempt any TWO

16 Marks

- a) Describe with neat sketch Electron beam welding process. State its two applications
- b) What is injection moulding? Draw a neat sketch of it. Write it's any four applications in industry.
- c) State two types of taper turning on lathe. State one advantage and one limitations of taper turning attachment.

Calculate half taper angle for the M.S. job on which taper is to be made.

1. Major Diameter - 50mm
2. Minor Diameter – 30mm
3. Length of taper – 60 mm
4. Length of job – 80mm

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