

III B.Tech I Semester Regular Examinations, November 2008
PRODUCTION TECHNOLOGY
(Common to Mechanical Engineering, Mechatronics and Automobile Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) Describe with the help of a neat sketch, the working of a sweep pattern and also state its advantages?
(b) What is gating ratio? Explain. [8+8]
2. (a) Write notes on nucleation and grain growth related to casting?
(b) What must be the preferred shape of a riser? Explain. [8+8]
3. (a) What design features can be altered to permit the joining of different thickness or different conductivity metals?
(b) What types of weld joints commonly employ filler welds? Explain. [8+8]
4. (a) What are the disadvantages of bare wire electrode as filler metal.
(b) Mention the causes and remedies for magnetic arc blow. [8+8]
5. (a) Compare the properties of cold worked and hot worked parts with examples.
(b) Distinguish between hot rolling and cold rolling.
(c) How do you estimate the rolling load? [5+5+6]
6. (a) Explain the design considerations in spinning process.
(b) Differentiate between Hot spinning and Cold spinning. [8+8]
7. (a) What makes hydrostatic extrusion better than the conventional extrusion process?
(b) Why does forging impart greater strength to such parts as crankshafts and gears that could be obtained by casting or welding of alloys of the same composition? [8+8]
8. (a) What do you mean by glass transition temperature?
(b) Explain the polymerization process. [8+8]
