Meen.1101   Production Technology (2+1)   **Marks: 50**

Time: 2 hours

I   **Fill up the blanks**   **(10x1=10)**

1. Solid shrinkage allowance is compensated by _____.
2. Steel is an alloy of iron and _____.
3. The coordination number of FCC is _____.
4. Disposable patterns are made of _____.
   a. Wood   b. Rubber   c. Metal   d. Polystyrene

State True or False

5. In MIG welding process non consumable electrode is used.
6. Working temperature of hot working is less than recrystallization temperature.
7. The ratio of area of sprue: area of runner: area of gate is called gating ratio.
8. In backward extrusion, the direction of ram motion and the direction of extrusion are same.
9. By increasing cutting velocity the coefficient of friction between chip and tool rake interface increases
10. A 'Dynamometer' is a device used for the measurement of cutting forces during metal cutting.

II   **Write Short notes on ANY FIVE of the following**   **(5x2=10)**

1. What is arc blow?
2. Define misrun and cold shut casting defects.
3. Define atomic packing fraction.
4. What is annealing process?
5. Define impact extrusion process.
6. Write down the difference between shaper and planner machine.
7. What is grinding ratio?

III   **Answer ANY FIVE of the following**   **(5x4=20)**

1. Calculate the permeability number of sand if it takes 85 s to pass 2000 cm^3 of air at a pressure of 6 g/cm^2 through the standard sample.
2. Explain following welding process with neat sketch.
   a. TIG   b. MIG
3. Explain shearing operation with suitable diagram.
4. Write down the difference between cold working and hot working.
5. Explain any four drilling operations with suitable diagram.
6. Define the following equipment.
   a. Jolting   b. Sand slinging.   c. Jack planner   d. Drop forging
7. Write down the difference between up milling and down milling.

IV   **Write an essay on ANY ONE of the following**   **(1x10=10)**

1. Explain Iron-carbon equilibrium diagram.
2. Explain single point cutting tool with suitable diagram and also write tool signature according to ASA system.

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