

32032 - Manufacturing Process

1. FOUNDRY TECHNOLOGY

Part A

1. Define pattern?
2. Define cope and drag?
3. What is the use of tires?
4. Name any four pattern materials?
5. What are the different types of allowances?
6. What are the types of pattern?
7. What is solid pattern?
8. What is the function of riser?
9. What is core?
10. What is meant by core print?

Part B

1. Write short note on core box?
2. What is binder?
3. What is moulding?
4. What are the requirements of a good core?
5. What are the properties of good moulding sand?
6. List out the different types of core?
7. What is the port timing diagram?
8. Explain balanced core with neat sketch?
9. Mention the application of centrifugal casting?
10. State any two advantages of die casting?

Part C

1. With neat sketch explain pattern?
2. With neat sketches explain the working of cupola furnace?
3. With neat sketches explain the working of electric furnace?
4. With neat sketches explain the working of pattern allowances?
5. With neat sketches explain the working of investment moulding?
6. With neat sketches explain the working of shell moulding?
7. With neat sketches explain the working of continuous casting?

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2. WELDING TECHNOLOGY

Part A

1. Enumerate any two types of basic welding process?
2. What is soldering?
3. Give the application of plasma arc welding?
4. What are the types of flame?
5. List out the equipments required for arc welding?
6. What do you mean by plasma?
7. Name the three types of gas flame?
8. Name the types of resistance welding?
9. Write any four defects in welding?
10. What is the purpose of ramming?

Part B

1. What is TIG welding?
2. List out advantages of submerged arc welding?
3. State the limitations of gas welding?
4. Write a note on X-RAY test of welding joint?
5. Difference between soldering and brazing?
6. Sketch the various types of welding joints?
7. Sketch the pit furnace and mark the parts?

Part C

1. Write a note on arc welding equipments and explain it?
2. Write a note on arc welding equipments and explain?
3. With a neat sketch explain the seam welding?
4. With a neat sketch explain the induction welding?
5. Write in brief about the electro slag welding?
6. With a neat sketch explain the ultrasonic test?
7. With a neat sketch explain the electron beam welding?
8. Write a note on arc welding equipments and explain it?

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3. FORMING TECHNOLOGY

Part A

1. What is hot working?
2. What is forging?
3. How are forging operation classified?
4. What is press forging?
5. Write short note on forging?
6. Give two metal powders used for pm?
7. Give any three hot working operations?
8. What is power metallurgy?
9. What are the applications of powder metallurgy?

Part B

1. What is roll forging? explain
2. What do you mean by infiltration?
3. What are the advantages of powder metallurgy?
4. Explain how powders are compacted?
5. Name the few components manufactured by powder metallurgy?
6. What is press tool?
7. Compare mechanical press and hydraulic press?
8. Define bending?

Part C

1. Explain the methods of manufacturing metal powder?
2. Explain the working of bending operations?
3. Explain the working of press working operations with neat diagram?
4. Explain the working of multi plate clutch with neat diagram?
5. Explain the working of shearing operations?
6. Explain the working of hot working?
7. Describe the design rules for powder metallurgy process?
8. Describe the rolling, smith forging, drop forging?

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4. THEORY OF METAL CUTTING, CENTRE LATHE AND AUTOMATIC LATHE

Part A

1. What do you mean by metal cutting?
2. What are the two types of metal cutting?
3. What is hot hardness?
4. Expand HCS?
5. What is HSS?
6. What are the two types of cutting tools?
7. Define crater wear?
8. State the Taylors equation?
9. What is flank wear?

Part B

1. State any two properties of cutting fluids?
2. What is the function of a lathe bed?
3. What is the function of a turret in a capstan lathe?
4. List out the various types of lathe?
5. What is a semi automatic lathe?
6. Compare steady rest with follower rest?
7. Sketch and explain the tree jaw chuck?
8. Explain counter boring?

Part C

1. Explain the working of automatic lathe with neat diagram?
2. Explain the working of lathe with neat diagram?
3. Explain the working of tumbler gear mechanism with neat diagram?
4. Describe the nomenclature of single point cutting tool?
5. Describe the different types of machining operations done on lathe?
6. Describe feed mechanism?

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5. DRILLING AND METROLOGY

Part A

1. What is drilling?
2. What is meant by a web in twist drill?
3. What is mean by helix angle?
4. Name the different types of milling machine?
5. What is spot facing?
6. Explain tapping?
7. What are clinometers?
8. Give the trigonometric formula used in sine bar?
9. What is the uses of sine bar?

Part B

1. Define reaming?
2. What is counter boring?
3. What is counter sinking?
4. What is sine bar?
5. Explain outside caliper?
6. Explain pitch screw gauge?
7. Write a note on slip gauge?
8. Define accuracy?

Part C

1. Explain the main components functions of an optical comparator?
2. Describe the accuracy, sensitivity, repeatability?
3. Discuss about the pneumatic comparator?
4. Draw the layout of clinometers and name its parts and their functions?
5. Draw the layout of autocollimator and name its parts and their functions?
6. Draw the layout of angle dekkor and name its parts and their functions?