

Code No: 07A3EC05

R07**Set No. 2**

II B.Tech I Semester Examinations, MAY 2011

PRODUCTION TECHNOLOGY

Common to Mechanical Engineering, Mechatronics, Automobile Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions

All Questions carry equal marks

1. An aluminum die with 200mm diameter and 25mm thickness is forged to a final thickness of 15mm. Estimate the maximum forging force when the coefficient of friction is 0.3 and the tensile yield stress = 25 N/mm². Neglect strain hardening. [16]
2. (a) What is the basic principle of explosive welding? Explain. [8+8]
(b) Describe the types of fluxes used in soldering and their applications? [8+8]
3. (a) What are the advantages of true centrifugal casting process?
(b) Sketch and explain the construction and operation of hot chamber die casting process? [8+8]
4. Explain the process of thermit welding. Where would you recommend it? State and explain clearly the controlling parameters that influence the thermit welding. [16]
5. (a) Explain the process of tube producing through rolling process?
(b) Explain what do you understand by the terms ingot, slab, bloom and billet. [8+8]
6. (a) Explain the bending terminology with the help of a suitable sketch.
(b) A sheet which has already been in a cold state, offers great resistance to further bending. Explain the reason. [8+8]
7. (a) In what ways do the cold moulding differ from hot compression moulding? What kind of parts are made by cold moulding? Discuss?
(b) Explain extrusion moulding process with a neat sketch discuss its advantages and applications? [8+8]
8. (a) Can a finished casting be used as a pattern for making mould? Justify your answer.
(b) What is the role of clay in moulding sand?
(c) Explain the importance of permeability in moulding sand? [6+5+5]

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R07**Set No. 4**

II B.Tech I Semester Examinations, MAY 2011

PRODUCTION TECHNOLOGY

Common to Mechanical Engineering, Mechatronics, Automobile Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions

All Questions carry equal marks

1. (a) What are the advantages of true centrifugal casting process?
(b) Sketch and explain the construction and operation of hot chamber die casting process? [8+8]
2. (a) Can a finished casting be used as a pattern for making mould? Justify your answer.
(b) What is the role of clay in moulding sand?
(c) Explain the importance of permeability in moulding sand? [6+5+5]
3. (a) Explain the process of tube producing through rolling process?
(b) Explain what do you understand by the terms ingot, slab, bloom and billet. [8+8]
4. (a) Explain the bending terminology with the help of a suitable sketch.
(b) A sheet which has already been in a cold state, offers great resistance to further bending. Explain the reason. [8+8]
5. (a) In what ways do the cold moulding differ from hot compression moulding? What kind of parts are made by cold moulding? Discuss?
(b) Explain extrusion moulding process with a neat sketch discuss its advantages and applications? [8+8]
6. Explain the process of thermit welding. Where would you recommend it? State and explain clearly the controlling parameters that influence the thermit welding. [16]
7. An aluminum die with 200mm diameter and 25mm thickness is forged to a final thickness of 15mm. Estimate the maximum forging force when the coefficient of friction is 0.3 and the tensile yield stress = 25 N/mm². Neglect strain hardening. [16]
8. (a) What is the basic principle of explosive welding? Explain.
(b) Describe the types of fluxes used in soldering and their applications? [8+8]

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R07**Set No. 1**

II B.Tech I Semester Examinations, MAY 2011

PRODUCTION TECHNOLOGY

Common to Mechanical Engineering, Mechatronics, Automobile Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions

All Questions carry equal marks

1. (a) What are the advantages of true centrifugal casting process?
(b) Sketch and explain the construction and operation of hot chamber die casting process? [8+8]
2. An aluminum die with 200mm diameter and 25mm thickness is forged to a final thickness of 15mm. Estimate the maximum forging force when the coefficient of friction is 0.3 and the tensile yield stress = 25 N/mm². Neglect strain hardening. [16]
3. (a) Explain the process of tube producing through rolling process?
(b) Explain what do you understand by the terms ingot, slab, bloom and billet. [8+8]
4. (a) What is the basic principle of explosive welding? Explain.
(b) Describe the types of fluxes used in soldering and their applications? [8+8]
5. (a) In what ways do the cold moulding differ from hot compression moulding? What kind of parts are made by cold moulding? Discuss?
(b) Explain extrusion moulding process with a neat sketch discuss its advantages and applications? [8+8]
6. (a) Can a finished casting be used as a pattern for making mould? Justify your answer.
(b) What is the role of clay in moulding sand?
(c) Explain the importance of permeability in moulding sand? [6+5+5]
7. Explain the process of thermit welding. Where would you recommend it? State and explain clearly the controlling parameters that influence the thermit welding. [16]
8. (a) Explain the bending terminology with the help of a suitable sketch.
(b) A sheet which has already been in a cold state, offers great resistance to further bending. Explain the reason. [8+8]

Code No: 07A3EC05

R07**Set No. 3**

II B.Tech I Semester Examinations, MAY 2011

PRODUCTION TECHNOLOGY

Common to Mechanical Engineering, Mechatronics, Automobile Engineering

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions

All Questions carry equal marks

1. An aluminum die with 200mm diameter and 25mm thickness is forged to a final thickness of 15mm. Estimate the maximum forging force when the coefficient of friction is 0.3 and the tensile yield stress = 25 N/mm^2 . Neglect strain hardening. [16]
2. (a) What is the basic principle of explosive welding? Explain. [8+8]
(b) Describe the types of fluxes used in soldering and their applications? [8+8]
3. (a) In what ways do the cold moulding differ from hot compression moulding? What kind of parts are made by cold moulding? Discuss? [8+8]
(b) Explain extrusion moulding process with a neat sketch discuss its advantages and applications? [8+8]
4. (a) Explain the bending terminology with the help of a suitable sketch. [8+8]
(b) A sheet which has already been in a cold state, offers great resistance to further bending. Explain the reason. [8+8]
5. Explain the process of thermit welding. Where would you recommend it? State and explain clearly the controlling parameters that influence the thermit welding. [16]
6. (a) Can a finished casting be used as a pattern for making mould? Justify your answer. [6+5+5]
(b) What is the role of clay in moulding sand?
(c) Explain the importance of permeability in moulding sand? [6+5+5]
7. (a) Explain the process of tube producing through rolling process? [8+8]
(b) Explain what do you understand by the terms ingot, slab, bloom and billet. [8+8]
8. (a) What are the advantages of true centrifugal casting process?
(b) Sketch and explain the construction and operation of hot chamber die casting process? [8+8]
