Code No: NR220305 **NR** **Set No. 2**

II B.Tech II Semester Examinations,December 2010
PRODUCTION TECHNOLOGY-I
Common to Mechanical Engineering, Aeronautical Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe briefly the production steps involved in making powder- metallurgy parts. [8+8]
   (b) Briefly explain the advantages of powder metallurgy.
2. Explain the following types of welding techniques: [5+5+6]
   (a) TIG welding
   (b) Friction welding
   (c) Laser Beam welding
3. (a) Discuss the shell molding with the help of neat sketch. [10+6]
   (b) Give the relevance of the following with reference to a casting
      i. Sprue.
      ii. Runner.
      iii. Ingate.
4. (a) Explain the causes for different types of cracks in welds and mention the remedies. [8+8]
   (b) Describe the following metal joining techniques:
      i. Dip soldering
      ii. Braze welding.
5. (a) What advantages does dry sand molding have over green sand molding? [6+5+5]
   (b) When are cement - bonded molds recommended?
   (c) What metals can be cast in plaster molds?
6. (a) With a neat sketch explain principle of Transfer molding of plastics. How it differs from compression molding ? [8+8]
   (b) Describe injection molding process with a neat sketch. List some parts made by this process.
7. List out the core baking equipments and describe the principle of the dielectric core baking process. What are its specific advantages? [16]
8. (a) Explain the importance of constant voltage and constant current power supply used for arc welding? [8+8]

(b) Explain the characteristics of groove welds with examples.

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Code No: NR220305 **NR** **Set No. 4**

II B.Tech II Semester Examinations,December 2010
PRODUCTION TECHNOLOGY-I
Common to Mechanical Engineering, Aeronautical Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Describe briefly the production steps involved in making powder- metallurgy parts. [8+8]
   (b) Briefly explain the advantages of powder metallurgy.
2. List out the core baking equipments and describe the principle of the dielectric core baking process. What are its specific advantages? [16]
3. (a) Explain the importance of constant voltage and constant current power supply used for arc welding? [8+8]
   (b) Explain the characteristics of groove welds with examples.
4. (a) Discuss the shell molding with the help of neat sketch. [10+6]
   (b) Give the relevance of the following with reference to a casting
      i. Sprue.
      ii. Runner.
      iii. Ingate.
5. (a) With a neat sketch explain principle of Transfer molding of plastics. How it differs from compression molding ? [8+8]
   (b) Describe injection molding process with a neat sketch. List some parts made by this process.
6. (a) What advantages does dry sand molding have over green sand molding? [6+5+5]
   (b) When are cement - bonded molds recommended?
   (c) What metals can be cast in plaster molds?
7. Explain the following types of welding techniques: [5+5+6]
   (a) TIG welding
   (b) Friction welding
   (c) Laser Beam welding
8. (a) Explain the causes for different types of cracks in welds and mention the remedies. [8+8]
   (b) Describe the following metal joining techniques:
      i. Dip soldering

ii. Braze welding.

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Code No: NR220305 **NR** **Set No. 1**

II B.Tech II Semester Examinations,December 2010
PRODUCTION TECHNOLOGY-I
Common to Mechanical Engineering, Aeronautical Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. List out the core baking equipments and describe the principle of the dielectric core baking process. What are its specific advantages? [16]
2. Explain the following types of welding techniques: [5+5+6]
   (a) TIG welding
   (b) Friction welding
   (c) Laser Beam welding
3. (a) What advantages does dry sand molding have over green sand molding? [6+5+5]
   (b) When are cement - bonded molds recommended?
   (c) What metals can be cast in plaster molds?
4. (a) With a neat sketch explain principle of Transfer molding of plastics. How it differs from compression molding ? [8+8]
   (b) Describe injection molding process with a neat sketch. List some parts made by this process.
5. (a) Discuss the shell molding with the help of neat sketch. [10+6]
   (b) Give the relevance of the following with reference to a casting
      i. Sprue.
      ii. Runner.
      iii. Ingate.
6. (a) Explain the causes for different types of cracks in welds and mention the remedies. [8+8]
   (b) Describe the following metal joining techniques:
      i. Dip soldering
      ii. Braze welding.
7. (a) Explain the importance of constant voltage and constant current power supply used for arc welding? [8+8]
   (b) Explain the characteristics of groove welds with examples.
8. (a) Describe briefly the production steps involved in making powder- metallurgy parts. [8+8]

(b) Briefly explain the advantages of powder metallurgy.

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Code No: NR220305 **NR** **Set No. 3**

II B.Tech II Semester Examinations,December 2010
PRODUCTION TECHNOLOGY-I
Common to Mechanical Engineering, Aeronautical Engineering
Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

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1. Explain the following types of welding techniques: [5+5+6]
   (a) TIG welding
   (b) Friction welding
   (c) Laser Beam welding
2. (a) Describe briefly the production steps involved in making powder- metallurgy parts. [8+8]
   (b) Briefly explain the advantages of powder metallurgy.
3. (a) Discuss the shell molding with the help of neat sketch. [10+6]
   (b) Give the relevance of the following with reference to a casting
      i. Sprue.
      ii. Runner.
      iii. Ingate.
4. List out the core baking equipments and describe the principle of the dielectric core baking process. What are its specific advantages? [16]
5. (a) With a neat sketch explain principle of Transfer molding of plastics. How it differs from compression molding ? [8+8]
   (b) Describe injection molding process with a neat sketch. List some parts made by this process.
6. (a) What advantages does dry sand molding have over green sand molding? [6+5+5]
   (b) When are cement - bonded molds recommended?
   (c) What metals can be cast in plaster molds?
7. (a) Explain the causes for different types of cracks in welds and mention the remedies. [8+8]
   (b) Describe the following metal joining techniques:
      i. Dip soldering
      ii. Braze welding.
8. (a) Explain the importance of constant voltage and constant current power supply used for arc welding? [8+8]

(b) Explain the characteristics of groove welds with examples.

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