Code No: R05320303 **R05** **Set No. 2**

**III B.Tech II Semester Examinations,December 2010**
**MACHINE TOOLS**
**Mechanical Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. (a) What considerations should be kept in mind when selecting a clamp for a job?
   (b) What is a swinging clamp ? Explain its use. [8+8]
2. (a) Discuss twist drill nomenclatures using sketch.
   (b) List out drill bit materials. Which is mostly used? Why? [8+8]
3. (a) Explain the importance of bonding material in grinding process.
   (b) Explain the phenomenon of wear related to grinding process. [8+8]
4. (a) Why not relief or clearance angles be zero or negative?
   (b) Why relief angles on carbide tools are kept small?
   (c) What are the advantages of providing side cutting edge angle on the cutting tool? [5+5+6]
5. What types of operations can be performed in a shaper efficiently? list and explain with sketch. [16]
6. (a) Differenciate between 3-jaw chuck and 4-jaw chuck.
   (b) Explain
      i. Steady rest,
      ii. follower rest,
      iii. face plate. [8+8]
7. (a) How do you determine the forces acting on a milling cutter?
   (b) Explain the procedure of milling a gear by formed - disc cutter. [8+8]
8. (a) Explain different types of lapping processes.
   (b) Explain the manufacturing process of broaching tool. [8+8]

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Code No: R05320303 **R05** **Set No. 4**

**III B.Tech II Semester Examinations,December 2010**
**MACHINE TOOLS**
**Mechanical Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. (a) Explain different types of lapping processes.
   (b) Explain the manufacturing process of broaching tool. [8+8]
2. (a) How do you determine the forces acting on a milling cutter?
   (b) Explain the procedure of milling a gear by formed - disc cutter. [8+8]
3. (a) Differenciate between 3-jaw chuck and 4-jaw chuck.
   (b) Explain
      i. Steady rest,
      ii. follower rest,
      iii. face plate. [8+8]
4. (a) Discuss twist drill nomenclatures using sketch.
   (b) List out drill bit materials. Which is mostly used? Why? [8+8]
5. (a) What considerations should be kept in mind when selecting a clamp for a job?
   (b) What is a swinging clamp ? Explain its use. [8+8]
6. What types of operations can be performed in a shaper efficiently? list and explain with sketch. [16]
7. (a) Why not relief or clearance angles be zero or negative?
   (b) Why relief angles on carbide tools are kept small?
   (c) What are the advantages of providing side cutting edge angle on the cutting tool? [5+5+6]
8. (a) Explain the importance of bonding material in grinding process.
   (b) Explain the phenomenon of wear related to grinding process. [8+8]

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Code No: R05320303 **R05** **Set No. 1**

**III B.Tech II Semester Examinations,December 2010**
**MACHINE TOOLS**
**Mechanical Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. (a) Explain the importance of bonding material in grinding process.
   (b) Explain the phenomenon of wear related to grinding process. [8+8]
2. (a) What considerations should be kept in mind when selecting a clamp for a job?
   (b) What is a swinging clamp ? Explain its use. [8+8]
3. (a) Explain different types of lapping processes.
   (b) Explain the manufacturing process of broaching tool. [8+8]
4. (a) Differenciate between 3-jaw chuck and 4-jaw chuck.
   (b) Explain
      i. Steady rest,
      ii. follower rest,
      iii. face plate. [8+8]
5. (a) How do you determine the forces acting on a milling cutter?
   (b) Explain the procedure of milling a gear by formed - disc cutter. [8+8]
6. (a) Why not relief or clearance angles be zero or negative?
   (b) Why relief angles on carbide tools are kept small?
   (c) What are the advantages of providing side cutting edge angle on the cutting tool? [5+5+6]
7. What types of operations can be performed in a shaper efficiently? list and explain with sketch. [16]
8. (a) Discuss twist drill nomenclatures using sketch.
   (b) List out drill bit materials. Which is mostly used? Why? [8+8]

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Code No: R05320303 **R05** **Set No. 3**

**III B.Tech II Semester Examinations,December 2010**
**MACHINE TOOLS**
**Mechanical Engineering**

**Time: 3 hours** **Max Marks: 80**

**Answer any FIVE Questions**
**All Questions carry equal marks**

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1. (a) Explain different types of lapping processes.
   (b) Explain the manufacturing process of broaching tool. [8+8]
2. (a) How do you determine the forces acting on a milling cutter?
   (b) Explain the procedure of milling a gear by formed - disc cutter. [8+8]
3. (a) Explain the importance of bonding material in grinding process.
   (b) Explain the phenomenon of wear related to grinding process. [8+8]
4. (a) Differenciate between 3-jaw chuck and 4-jaw chuck.
   (b) Explain
      i. Steady rest,
      ii. follower rest,
      iii. face plate. [8+8]
5. (a) Discuss twist drill nomenclatures using sketch.
   (b) List out drill bit materials. Which is mostly used? Why? [8+8]
6. What types of operations can be performed in a shaper efficiently? list and explain with sketch. [16]
7. (a) Why not relief or clearance angles be zero or negative?
   (b) Why relief angles on carbide tools are kept small?
   (c) What are the advantages of providing side cutting edge angle on the cutting tool? [5+5+6]
8. (a) What considerations should be kept in mind when selecting a clamp for a job?
   (b) What is a swinging clamp ? Explain its use. [8+8]

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