

SE-IV / ~~Engg. Design~~ / 03-12-14 / PRDD  
Manufacturing  
Engg-III



QP Code : 12470

(3 Hours)

[ Total Marks : 80

- N.B :** (1) Attempt any four questions including Q.No. 1, which is compulsory.  
(2) Wherever necessary, draw neat sketches.  
(3) Answer in legible handwriting.

1. (a) Explain grit, grade and structure in the context of grinding wheels. 5  
(b) Explain gear hobbing process. 5  
(c) Explain thread whirling process. 5  
(d) Explain filament winding process of composite manufacturing. 5
2. (a) Explain the process of laser beam machining with its advantages, limitations and applications. 10  
(b) Explain the processes of resin transfer moulding and spray up used for composite manufacturing. 10
3. (a) Explain in detail the process of centerless grinding. 10  
(b) Briefly explain the process of thread rolling with its advantages limitations and applications. 10
4. (a) Explain the working principle of CNC lathe machine with the help of a block diagram. 10  
(b) Explain in detail EDM process also list its various advantages, limitations and applications. 10
5. (a) With neat sketches explain radial chaser head and tangential chaser head type die used on capstan lathe. 10  
(b) Explain with a neat sketch SWISS type Automatic machine. 10
6. Write short notes on :— 20
  - (a) Gear shaping
  - (b) Lapping process
  - (c) Water jet machining (WJM)
  - (d) Specifications of a grinding wheel.

GN-Con.:9656-14.