Assignment 02

Due on 2020-02-12, 23:59 IST.

1. Cutting force, power, and surface finish are influenced by:
   a. friction between tool face and rake face angle
   b. chip shape and rake face angle
   c. tool nose angle
   d. tool nose radius
   Select the best possible options.
   - (a) and (b)
   - (b) and (c)
   - (c) and (d)
   - (a), (b), and (c)
   Accepted Answers: (a) and (b)

2. Cutting edge angle is provided to a cutting tool to:
   a. reduce the cutting edge from the machined surface
   b. reduce tool chatter
   c. tool effects tool life as well as surface finish
   d. all of the above
   Accepted Answers: c, d

3. A turning tool is a nose radius provided for:
   a. better surface finish
   b. controlling the kerf of kerf generation
   c. controlling the kerf lip tip burn-back edge formation
   Accepted Answers: a, b, c

4. The depth of cut and the feed rate are 0.5 mm and 0.5 mm, respectively. If the average value of coefficient of friction between the chip and tool is 0.6, then determine the shear force component of the resulting, in Newton.
   - 0.6 N
   - 0.6 N
   - 1.8 N
   - 1.8 N
   Accepted Answers: 1.8 N

5. For an orthogonal machining with a tool with 35° rake angle, the shear plane angle was found to be 30°. The shear plane angle in X1 for this operation is:
   - 0°
   - 30°
   - 45°
   - 60°
   Accepted Answers: 45°