

B.Tech. SEM -V Production 2014 Course (CBCS) : WINTER - 2018

SUBJECT: METAL FORMING

Day: Thursday
Date: 22/11/2018

W-2018-2425

Time: 02.30 PM TO 05.30 PM
Max. Marks: 60

N.B:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Neat diagram must be drawn **WHEREVER** necessary.
- 4) Assume suitable data with necessary.

Q.1 What is the concept of formability? Explain formability limit diagrams in detail. (10)

OR

- Q.1 a) Describe the defects in drawing. (05)
b) Explain lubrication in wire drawing. (05)

Q.2 What are the types of hammers used in forging? Explain in detail. (10)

OR

Q.2 Describe forging design factors in detail. (10)

Q.3 Discuss the variation of forces in roll gap and its effect on the rolling process. (10)

OR

Q.3 What are the types of rolling mills? Explain any two in detail. (10)

Q.4 Describe various cutting and forming operations of sheet metal. (10)

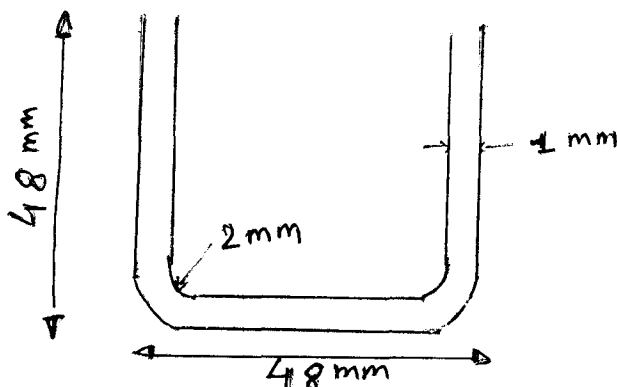
OR

Q.4 Explain with suitable sketches explosive forming and stretch forming. (10)

Q.5 With a neat sketch explain main components of the die and press. (10)

OR

Q.5 Design a deep drawing die for the component as shown in Fig. (10)
Thickness : 1mm, Material: Medium carbon steel, UTS: 325 N/mm^2 .



Q.6 What are the methods used for manufacturing a seamless tubes? Explain any one in detail. (10)

OR

Q.6 Calculate the work done in extruding an aluminum billet 780mm diameter, 1.5m long to 25mm diameter rod given that the flow stress of the aluminum is 60 N/mm^2 and the coefficient between biller and container is 0.38. (10)