

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain the different types of surface defects.
- Q.4 Explain the different types of rolling process.
- Q.5 Explain the different types of rolling mills with a neat & clean sketch.
- Q.6 Explain the cold rolling process. Also mention its advantages & applications.
- Q.7 Write short note on
- (a) Hot Rolling
 - (b) Movement of Dislocation.

No. of Printed Pages : 4
Roll No.

094752

5th Sem. / Mechanical Metallurgy

Subject : Principles of Rolling

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1
- a) Define Stress.
 - b) Name any two conventional rolled products.
 - c) What do you mean by plastic deformation.
 - d) Define Twinning.
 - e) What do you mean by Hot Rolling.
 - f) What do you mean by slivers.
 - g) Define Forward Slip.
 - h) What do you mean by Billet.
 - i) Write any two applications of Rolling.

(60)

(4)

094752

(1)

094752

- j) Define grain boundary.
- k) Name any two types of Rolling Mills.
- l) Define angle of Bite.
- m) Write any two applications of Cold Rolling.
- n) Define Neutral point.
- o) Define Recrystallization temperature.
- p) What do you mean by scaling.
- q) Define Lap.
- r) What do you mean by velocity of Rolls.

SECTION-B

Note: Short answer type questions. Attempt any ten parts

10x4=40

- Q.2
- i) What is the principle of Rolling.
 - ii) What is the difference between Slip & Twinning.
 - iii) What is the role of rolling in structural engineering.

(2)

094752

- iv) Explain grain boundary movement with Load.
- v) Explain the principle of Continuous Rolling.
- vi) Explain the different types of Rolled profiles.
- vii) Compare rolling with any of the metal forming process.
- viii) What are the various Non-Conventional Rolled products.
- ix) Explain with diagram the twinning process.
- x) Explain the different parameters of Rolling.
- xi) What are the changes observed in the properties of steel when heating is done.
- xii) Explain the defects due to scaling.
- xiii) Explain 2 high mill with a neat & clean diagram.
- xiv) What are the various application of Rolling.
- xv) What is the role of friction in rolling.

(3)

094752