Newton's Institute Of Science & Technology

Allugurajupally (V), Koppunur (Po), Macherla (Md), Guntur, A.P

1st Mid Examination Question Paper

Course :	B.Tech 3rd Year 2nd Sem	Regulation :	R20
Subject :	DDSS	Time :	1.30 Hours

1. A SS Steel Joist Beam Of 4m Effective Length Is Laterally Supported Throughout. It Carries A Total UDL Of 40 KN Including Self Weights. Design An Appropriate Section Using Steel Of Grade Fe410. Assume Any Required Data If Required?

2. Determine the design bending strength of ISLB 350 @ 486 N/M considering the beam to be (a) Laterally Supported (b) Laterally Unsupported. The Design shear force V is less than the design shear strength. The Unsupported Length of the beam is 3m assume steel of grad Fe 410?

3. Design a Welded Plate girder for a simply supported bridge deck beam with clear span of 24m, subjected to D.L if 20 kn/m (excluding self weight) L.L 10 Kn/m and two concentrated loads 200 KN Each at 6m from each end, assume that the top compression flange of plate girder is restrained laterally and prevented from rotating. Use Fe 415 grade of steel. Design as an unstiffened plate girder with thick web?