Q.No	Part A (2x5 == 10 marks) (Answer all the questions)	C
1	State Hooke's law.	C
2	Mention the factors affecting the elasticity	C
3	Define yield point.	C
4	Write the advantages of I- shape Girders	C
5	How does the temperature affect the elasticity	C

Q.No	Part B - (8 x 1 = 8 marks), (16 x 2 = 32 marks) (Answer all the questions)	C
11	Recall the principle of gyroscope. Explain the design and working of gyroscope. List its applications	C
12 A	i) Give the theory of torsion pendulum and describe a method to find the moment of inertia and determine the rigidity modulus of a wire? ii) A copper wire of 3m length and 1mm diameter is subjected to a tension of 5N. Calculate the elongation produced in the wire if the young's modulus of elasticity of copper is 120GPa.	C

	OR
12 B	i) Give an account of I- Shape Girders. ii)Find the expression for equation for moment of inertia of a solid disc and ring with respect to its tangent (a) Parallel to the disc surface and (b) Perpendicular to the disc surface
13 A	i) Explain the types of modulus of elasticity. ii) Describe with necessary theory, the method of determining the young's modulus of the material of the beam of rectangular cross section by bending it non-uniformly.
	OR
13 B	i) Draw stress strain diagram and discuss the behaviour of ductile material under loading. ii) What are the factors affecting the elastic properties? Explain in detail