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| **IMS ENGINEERING COLLEGE** | IMSEC/QF/48 |
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| **Tutorials/ Assignments/ Quizzes** | Issue Date: 1 May 2010 |

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| **Subject Name:** Machine Design | **Subject Code: NME-501** | **Max Marks:** 10 |

1. A triple start square threaded screw is used to raise a load of 50 kN. The screw has a nominal diameter of 50 mm and pitch is 8 mm. Height of the nut is 40 mm and coefficient of friction between screw and nut is 0.25. Assuming no collar friction find the maximum stress induced in the screw and nut thread and the bearing pressure between screw and nut.
2. Design a screw jack for lifting a load of 20 kN through 200 mm.
3. Discuss the different end styles of helical compression springs. **2012-13**
4. 2. Derive the expression for deflection of helical springs of circular wire.