DEPARTMENT OF MECHANICAL ENGINEERING

B.Tech (6th Semester Major Examination)

Course: Machine Design-II **Maximum Marks: 40**

Problem: Power of 3.75kW is to be transmitted to a gear drive for reciprocating compressor, pinion rotates at 1200 rpm. The gear drive should be 20° full depth. For the above details, answer the following.

Q1. Module for the design is.	3 CO3
Q2. For the details provided in Q.1 No. of teeth of pinion (Np) is equal to	3 CO2
Q3. For the details provided in Q.1 No. of teeth on gear (Ng) is equal to	2 CO2
Q4. For the details provided in Q.1 and for the out speed of gear 390 rpm. True Velocity Ratio is equal to	7 CO1
Q5. For the details provided in Q.1 Diameter of pitch for pinion is equal to	2 CO1
Q6. For the details provided in Q.1 Diameter of pitch of gear is equal to	7 CO3
Q7. For the details provided in Q.1 Central distance is equal to	7 CO2
Q8. For the details provided in Q.1 Pitch Line Velocity is equal to	7 CO2
Q9. For the details provided in Q.1Tangential Load Wt is equal to	2 CO4

Total=Score * Weightage(3)for Q1, Q2, and Score * Weightage(3) for Q4, Q6, Q7,Q8 and Score * Weightage(2) for Q5, Q9