

Government College Of Engineering, Amravati.

(An Autonomous Institute Of Government of Maharashtra)

Mechanical Engineering Department

CT-2 (Winter2018) MEU-501 Machine Design-I MARKS-15 TIME-1 HOUR: 12pm to 1 pm Date-24/09/2018

Q.1 Attempt any two:

- Define endurance limit. State the factors to be considered while Designing Machine parts to avoid fatigue failure. 05 Marks
- Explain Gerber line and Soderberg line for combination of stresses. 05 Marks
- Define stress concentration. State the different ways for reducing stress Concentration with sketches. 05 Marks

Q.2. A bracket as shown in fig.1, supports a load of 30KN. Determine the size of bolts, if the maximum allowable tensile stress in the bolt material is 60 MPa. The distances are $L_1 = 80\text{mm}$, $L_2 = 250\text{ mm}$ and $L = 500\text{mm}$ 05 Marks

