Structure I

Maximum time allowed: 90 minutes

Mid-term exam (First semester)

**Problem -1 20%**

Determine the magnitude of the resultant force and its direction measured counter clockwise from the positive x-axis of the three forces shown in Fig.1.

*F2=625N*

*y*

*x*

*45o*

*F3=750N*

*F1=850N*

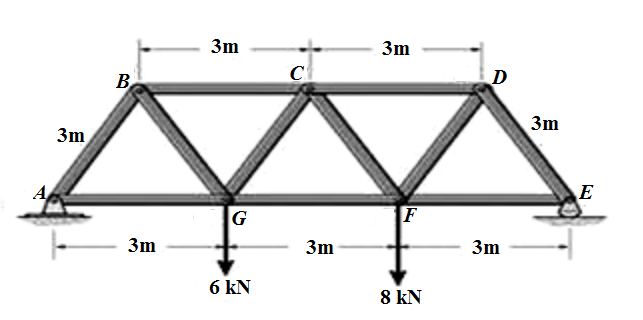
*30o*

*3*

*4*

**Problem -1** *Fig.1*

**Problem -2 20%**

Determine the force in members (CD, CF, and FG) of the Warren truss shown in Fig.2. Indicate if the members are in tension or compression.

**Problem -2** *Fig.2*

Notes: 1. Electronic calculators may be used

2. Answer ALL questions

**END OF EXAMINATION PAPER**