

**Practice Problem Set 4: Engineering Mechanics (NMEC101)**

**Answers**

**1.  $A_X = 17\text{ N}$  ( $\leftarrow$ ),  $A_Y = 94.06\text{ N}$  ( $\uparrow$ ),  $E_X = 17\text{ N}$  ( $\rightarrow$ ),  $E_Y = 75.93\text{ N}$  ( $\uparrow$ )**

**2.  $A_X = 45\text{ N}$  ( $\leftarrow$ ),  $A_Y = 30\text{ N}$  ( $\downarrow$ ),  $B_X = 45\text{ N}$  ( $\rightarrow$ ),  $B_Y = 270\text{ N}$  ( $\uparrow$ )**

**3.  $G_X = 2400\text{ N}$  ( $\rightarrow$ ),  $G_Y = 1800\text{ N}$  ( $\uparrow$ ),  $B_X = 3600\text{ N}$  ( $\leftarrow$ ),  $B_Y = 1800\text{ N}$  ( $\downarrow$ ),  $E_X = 1200\text{ N}$  ( $\rightarrow$ ),  $E_Y = 0$ ,  $H_X = 0$ ,  $H_Y = 0$**

**4.  $F_{BF} = 7200\text{ N}$  (*Tension*),  $F_{DG} = 3000\text{ N}$  (*Compression*)**