# Question 03

## Code

clc

clear all

close all

% Ax=B

% x=A^-1 \* B

P=250:10:1250;

A=[-0.866 0 0.5 zeros(1,3);

-0.5 0 -.866 zeros(1,3);

0.866 1 0 1 0 0;

0.5 zeros(1,3) 1 0;

0 -1 -.5 zeros(1,3);

zeros(1,2) 0.866 0 0 1];

F1=[];

F2=[];

F3=[];

H1=[];

V1=[];

V2=[];

for i=1:length(P)

B=[0;P(i);zeros(4,1)];

x=inv(A)\*B;

F1=[F1 x(1)];

if (x(2)>430)

F2=[F2 0];

else

F2=[F2 x(2)];

end

F3=[F3 x(3)];

H1=[H1 x(4)];

if (x(5)>200)

V1=[V1 0];

else

V1=[V1 x(5)];

end

V2=[V1 x(6)];

end

plot(F1,P,'r','LineWidth',2,'Linestyle', '--')

hold on

xlabel('Force')

ylabel('P')

grid on

plot(F2,P,'b','LineWidth',2)

title('F vs P ')

legend ('F1',' F2')

disp(['Mean Values of F1 = ',num2str(mean(F1))])

disp(['Mean Values of F2 = ',num2str(mean(F2))])

disp(['Mean Values of F3 = ',num2str(mean(F3))])

disp(['Max Values of H1 = ',num2str(max(H1))])

disp(['Max Values of V1 = ',num2str(max(V1))])

disp(['Max Values of V2 = ',num2str(max(V2))])

## Output



