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Please indicate your answers by entering the option ( i), (ii), (iii) or (iv) ) where asked.  
You should append the completed document as a pdf with your typewritten worked solutions including MATLAB code) and upload to Blackboard.

**Q 4.23**

(i)

L =

1.5000	0	0	0
-2.0000	1.0000	0	0
0.5000	1.0000	1.5000	0
-2.0000	3.5000	-0.5000	1.0000

U =

4.0000	-1.0000	3.0000	2.0000
0	-1.0000	3.0000	0.5000
0	0	2.0000	1.0000
0	0	0	3.0000

(ii)

L =

1.0000	0	0	0
-2.0000	1.0000	0	0
0.5000	1.5000	1.0000	0
-2.0000	3.0000	-0.5000	1.0000

U =

4.0000	-1.0000	3.0000	2.0000
0	-2.0000	3.0000	0.5000
0	0	4.0000	2.0000
0	0	0	3.0000

(iii)

L =

1.5000	0	0	0
-2.0000	1.0000	0	0
0.5000	1.0000	1.0000	0
-2.0000	2.0000	-0.5000	1.0000

U =

3.0000	-1.5000	3.0000	2.0000
0	-2.0000	3.0000	0.5000
0	0	4.0000	2.5000
0	0	0	1.0000

(iv)

L =

1.5000	0	0	0
-2.0000	1.5000	0	0
0.5000	1.5000	1.5000	0
-2.0000	3.0000	-0.5000	1.5000

U =

4.0000	-1.0000	3.0000	2.0000
0	-2.0000	3.0000	0.5000
0	0	4.0000	2.0000
0	0	0	2.0000

Your Answer ((i) – (iv)): (ii)

### Q 5.17

You need only to indicate the best team and the worst team (from teams 1 to 6).

Your Answers: Best 2&5 Worst 1

**Q 6.3**

- (i)  $b = 4.6831 \times 10^{-8}$ ,  $m = 0.022$ ,  $population(1985) = 1014 \text{ million}$
- (ii)  $b = 4.8932 \times 10^{-8}$ ,  $m = 0.022$ ,  $population(1985) = 1024 \text{ million}$
- (iii)  $b = 4.6931 \times 10^{-8}$ ,  $m = 0.012$ ,  $population(1985) = 1038 \text{ million}$
- (iv)  $b = 4.9932 \times 10^{-8}$ ,  $m = 0.014$ ,  $population(1985) = 1042 \text{ million}$

**Your Answer ((i)-(iv)):**           (iv)