

QUANTITATIVE SECTION II (Question 4 out of 7)

4. The president of a Canadian university wants to forecast undergraduate/graduate student enrolments for the next academic year, based on the following historical data:

| Year        | Enrolments (in thousand) |
|-------------|--------------------------|
| 5 years ago | 15                       |
| 4 years ago | 16                       |
| 3 years ago | 18                       |
| 2 years ago | 20                       |
| Last year   | 21                       |

- a) What is the forecast for this year using trend adjusted (double) smoothing with  $\alpha(1) = .05$  and  $\alpha(2) = 0.3$ , if the forecast for last year was twenty-one thousand, the forecast for two years ago was nineteen thousand, and the trend estimate for last year's forecast was fifteen thousand? **(5 marks)**
- b) What recommendations would you have for the president to develop this forecast, given the ongoing pandemic situation? Explain it in less than **500** words **(3 marks)**