**Q2** Assume the ABC Inc. estimated a short-run average variable cost function for its product as: AVC = *a* + *b*Q + *c*Q2, using time-series data for 15 years where Q = number of units of output. The output obtained from the computer is below:

Q2

0.000088

0.000032

2.75

0.0176

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| DEPENDENT VARIABLE: AVC OBSERVATIONS: 15 | | R-SQUARE 0.4135 | F-RATIO 4.230 | P-VALUE ON F 0.0407 |
| VARIABLE | PARAMETER  ESTIMATE | STANDARD  ERROR | T-RATIO | P-VALUE |
| INTERCEPT | 30.4202 | 6.4659 | 4.70 | 0.0005 |
| Q | -0.0799 | 0.0308 | -2.60 | 0.0232 |

1. Are the estimates of *a, b,* and *c* have correct signs? Are they statistically significant at 5% level of significance? (use t-ratios from t-table in your textbook)
2. At what level of output do you estimate the AVC reaches its minimum value?
3. What is the estimated Marginal curve?
4. What is the estimated Marginal Cost when output is 700 units?
5. What is the estimated AVC curve?
6. What is the estimated AVC when output is 700 units?

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