**QUESTION 8 – FINAL EXAM**

**Pharma Inc**

**Synopsis:** Pharma Inc., a biotech firm, has a patent on a drug to treat multiple sclerosis for the next 17 years, and it plans to produce and sell the drug by itself. The drug will be priced at $46.50 per patient per day, with each patient taking it for an average of 2 years. After extensive market research, it was determined that 100,000 patients will be buying this drug immediately. The total cost of development for commercial use is estimated at $2.75 billion. Patent life is 17 years. The 17-year treasury bond rate is calculated at 3.5%. Variance in expected present values = 0.224 based on industry average firm variance for bio-tech firms and it will take one year to produce from when the company got rewarded the patent (Research to Commercialization).

**Calculate the Value of the Project using Black-Scholes option pricing method.**