**Date: 19/03/2020**

**Individual Assignment for the course investment Analysis and portfolio management (40%)**

1. Discuss about:
2. The existing investment options using financial instruments in Ethiopia
3. The current status (2019 and 2020) of stock or capital market establishment in Ethiopia
4. What is the relevance or importance of fundamental and technical security analysis?
5. Discuss about Efficient Frontier in a Markowitz Portfolio Theory using your own example.
6. Explain the relationship between bond maturity, bond duration and convexity using your own numerical example.
7. Suppose that a managed portfolio earned a return of 20 percent over a certain time period with a standard deviation of 32 percent. Also assume that during the same period the Treasury bill rate was 4 percent, and the overall stock market earned a return of 13 percent with a standard deviation of 20 percent. Suppose that the beta of the managed portfolio is 1.5.

**Required:** calculate and interpret the Sharpe ratio (S), Treynor ratio (T), Jensen’s alpha (a) and Modigliani and Modigliani (M2).

1. Given the following values

Strike price = $45

Time remaining to expiration = 183 days

Spot stock price = $47

Expected price volatility = standard deviation = 25%

Risk-free rate = 10%

**Required:** Calculate the option price by using Black-Scholes option pricing model

1. Discuss about the following option strategies (explain using your own numerical example)
2. Long call option
3. Short call option
4. Long put option
5. Short put option

**Final Submission date: June 25/2020**