

IIT-Patna
HS301- Financial Economics (Mid-Semester Exam)
4th October, 2020 Total Marks=25 Duration-48 Hours

***Instruction: Send your scanned answer script in single file to
rajendra@iitp.ac.in by 5PM on 6th October***

(Answer any ALL Questions)

- 1) If utility function for an investor is $U = \ln(X)$ where X is income and U is utility level then find out the certainty equivalence for the investor for a gamble where he will gain either 5 rupee or 7 rupee with equal probabilities. Also comment about investor's risk aversion. **(7 marks)**
- 2) Derive and plot graphically the risk-return frontier for an investor who buys two assets with same return but different risks (standard deviations). **(8 marks)**
- 3) Derive the CAPM equation and discuss about idiosyncratic and market risk. **(10 marks)**