Indian Institute of Technology Kharagpur

Date________FN/AN Time: 2 hours Full Marks: 30 No of Students: 62 (approx)

Mid Spring Semester 2015-16 Deptt: HSS Sub No: HS30097

Sub Name: Financial Institutions and Markets

Answer all the questions and all the questions carry equal marks.

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1. How do you measure the financial development? Briefly explain the theories of the impact of financial development on economic growth.
2.
   (i) You decide to purchase a new home and need an Rs.2000000 mortgage. You take out a loan from the bank that has an interest rate of 10%. What is the yearly payment to the bank to pay-off the loan in 20 years?

   (ii) Find the price of a 10% coupon paying bond with a face value of Rs.1000, 12% yield to maturity and the remaining periods to maturity is eight years.

   (iii) If C is the yearly payment, P_C is the price of a perpetuity and i_C is the yield to maturity (YTM), then prove that

$$P_C = \frac{C}{i_C}$$

3.
   (i) If there is a decline in interest rates, which would you rather be holding, long-term bonds or short-term bonds? Which type of bond has the greater interest rate risk?

   (ii) Using the supply and demand for bonds framework, show why interest rates are procyclical (rising when the economy is expanding and falling when the economy is declining).

   (iii) You own a Rs.1000 par zero coupon bond that has five years of remaining maturity. You plan on selling the bond in one year, and believe that the required yield next year will have the following probability distribution:

Probability	Required Yields
0.1	6.60%
0.2	6.75%
0.4	7.00%
0.2	7.20%
0.1	7.45%

   a. What is your expected price when you sell the bond?

   b. What is the standard deviation of the bond price?

4. What do you mean by market efficiency? Explain the different types of market efficiency?

5. Highlight the different instruments of monetary policy in India. Provide a synoptic view of the operating procedure of monetary policy used by RBI in the recent years.
