PGDM & PGDM (IB), 2013-15
Investment Management
DM-312/IB-306
Trimester – III, Supplementary Examination: September 2014

Time allowed: 2 Hrs 30 Min | Max Marks: 50

Roll No: ____________

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means.** In case of rough work please use answer sheet.

Section A, 15 Marks: Attempt 3 out of 5 Questions, all questions carry 5 Marks each

Question 1:- The price of a Rs.1,000 par bond carrying a coupon rate of 7 percent and maturing after 5 years is Rs.1040. (i) What is the approximate YTM? (ii) What will be the realised YTM if the reinvestment rate is 6 percent?

Question 2:- Briefly explain the concept of the Efficient Market Hypothesis and each of its three forms.

Question 3:- A portfolio consists of 4 securities, 1, 2, 3, and 4. The proportions of these securities are: w1=0.3, w2=0.2, w3=0.2, and w4=0.3. The standard deviations of returns on these securities (in percentage terms) are: σ1=5, σ2=6, σ3=12, and σ4=8. The correlation coefficients among security returns are: ρ12=0.2, ρ13=0.6, ρ14=0.3, ρ23=0.4, ρ24=0.6, and ρ34=0.5. What is the standard deviation of portfolio return?

Question 4:- Identify three most important Economic factors affecting Capital Markets currently; write in brief how is it affecting the markets.

Question 5:- You are given the following information regarding sample of stocks

		Price	
Stock	Number of Shares	T	T+1
A	10,00,000	60	80
B	1,00,00,000	20	35
C	3,00,00,000	18	25

Construct price weighted & Value weighted index for these three stocks and compute the percentage change I the index for the period from T to T+1. Briefly discuss the difference in the results for the two indexes.

Section B, 20 Marks: Attempt 2 out of 3 Questions, all questions carry 10 Marks each

Question 6:- What does Portfolio Management process comprises of, write in detail all the steps involved. Write briefly about the importance of asset allocation.

Question 7:- The following are monthly percentage price changes for four market indexes

Month	DJIA	Sensex	IPC	Nikkei
1	0.03	0.02	0.04	0.04
2	0.07	0.06	0.10	-0.02
3	-0.02	-0.01	-0.04	0.07
4	0.01	0.03	0.03	0.02
5	0.05	0.04	0.11	0.02
6	-0.06	-0.04	-0.08	0.06

Compute the following

a. Average monthly rate of return for each index
b. Standard deviation for each index
c. Covariance between rates of return for the following indexes
    - DJIA
    - Sensex
    - IPC
    - Nikkei
d. The correlation coefficients for the four combinations
e. Using the answers from part a,b & d, calculate the expected returns and standard deviation of a portfolio consisting of equal parts sensex and IPC. Discuss the two portfolios

Question 8: Janet Ludlow's company requires all its analysts to use a two-stage DDM and the CAPM to value stocks. Using these models, Ludlow has valued QuickBrush Company at $ 63 per share. She now must value SmileWhite Corporation.

A. Calculate the required rate of return for SmileWhite using the information given in the Table and the CAPM.

	December 2013	
	Quick Brush	Smile White
Beta	1.35	1.15
Market Price	$45.00	$30.00
Intrinsic value	$63.00	?

Risk free rate = 4.5%, expected market return = 14.5%.

B. Ludlow estimates the following EPS and dividend growth rates for SmileWhite:
First three years: 12% per year
Years thereafter: 9% per year
The 2013 dividend per share is $ 1.72.
Estimate the intrinsic value of SmileWhite using the data above and the two-stage DDM. Show your work.

C. Recommend QuickBrush or SmileWhite stock for purchase by comparing each company' s intrinsic value with its current market price. Show your work.

D. Describe one-strength of the two-stage DDM in comparison with the constant growth DDM. Describe one weakness inherent in all DDMs ?

Section C, 15 Marks: Compulsory Case Study

Invensys Tech Ltd was set up 25 years ago. After few years of initial turbulence the company found a few market segments in which it had some competitive advantage. The financials of the company for the last five years are given below:

Rs. in million

Income Statement Summary	**20 x 1**	**20 x 2**	**20 x 3**	**20 x 4**	**20 x 5**
• Net sales	1800	2160	2500	3010	3800
• Profit before interest & tax	540	610	625	780	1180
• Interest	108	140	150	187	290
• Profit before tax	432	470	475	593	890
• Tax	125	140	142	180	275
• Profit after tax	307	330	333	413	615
• Dividends	108	116	117	165	246
• Retained earnings	199	214	216	248	369
Balance Sheet Summary					
• Equity capital (Rs.10 par)	150	150	150	150	150
• Reserves and surplus	800	1014	1230	1478	1847
• Loan funds	200	240	250	275	325
• Capital employed	1150	1404	1630	1903	2322
• Net fixed assets	800	830	950	1170	1530
• Investments	100	110	120	135	140
• Net current assets	250	464	560	598	652
	1150	1404	1630	1903	2322
• Market price per share(year ended)	120	176	180	270	462

The year 20x5 has just ended. The current market price per share is Rs.462. The market price per share at the beginning of 20x1 was Rs.82.

(a) What was the geometric mean return for the past 5 years?

(b) Calculate the following for the past 2 years: return on equity, book value per share, EPS and PE ratio

(c) Calculate the CAGR of Sales & EPS for the period 20 x 1 – 20 x 5.

(d) Calculate the sustainable growth rate based on the average retention ratio and the average return on equity for the past 2 years.

(e) Decompose the ROE for the last 2 years in term of five factors.

(f) Estimate the EPS for the next year (20 x 6) using the following assumptions.

(i) Net sales will grow at 30%

(ii) PBIT / Net sales ratio will improve by 1.5% over its 20 x 5 value.

(iii) Interest will increase by 5% over its 20 x 5 value.

(iv) Effective tax rate will be 30%.

(g) Comment on the performance of the company