Roots Institute of Financial Markets

RIFM

Practice Book

Investment Planning

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Forward

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UNIT-1
INTRODUCTION TO INVESTMENT PLANNING

1. The inverse relationship between the price and interest rates of a fixed income instruments is an example of
   A. Business Risk
   B. Market Risk
   C. Competition Risk
   D. Interest rate Risk

2. Which of the following are characteristics of money market securities?
   A. They are issued by the Government, municipalities and large corporations that have high quality ratings.
   B. All have terms to maturity that are 270 days are less.
   C. All tend to have large amounts of purchasing power risk.
   D. Both a and b
   E.

3. A bond's duration measures which one of the following?

   A. The time structure of a bond's cash flows
   B. The bond's interest-rate risk
   C. Both a and b above
   D. The default risk of the bond issue

4. Mr. Y has invested in the shares of BPL Ltd. It's been forecasted that due to entry of a lot of players in the same industry BPL Ltd. will face a very high level of competition. Mr. Y in this scenario is faced with

   A. Business Risk
   B. Market Risk
   C. Competition Risk
   D. Interest rate Risk

5. Municipal bonds that are backed by the income from specific projects are known as:

   A. Income bonds
   B. Revenue Bonds
   C. General Obligation bonds
   D. Debenture bonds

6. Bonds with higher coupons, other things being the same,
   A. Have more interest-rate risk than bonds with smaller coupons
   B. Have less interest-rate risk than bonds with smaller coupons
   C. Have lower duration than smaller-coupon bonds
   D. Both B and C

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62. A lower coefficient of variation implies:

A. The value in a set are relatively less dispersed from the mean and hence less risky
B. The value in a set are relatively more dispersed from the mean and hence less risky
C. The value in a set are relatively more dispersed from the mean and hence more risky
D. None of the above is true

63. Mr. Sumit invested in Morgan Stanley Dynamic Equity Fund which has a standard deviation of 15% and in Meril Lynch Top 100 Equity Fund which has a standard deviation of 10%. The two funds have a perfectly negatively correlated. What weights of both the funds will eliminate all the portfolio risk.

A. 40% and 60%
B. 60% and 40%
C. 40% and 40%
D. 70% and 30%

64. When will be the investor's risk reward trade off better?

A. With lower coefficient of variation
B. With Higher coefficient of variation
C. With coefficient of variation equal to 1
D. None of the above is correct

65. Calculate the beta of a security with the help of the following details.

S.D. of stock=14%

S.D. of market= 18%

Coefficient of correlation= 0.84

A. 0.33
B. 0.65
C. 1.65
D. 1.33

66. Calculate the yield on a long term corporate bond having some probability of default if its bond default premium and the return on long term government paper are 0.37% and 10.36% respectively?

A. 10.73%
B. 9.99%
C. 10.37%
D. Data insufficient

67. Which of the following best describes the coefficient of determination?

A. It is % age of risk explained by the market
B. It is % age of total risk explained by the market
C. It is % age of unsystematic risk explained by the market

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D. It is % age of diversified risk explained by the market
A. Sometimes larger than the arithmetic mean for stocks

161. Which statement is true with regard to risk free rate?

A. The risk-free rate is the maximum return an investor expects from any investment.
B. The risk-free rate is the return an investor expects to earn from investment in t-bills.
C. The risk-free rate is the rate one earns on the investment in equities.
D. None of the above

162. The total return for a 12% semi annual coupon bond purchased at 1005, held for six months and sold for 1050 is

A. 3.3%
B. 16.42%
C. 10.45%
D. None of the above

163. The total return on a bond purchased for Rs.1000 that pays interest of Rs.90 during the year and is sold for Rs.910 at the end of one year is

A. 0%
B. 10%
C. -10%
D. 1%

164. A perfectly diversified portfolio will fully eliminate _____risk.
A. Systematic
B. Unsystematic

165. The return relative for a stock bought at Rs.40, sold at Rs.38, and paying a Rs.1 dividend is

A. .975
B. -.0732
C. .927
D. .0789

166. For a U.S investor purchasing a foreign stock, beginning price is 50, income is 2, and ending stock price is 46.The foreign currency depreciated 4 % against the dollar. The return to the U.S. investor after currency risk is accounted for is

A. -4%
B. -7.84%
C. -.0016%
D. 2%

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Answer Sheet Unit 1

1	D	41	D	81	C	121	B	161	B	192	A
2	A	42	D	82	B	122	C	162	C	193	D
3	C	43	D	83	B	123	A	163	A	194	D
4	A	44	C	84	A	124	C	164	B	195	A
5	B	45	A	85	B	125	D	165	A	196	A
6	D	46	A	86	A	126	A	166	B	197	C
7	D	47	B	87	C	127	C	167	C	198	C
8	A	48	C	88	C	128	C	168		199	
9	D	49	A	89	C	129	B	1	D	1	C
10	B	50	D	90	D	130	A	2	B	2	D
11	D	51	D	91	C	131	D	3	D	200	A
12	D	52	B	92	C	132	B	4	B	201	C
13	A	53	D	93	B	133	A	5	D		
14	D	54	D	94	B	134	B	169	A		
15	A	55	C	95	A	135	A	170	C		
16	A	56	A	96	B	136	D	171	A		
17	C	57	A	97	B	137	A	172	A		
18	B	58	D	98	C	138	A	173	D		
19	C	59	A	99	A	139	D	174	A		
20	D	60	B	100	A	140	D	175	A		
21	D	61	B	101	D	141	A	176			
22	A	62	A	102	D	142	D	1	C		
23	B	63	A	103	C	143	B	2	A		
24	B	64	A	104	C	144	D	177			
25	A	65	B	105	A	145	B	1	D		
26	C	66	A	106	C	146	A	2	D		
27	C	67	B	107	A	147	C	178	D		
28	D	68	B	108	C	148	A	179	A		
29	B	69	C	109	B	149	B	180	B		
30	A	70	B	110	D	150	C	181	A		
31	B	71	B	111	B	151	D	182	C		
32	B	72	A	112	C	152	B	183	C		
33	D	73	C	113	C	153	B	184	D		
34	B	74	A	114	B	154	C	185	C		
35	B	75	A	115	A	155	A	186	A		
36	A	76	A	116	B	156	B	187	C		
37	D	77	D	117	A	157	D	188	A		
38	B	78	C	118	C	158	A	189	C		
39	D	79	B	119	B	159	A	190	C		
40	B	80	B	120	D	160	B	191	A		

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Solution 7: The market risk premium is the additional return for accepting the risk of the market. If the market premium increases with all else remaining the same, then the price of the stock would have to decrease. An increase in the market premium would also increase the discount rate used to value the stock. This higher discount rate will cause the present value of the cash flows to be smaller.

Solution 8: Answer is option A. Non-diversifiable risks or systematic risks are those that affect the entire market, including market risk, interest rate risk, and purchasing power risk.

Solution 9: Answer is option D.ADRs are used to trade foreign securities in the U.S. ADRs are foreign shares denominated in U.S. dollars and do not eliminate currency risk.

Solution10: Answer is option B. Systematic risk cannot be eliminated, thus statement #2 is false. Beta only measures systematic risk; statement #5 is false. All other statements are true.

Solution 11: Answer is option D. Mortgage–backed securities are subject to the same risk as bonds plus the risk of prepayment

Solution13: Answer is option A. A longer-term bond will be subject to more inflation risk. Since the quality of the bond is high, the level of default risk is low.

Solution 15: A retiree at 60 has little appetite for risk as he no longer has any earning power. Further, he needs certainty of income. But a small amount of equity is still recommended as a hedge against inflation. If not, if he lives until say 80, he will experience a drop in his standard of living.

Answer 18: A change in the coupon payment from annual to semiannual will result in the coupons becoming more significant compared to the final payment on a weighted average basis and decreases the duration of a bond. All other factors will increase the duration of a bond.

Solution 19: The only answer that does not contain II. An increase in the dividend growth rate leads to an increase in the stock price

Solution 38: Beta only captures systematic non-diversifiable risk of a security. Therefore, I False II True, III True, IV False. Investors form portfolios to eliminate non-systematic risk

Solution 42 : Standard deviation of portfolio:

$$б_{AB}=[б_A^2W_A^2+б_B^2W_B^2+2W_AW_Bp_{AB}б_Aб_B]^{1/2}$$

= [(8^2*0.40^2) + (5^2*0.60^2)+2*.40*.60*0.28*8*5]^1/2
= 4.96%

Solution 50: Bond Horizon Premium= Yield on Long term Government Bond- Return on Treasury Bills
0.95%= Yield on Long term Government Bond-7.85%
Yield on Long term Government Bond= 0.95=7.85= 8.80%

Solution: 51 Minimum Possible Return = Mean-3SD
= 22-(3*12)
= -14%
Maximum Possible Return = Mean +3SD
= 22+(3x12)
= 58%

Solution 52: Equity risk Premium (ERP) = Return on equity-risk free rate
8 = Return on equity-7.5

Return on equity = 15.5%
Price at the beginning = 100*100/115.50
= Rs. 86.58

Solution 53: Equity risk premium (EPR)= Return on equity-risk free rate
Return on equity= (108-90)/90*100=20%
ERP=20-6.5= 13.50%

Solution 56: Coefficient of variation= S.D./Mean*100
=3/15*100
= 20%

Solution 59: Portfolio Return= (0.50*19) +(0.35*12)+(0.15*9.5)= 15.125%

Solution 61: Weight of security A= 30/30+10= 0.75 or 75%
Weight of security B= 10/30+10= 0.25 or 25%

Solution 65: Covariance= 14*18*0.84
=211.68
Beta = Cov/Variance of market
= 211.68/324
= 0.65

Solution 66: Yield on long term corporate bond= 10.36+0.37
= 10.73%

Solution 68: Bond default premium= 10.25-9.75
= 0.50%

Solution 69: Equity risk Premium (ERP) = Return on equity-risk free rate
= 15-7.5
= 7.5%

Solution 70: Bond Horizon Premium= Yield on Long term Government Bond- Return on Treasury Bills
0.87= Bond Horizon Premium= Yield on Long term Government Bond- 7.79
Yield on Long term Government Bond= 7.79+0.87 = 8.66%

Solution 71:

Asset	Amount Invested	Weights	Indicative Returns	Volatility	Maximum Return(Mean+3SD)	Minimum Return(Mean-3SD)
Equity	Rs.4,00,000	0.4	28%	12%	64%	-8%
Mutual Funds	Rs.3,00,000	0.3	25%	10%	55%	-5%
GOI Relief	Rs.1,00,000	0.1	8.5%	0%	8.5%	8.5%
Bonds						
ELSS	Rs.2,00,000	0.2	32%	9%	59%	5%

Maximum Possible Return = (0.4x64)+(0.3x55)+(0.1x8.5)+(0.2x59)
= 54.75%
Minimum Possible Return = (0.4x-8)+(0.3x-5)+(0.1x8.5)+(0.2x5)

= -2.85%

Solution 72: Minimum Possible Return = Mean-3SD
= 9.5 -(3x SD)
= 9.5%

Maximum Possible Return = Mean +3SD
= 9.5 +(3xSD)
= 9.5%

Solution 73: No. of co-efficient of covariance terms = n (n-1)/12
= 20*19/2=190

Consider an equity mutual fund with an expected return of 15% and an expected standard deviation of 18%.The risk-free rate is 5%.The expected return on the market index is 16%, and its standard deviation is 20%.An investor wishes to place 60% of her funds in the mutual fund and the remainder in riskless assets. Using this information, answer the next question.

Solution 74: Standard Deviation of portfolio = $б_{AB} = [б_A^2 W_A^2 + б_B^2 W_B^2 + 2W_A W_B \rho_{AB} б_A б_B]^{1/2}$
But, s.d. of risk free asset is zero, so Coefficient of correlation is also zero
Therefore, Standard Deviation of portfolio = 18x0.6=10.8%

Solution 77: Standard deviation of portfolio:
$б_{AB}=[б_A^2 W_A^2 + б_B^2 W_B^2 + 2W_A W_B \rho_{AB} б_A б_B]^{1/2}$
= [(8^2*0.40^2) + (5^2*0.60^2)+2*.40*.60*0.28*8*5]^1/2
= 4.96%

Solution 78: Portfolio beta= 1.35*0.5+0.95*0.5+0.60*0.15= 1.0975
Solution 86: Equity risk premium (ERP) = Return on equity- risk free rate
Return on equity= (134-115)/115*100= 16.52%
ERP= 16.52-7.5-9.02%

Solution 87: Maximum Possible Return = Mean + 3 SD
On Punj Lyold = 22+3x8
= 46%
On Crompton Greaves = 18+3x5.5
= 34.5%
Maximum Possible Return on his portfolio = 46x0.5+34.5x0.5
= 40.25%

Solution 90: Note: Price = Dividend / (rate of return – rate of growth of dividend)
Next year dividend = 3.85 * (1.07) =4.1195
40 = 4.1195 / (r-.07)
Solving for r gives 17.298

Solution 94: Note: return on portfolio is sum of (expected return of individual asset* probability)

Solution: 95
N =5
I=Solve =47.5
PV =-12000
PMT =1500

FV = 65000

Solution 98: Solution: M.V of a Stock=[(Dividend*(1+growth rate)] / (Return- growth rate)

Solution 104: Answer is option C. Of all the choices, only unexpected corporate earning growth would have a significant positive impact on the value of a stock. Under the Efficient Market Hypothesis, any expected changes would already be reflected in the price of the common stock. Unexpected increases in inflation would increase the discount rate and reduce the value of the fund.

Solution 107: Arbitrage Pricing Theory uses multiple regression (many factors) to determine a model or formula that has numerous factors. This model is then used to determine the value of a security. The CAPM is based on the single factor of Beta, which measures the level of systematic risk within a portfolio.

Solution 110: Answer is option D. Statement #4 is false, because if the cost of capital is less than the IRR, then the project should be accepted (NPV > 0).

Solution:116
N =4
I=Solve =23.02
PV =-100000
PMT = 15000
FV =145000

Solution 117: Return on Portfolio = 9+10+12+18/4=12.25%

Solution 118: 17160=10000x1.10x1.20xR
R = 17160/13200
R = 1.3 or 30%
Solution 119: CWI=1.05x1.10x1.12x1.08=1.397088

Solution 120: Note: Rule of 72, nper= 72/ rate of compounding, nper is no of years to double.

Solution 121: CAGR = [{(End Value + Dividend Received/Begin Value)^1/No. of years} -1]x100
CAGR = [{(29500/10000) ^1/5}-1] x100

Solution 122: CAGR= [{(End Value+ Dividend Received/Begin Value) ^1/No. of years}-1] x100
CAGR= [{650/120) ^1/10}-1] x100
=18.40%

Solution 123: Expected Return=9x0.5+14x0.2+18x0.3=12.7%

Solution 124: Difference = 2.3838-1.9865=0.3973
Return = 0.3973/1.9865=0.2 or 20%
Solution 125: Return = 46-34=12
Total Return = 12+1=13
Return Relative = 1+ (13/34) =1.38
Solution 130: Return for French Investor=300-250+10=60
% Return=60/250x100=24%

Solution 132: Arithmetic Mean = -10+30+15+23/4=14.5%

Solution 134: 23=12+35+(x)-5-13/5
X= 86%
Return for year 2005 = 86%

Solution 135: Real Rate of Return = [1+I/1+E]-1x100
1.08 = 1.10/1+E
1+E = 1.0185
E = 1.85%

Solution 136: Real Rate of Return = [1+I/1+E]-1x100
1.05 =1+I/1.07
1+I = 1.1235
I = 12.35%

Solution 137: Tax Adjusted Real Rate of Return = [1+ {I (1-T)}/1+E]-1x100
1.04 = 1+ [0.12 (1-T)]/1.06
1.04x1.06 = 1+ [0.12(1-T)]
1.1024-1 = 0.12(1-T)
(1-T) =.1024/0.12
(1-T) = 0.8533
Tax Rate = 14.67%

Solution 138: CAGR = (214948/100000) $^{1/5}$-1x100
= 16.50%

Solution 139: CWI =10000x1.10x1.14x1.22x0.86x0.98
= 12894

Solution 140: The Value of CWI at the end of 2007 is 151545 while the beginning index value was 100,000.Calculate the return generated by the investment in the year 2007?
151545 =100000x1.1x1.14x1.08x0.94x1.24xR
R = 151545/157859
R = 0.96=-4%

Solution 143: -15 =x+35+10-5-13/5
X =-102%

Solution 144: Geometric Mean = (0.88x1.30x1.15x1.23)$^{1/4}$-1x100
= 12.78%

Solution 145: (1.093)^5 = 1.12x1.35xRx0.95x0.87
R = 1.55991/1.249668
=1.2482 or 24.82%

Solution 146: Real Rate of Return = [1+I/1+E]-1x100
=4.30%

Solution 147: Real Rate of Return = [1+I/1+E]-1x100
=3.77%

Solution 150: Tax Adjusted Real Rate of Return = [1+ {I (1-T)}/1+E]-1x100

= [1+0.12 (0.85)/1.065]-1x100
=[1.102/1.065]-1x100
= 3.47%

Solution 151: Arithmetic Mean = (End Price + Dividend)-begin Price/Begin Price
= (250+100)-230/230=52.17%

Solution 152: $(1.11)^5$ = Rx1.25x1.10x0.95x0.77
R = 1.6850/1.0058
= 1.6752 or 67.52%

Solution 153: Geometric Mean = $(0.90x1.30x1.15x1.23)^{1/4}$-1x100
= 13.42%

Solution 154: HPR = (900+10)-800/800=0.1375 or 13.75%

Solution 155: Arithmetic Mean = -12+30+15+23/4 =14%

Solution156: Formula: Approximate yield = annual income+ $\frac{\text{future price-current price}}{\text{No. of years}}$

$$\frac{\text{Future price + current price}}{2}$$

Solution 159: Expected Value = (10x0.2) + (20x0.5) + (-25x0.3)
= 4.5%

Solution 162: Return = 45+60=105
% Total Return =105/1005x100=10.45%

Solution 163: Total Return = (910-1000) +90=0

Solution165: Return = 38-40=-2
Total Return = -2+1=-1
Return = -1/38=-0.026
Return Relative = 1-0.026=0.975

Solution 166: Loss on Trading = 46-50+2=-2
Currency Loss (to be converted into Rs. On sale of security) =48x0.04=1.92(-)
Total Loss = -2-1.92=3.92
% Loss = 3.92/50x100=-7.84%
A U.S. investor buys a French stock when the value of the franc stated in dollars is $0.20.The cost of the stock is 250 francs. One year later the stock is at 300 francs, and the stock paid a dividend of 10 francs. The francs is now at $0.19.Answer the next two questions.

Solution 167: HPR = (End Price +Dividend)-Begin price/Begin Price
0.05 = (129+D)-125/125
D = 2.25

Solution 169: Tax Adjusted Real Rate of Return = [1+ {I (1-T)}/1+E]-1x100
I = 33%

Solution171: Rationale: A higher Sharpe measure than a passive strategy is indicative of the benefits of active management.

Solution 173: Treynor Measure =7.6/1.5=5.06

Solution 177: Note: Correlation coeff: = covariance / (sigma a * sigma b)

Solution 178: Sharpe Measure =11.2/9.7=1.15

Solution 179: Rationale: The manager with the highest Sharpe measure presumably has true forecasting abilities.

Solution 180: Rationale: A portfolio with a positive alpha is outperforming the market. If this portfolio also has a low degree of nonsystematic risk, the portfolio is adequately diversified.

Solution 181: Rationale: A purely passive strategy uses only index funds and keeps the proportions constant when there are changes in perceived market conditions.

Solution 182: Solution: Realized Return - Risk Free Return Sharp Index = Standard Deviation of Portfolio (0.19 – 0.08). 0.47826 = 0.23. Answer is C

Solution183: Answer is option D, unless the correlation coefficient bet ween the stocks is equal to one, the standard deviation for the portfolio will be lower than the weighted average standard deviation for the portfolio.

Solution 184: Answer is option D. Sharpe uses standard deviation and Treynor uses beta

Solution 185: Rationale: The Sharpe measure is commonly used to measure the performance of professional managers. A good manager has a steeper CAL than the one from following a passive strategy.

Solution 186: Jonson's Measure=17.8-[8.5+1.5(11-8.5)] =5.55

Solution 189: By definition, the Treynor Index uses beta as its risk measure

Solution 190: By definition, as the stocks are positively correlated, they move in the same direction but Stock B will move three quarter as much as Stock A

Solution 191: Calculations are as follows: (2.0)/(1.1) + (5.0)/(1.1)^2 + (6.0)/(1.1)^3 – 8.0

Solution 193: Rationale: Although one can engage in various degrees of active portfolio management (security selection without market timing and vice versa), the most active portfolio management strategy consists of engaging in both pursuits.

Solution 194: A purely passive strategy is one that calls for no market analysis.

Solution 201: (7x0.2) + (12x0.3) + (20x0.15) + (5x0.35) = 9.75

Unit-2

Investment Vehicles

221. A security will not earn the yield-to-maturity that was promised when the security was purchased if which of the following conditions occurs?

A. The issuer defaults on either the interest or principal payments.
B. The investor sells the security prior to its maturity date.
C. Cash flows from the security paid to the investor prior to its maturity date are held in cash or spent on consumption goods rather than reinvested.
D. All of the above are true.

222. Which one of the following products is designed to provide both growth and income?

A. Fixed premium annuity.
B. Non-participating mortgage real estate investment trust (REIT).
C. Aggressive growth mutual fund.
D. Convertible bond.

223. Assuming that the current market yield for similar risk bonds is 8%, determine the discounted present value of a Rs.1,000 bond with a 7.5% coupon rate, which pays interest semiannually and matures in 17.5 years.

A. Rs.504.68
B. Rs.539.78
C. Rs.953.34
D. Rs.968.96

224. Ruchi invested Rs.10, 000 in a fixed deposit. If the interest is compounded monthly at an annual rate of 4%, what would be the amount that Rani would receive in five years time? (use 2 decimal places)

A. 12,158.65
B. 12,209.97
C. 12,188.65
D. 12.187.65

225. Studies show that the Indian middle class has an excess of _____ as investments.

A. Fixed Deposits
B. Mutual Funds
C. Equity Shares
D. Real Estate

226. Mr Amit places his fixed deposit for one year with interest payable at maturity. Mr Sumit places his fixed deposit with another bank with interest payable quarterly. Assuming that the deposit amount is Rs.100,000, and using the same annual rate of 6%, what is the difference in future value after one year?

A. Rs.130.43

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B. Rs.132.54
C. Rs.134.22
D. Rs.136.36

303. Which of the following is CORRECT regarding zero-coupon securities?

A. They eliminate re-investment rate risk.
B. The yield to be earned on them cannot be determined until these securities are held to maturity
C. They are only issued by corporations.
D. They offer minimum price volatility.

304. The yield to maturity on a bond

A. Is a promised yield
B. Is calculated by assuming that investors reinvest all coupons received from a bond at a rate equal to the computed YTM on that bond
C. Is a measure of the true yield that a bond investor is assured of receiving barring
D. Is almost always equal to the realized compound yield

305. When calculated for a period of, say, two years, the Realized Compound Yield consists of

A. The coupon income
B. The price change
C. The coupon income+ the price change
D. The coupon income+ the price change the interest-on-interest

306. Choose the INCORRECT statement in the following set of statements about bond measures.

A. The yield to call is a promised yield
B. The current yield is equal to coupon divided by current marker price.
C. The horizon return is an expected return
D. The YTM is both a promised return and a realized return.

307. An increase in reinvestment rate risk

A. Is caused by an increase in interest rates.
B. Leads to a decline in coupon rates.
C. Results from a decline in interest rates.
D. Results from an increase in inflation.

308. If bond investors do not reinvest the coupons received during the life of the bond, then the

A. Promised yield will be less than the realized yield.
B. Promised yield will exceed the realized yield.
C. Nominal yield will be greater than the promised yield.
D. Current yield will equal the promised yield.

309. With regard to the various yield measures on bonds.

A. The yield to call is often a better measure than YTM for bonds selling at a premium

B. The realized compound yield takes into account all intermediate cash flows and reinvestment rates
C. The yield to maturity is the compound rate of return an investor will receive if the bond is held to maturity
D. A and B are correct

310. A bond of face value of Rs. 1000 has a coupon of 7.5% and is compounded quarterly duration 4 yrs. similar bond in market yield 8% what is pv of the bond?

A. 982.03
B. 983.03
C. 984.03
D. 985.03

311. A bond of face value of Rs. 1000 has a coupon of 7.5% and is compounded semi annually duration
4.5 yrs. similar bond in market yield 8% what is PV of the bond?

A. 981.41
B. b) 982.42
C. c) 983.25
D. 980.25

312. A bond of face value of Rs. 1000 has a coupon of 8.5% and is compounded annually, duration 12
yrs., similar bond in market yield 9% what is PV of the bond?

A. 963.20
B. 964.20
C. 964.80
D. 965.80

313. Mr.Amit buys 200 convertible debentures of TISCO at Rs. 200 each. 50% of the value of these debentures is converted into one share of Rs. 80 each after 4 years. Mr. Amit exercises his options after 4 yrs and receives 100 shares. Compute cost of acquisition of each share?

A. 200
B. 250
C. 275
D. 300

467. Under fundamental analysis, a security is considered attractive for purchase if its computed intrinsic value is

A. Less than its current price
B. Greater than its current price
C. Less than its book value
D. Greater than its book value

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468. Namit buys Wealth Enterprises for Rs.40. He expects the firm's earnings and dividends to grow at an annual rate of 7%. The firm expects to pay a dividend of Rs.2.00 next year. The market risk premium is 8%.Namit expected rate of return is

A. 10%
B. 12%
C. 12.35%
D. 15%

469. Onyx wealth solutions Ltd. currently earns Rs.3.00 per share and currently pays Rs.1.20 per share in divindends. It is expected to have a constant growth rate of 7% per year. The risk free rate of return is 6%, the market risk premium is 8%, and the beta for this company is 1.0. The stock price is

A. Rs.42.86
B. Rs.18.34
C. Rs.17.14
D. Rs.40.05

470. Choose the INCORRECT statement concerning the DDM:

A. It is based on the position that the price of a stock is the discounted value of all future dividends
B. Not all of its three growth rate cases involve a present value process
C. The no growth rate case is the least likely case to be encountered
D. The multiple growth rate case involves at least two different growth rates

471. Using the constant growth version of the DDM to determine the intrinsic value of a stock

A. The formula calls for the dividend to be paid this period
B. The required rate of return is expected to be larger than the growth rate in dividends
C. There is no present value process involved in the simple equation used in this case
D. The answer obtained from this equation is the definitive value for the stock for all investors

472. Which of the following statements is INCORRECT about dividends?

A. Dividends are the foundation of valuation for common stocks
B. The DDM states that the value of a stock is the discounted value of all future earnings
C. The DDM is operationalized by estimating the expected future dividends to be paid by a company and estimating the required rate of return
D. The answer obtained from this equation is the definitive value for the stock for all investors

473. With regard to markets, choose the CORRECT statement:

A. Secondary markets exist for the trading of new securities
B. Investment bankers often underwrite new issues by purchasing the securities
C. If the issuer is selling securities for the first time, these are referred to as seasoned issues
D. All secondary equity markets are auction markets

474. You instruct your broker to sell your existing shares at a price that will assure you of receiving at least Rs.9. This is which type of order?

A. A market order
B. A limit order to sell
C. A stop order to buy
D. A stop order to sell

475. An investor buys 100 shares of a stock at Rs.200 per share on 60% margin. The stock goes to Rs.220. Ignoring all costs of transacting, the percentage return on investment is

A. 16.67%
B. 45.45%
C. 10%
D. None of the above

476. If the initial margin requirement is 60 percent, and a stock sells for Rs.50, an investor with Rs.3000 of his own who wants to use the full Rs.3000 in a margin transaction

A. Can purchase 125 shares
B. Can purchase a maximum of 100 shares by borrowing Rs.2000 from the broker.
C. Can purchase 80 shares
D. Can purchase 200 shares by borrowing Rs.3000 from the broker

477. You sell short 100 shares of stock at Rs.150 per share. If the stock moves to Rs.180, you have

A. A loss of Rs.2000
B. A gain of Rs.3000
C. A loss of Rs.3000
D. None of the above

572. What is the sum of a series of future cash transactions on a present value basis?

A. Discounted Cash Flow
B. Time Value of Money
C. Adjusted Present Value
D. Annuity

573. Suppose you invested an equal amount of money is Gold and Real Estate at the same point of time and soon the economy enters into depression. Which investment will pay you better?

A. Real Estate
B. Gold
C. Both will give the same returns
D. All the options are incorrect574. Physical settlement in a commodity futures market involves the delivery of:
A. Profit
B. Future Contract
C. Underlying Commodity
D. None of the above

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Answers Unit 2							
221	D	256	B	294	C	332	A
222	D	257	C	295	D	333	A
223	C	258	D	296	D	334	A
224	B	259	B	297	D	335	C
225	A	260	C	298	D	336	B
226	D	261	D	299	A	337	B
227	C	262	C	300	D	338	A
228	D	263	A	301	B	339	A
229	A	264	D	302	A	340	C
230	B	265	C	303	A	341	B
231	A	266	B	304	B	342	D
232	D	267	C	305	D	343	A
233	C	268	B	306	C	344	B
234	C	269	D	307	C	345	B
235	B	270	D	308	A	346	B
236	C	271	D	309	B	347	B
237	D	272	A	310	B	348	D
238	A	273	C	311	A	349	B
239	A	274	C	312	B	350	C
240	B	275	D	313	A	351	D
241	B	276	B	314	C	352	A
242	D	277	A	315	B	353	D
243	A	278	B	316	D	354	B
244	C	279	A	317	C	355	B
245/1	C	280	B	318	D	356	B
245/2	D	281	A	319	C	357	C
245/3	C	282	A	320	B	358	D
245/4	D	283	B	321	D	359	C
246	B	284	C	322	B	360	D
247	C	285	A	323	A	361	B
248	A	286	A	324	C	362	B
249	A	287	A	325	B	363	A
250	B	288	C	326	B	364	B
251	A	289	D	327	D	365	A
252	C	290	D	328	A	366	D
253	C	291	D	329	C	367	D
254	C	292	B	330	C	368	A
255	C	293	C	331	D	369	B

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Answers Unit 2							
370	C	401/8	C	439	C	477	C
371	C	402	D	440	D	478	C
372	C	403	C	441	B	479	B
373	B	404	C	442	A	480	A
374	A	405	B	443	A	481	C
375	C	406	B	444	D	482	B
376	A	407	A	445	C	483	D
377	C	408	D	446	C	484	C
378	A	409	D	447	C	485	B
379	B	410	A	448	C	486	A
380	C	411	D	449	C	487	A
381	B	412	C	450	D	488	C
382	D	413	A	451	A	489	A
383	C	414	B	452	A	490	A
384	A	415	B	453	D	491	D
385	B	416	D	454	D	492	A
386	C	417	C	455	B	493	D
387	B	418	B	456	D	494	C
388	A	419	D	457	B	495	C
389	B	420	A	458	D	496	D
390	A	421	D	459	A	497	A
391	D	422	D	460	C	498	A
392	C	423	A	461	D	499	C
393	A	424	B	462	C	500	A
394	D	425	C	463	C	501	B
395	B	426	C	464	C	502	A
396	A	427	C	465	A	503	B
397	B	428	B	466	C	504	D
398	B	429	C	467	A	505	B
399	D	430	C	468	B	506	D
400	D	431	D	469	B	507	D
401/1	B	432	A	470	B	508	D
401/2	A	433	B	471	B	509	A
401/3	C	434	C	472	B	510	C
401/4	A	435	C	473	B	511	D
401/5	B	436	B	474	B	512	A
401/6	D	437	B	475	A	513	D
401/7	A	438	B	476	B	514	A

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Answers Unit 2			
515	D	546	C
516	B	547	A
517	B	548	C
518	B	549	A
519	A	550	C
520	A	551	D
521	C	552	C
522	C	553	A
523	B	554	D
524	D	555	C
525	D	556	B
526	C	557	C
527/1	C	558	A
527/2	B	559	A
527/3	C	560	D
528/1	B	561	C
528/2	D	562	C
528/3	B	563	B
529/1	B	564	D
529/2	B	565	B
529/3	C	566	B
529/4	D	567	C
530	D	568	B
531	B	569	A
532	C	570	A
533	D	571	B
534	D	572	A
535	A	573	B
536	D	574	C
537	B		
538	B		
539	D		
540	C		
541	D		
542	C		
543	D		
544	D		
545	B		

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222 **Solution:** Convertible bonds generate current income from coupon payments and allow for growth through the stock conversion feature. Options “A” & “B” provide income only and Option “C” is designed for growth.

223 **Solution:** Answer is option C
N = 35 (17.5 x 2)i = 4 (8 _ 2)PMTOA = Rs.37.50 (Rs.75 _ 2)
FV = Rs.1, 000PV = (Rs.953.34)

226 **Solution:** (100,000) x (1 + 0.015)^(4) – (100,000 x 1.06) = 136.36

229 **Solution:** (((((4985/4000)^(1/7))-1)*100)*2)

264 CMPD N=20 I=Solve=9.095

PV=-810 PMT=70 FV=1000

268 CMPD N=3*2=6 I=5.0928*2=10.185

PV=-97 PMT=4.5 FV=100

285 N=3*2=6 I=5.2955*2=10.59 PV=-96

PMT=4.5 FV=100

287 **Solution:**

Duration is directly related to maturity and inversely related to the coupon rate and yield to maturity (YTM).Duration is approximately equal to the point in years where the investor receives half of the present value of the bond’s cash flows. Therefore the later the cash flow are received, the greater the duration.

The longer the time to maturity, the greater the duration (and vice versa).A longer-term bond pays its cash flows later than a shorter-term bond, increasing the duration. The lower the coupon rate, the greater the duration(and vice versa).A lower coupon bond pays lower annual cash flows than a higher-coupon bond and thus has less influence on duration. The lower the YTM, the higher the duration. This is because the bond’s price (or present vale) is inversely related to interest rates. When market yields fall, the value (or cash flow) of a bond increases without increasing the time to maturity.

291 CMPD N=14 I=8

PV=Solve=-835.11 PMT=60 FV=1000

298 **Solution:** Answer is option E. Duration is a present value, time weighted measure of payback. All of the
factors listed are important components in determining duration.

299 CMPD N=15*2=30 I=9/2=4.5

PV=-267 PMT=0 FV=1000

321 CMPD N=12 I=Solve=7.934

PV=-400 PMT=0 FV=1000

325 **Answer:** A change in the coupon payment from annual to semiannual will result in the coupons becoming more significant compared to the final payment on a weighted average basis and decreases the duration of a bond. All other factors will increase the duration of a bond.

326 **Solution**
Using the Growth Dividend Model, the calculations are as follows:
R = Risk free rate + risk premium
Div1 = Div x (1 +g)
P = Div1/(R – g)
Where P = price
Div1 = dividend in year 1
R = required rate of return or discount rate
g = constant dividend growth rate
R = 0.06 + 0.07 = 0.13
Div1 = 8 x (1 + 0.05) = 8.4
P = 8.4/(0.13 – 0.05) = 105

336 **Solution:** All else constant, bond with a longer maturity will be more sensitive to changes in interest rates. All else constant, a bond with a lower coupon will have greater interest rate risk.

337 A bond's percentage change in price and dollar change in price are both tied to the underlying price volatility. The statement that a bond's percentage change in price and dollar change in price are both tied to the underlying price volatility is true.

The effective duration formula result is for a 1.00% change in interest rates (100 basis points equals 1.00%, or 0.01 in decimal form).

338 The approximate bond price change is computed as follows:

Estimated Bond Price Change=-5.47/100*98.63*2=-10.79

339 CMPD

N=10 N=3

I=9 I=Solve=12.37

PV=Solve=-871.64 PV=-871.64

PMT=70 PMT=70

FV=1000 FV=1000

340 CMPD

N=10 N=5

I=9	I=Solve=9.67
PV=Solve=-935.82	PV=-.935.82
PMT=80	PMT=80
FV=1000	FV=1000

344 **Solution:** = Yield to maturity (YTM)= Annual Interest+ (Bonds Par Value-current bond price)/
Bond's par value Current bond price
Number of years to maturity
Annual interest Bond's par value - Current bond price
Bond's par value Current bond price
Number of years to maturity
Annual interest Bond's par value - Current bond price
Yield to maturity (YTM)
Therefore YTM = {15 + (-20/2)} / {(100+120)/2} = 4.55 %

345 **Solution** = (100-90) + 5 / 90*100 = 16.67%

355 **Solution:** Paid-up value- No. of premiums paid X sum assured /No. of premium payable + bonus if any.
Surrender value,
Paid-up value X S.V. factor/100,
Paid-up value: 20 X 1, 20,000/100
= Rs.24, 000 + 84, 000 (bonus for 10 years Rs.700 per 1, 000 S.A)
= Rs.1, 08,000
Surrender Value: 1, 08,000 X 25/100
= Rs.27, 000,
Therefore surrender value is Rs.27, 000.

365 **Solution:** The option is out of the money; therefore the intrinsic value is zero. The premium of an option does not affect the intrinsic value of the option, hence (a)

368 Unit purchased for dividend	=3/21=0.1428
Total units held	=1.1428
End Value	=1.1428*22=25.14
Return	=5.14/20*100=25.7%

372 **Solution:** It is generally accepted that the order is Bond Fund, Balanced Fund, Growth Fund and Small Cap Fund. A small cap fund is more risky than a growth fund. Earnings of smaller companies are more exposed to the vagaries of the economic cycle.

378 Assume that the Franklin Templeton Mutual fund annual returns for 4 consecutive years are 10.3% for 1999,-13.2% for 2000,+14.3% for 2001,and -1.9% for 2002. Answer the next 2 questions.

379 **Solution:**

NAV = (Market Value of Investment-Total Liabilities)/no. of outstanding units

= (700-0.5)/28

= 24.98

380 Terminal Wealth = 10000*1.103*0.868*1.143=10943.13

381 **Solution:** A money market fund invests only in short term money market instruments such as short term debt securities, Treasury bills, banker's certificates of deposits and bank acceptances. As the instruments are highly liquid, usually no notice for withdrawal is required. In fact, some money market funds provide quasi checking facilities. Money market funds can pay current income as the instruments mature in the short term. It should also be mentioned that money market funds have low interest rate risk because of the short tenor of the instruments.

382 **Solution:** Only I and III are true. II There is no need for the manager to repurchase units. IV Redemptions do not affect a close end fund. The number of units stays the same.

384 **Solution:** As both funds appreciated by the same amount, the investor made identical returns from both funds: Rs.4000 x 18% = Rs.720. There is a misconception that a lower priced fund has a higher return. I is true. Rs.4000/1.02 = 3921.57 units II is true. Rs.4000/0.58 = 6896.55 units

385 **Solution:** Total return is calculated as follows: (P2 – P1 + Div)/P1 x 100, (112 – 113 + 6)/113 = 4.4%

393 **Solution:** The price is calculated as follows: (62 – 52)/52 = 19.2%, 40 x 1.192 = 48

401(1) The actual cost is Premium paid (Rs300) + Exercise value (50*100) = Rs5300
While the actual market value on the date of exercise is (57*100) = Rs 5700, which leaves a profit of Rs 400.

401(2) Market value after 6 months for five hundred shares of B is (35*500) = 17500
Exercise price after 6 months for five hundred shares of B is (45*500) =22500
Profit in put option is (22500- 3000) = 19500, Rs 3000 is the premium paid for put option. Value in put option is 19500 – 17500 = Rs 2000.

401(4) Note: Because the market price is lower than exercise price the buyer would prefer to buy in market than to exercise the option. Which leaves the call writer with the profit of premium collected i.e. Rs 625.

408 Price of share = 8/0.125=64

40912.2=124000000/No. of shares

No. of shares =10163934

415 Sol: Book value of share is 2000/40 ie 50, Market price is twice the book value so it is 100.

417 Note: Price = Dividend / (rate of return – rate of growth of dividend)
Next year dividend = 3.85 * (1.07)=4.1195
40 = 4.1195 / (r-.07)
Solving for r gives 17.298

418 Note: Price = Dividend / (rate of return – rate of growth of dividend)
Next year dividend = 3.85 * (1.07)=4.1195
40 = 4.1195 / (r-.07)
Solving for r gives 17.298

419
Solution: Answer is option E**;** the intrinsic value of a share of common stock is equal to the discounted present value of its cash flows.

420 **Solution:** Arbitrage Pricing Theory uses multiple regressions (many factors) to determine a model or formula that has numerous factors. This model is then used to determine the value of a security. The
CAPM is based on the single factor of Beta, which measures the level of systematic risk within a portfolio.

421 **Solution:** The market risk premium is the additional return for accepting the risk of the market. If the market premium increases with all else remaining the same, then the price of the stock would have to decrease. An increase in the market premium would also increase the discount rate used to value the stock. This higher discount rate will cause the present value of the cash flows to be smaller.

422 **Solution:** PV = Rs.1.36
FV = (Rs.2.00)
N= 5
i = 8.02
d1 1.082 (2.00) 2.16
Value of common stock = == = Rs.54.00
RRR - g 0.12 – 0.08 0.04
RRR = Required Rate of Return
g = growth rate

423 **Solution:** V =
d0 (1 + g)
=
Rs.2.30 (1.04)
= Rs.47.84 (value using dividend growth model), k - g 0.09 - 0.04
Since the value of Rs.47.84 is greater than the current market price, the stock is underpriced in the market. Tom should purchase the stock.

424 **Solution:** Answer is option B. Above the line would indicate a higher than expected return for the given risk level. On the line would indicate an expected return for the given risk level. Below the line would indicate lower than expected return for the given risk level

425 **Solution:** Answer is option C. This is a question regarding the constant dividend growth model for determining the value of a stock. The following formula is used for the constant dividend growth model:
P0 = D1/k – g where:

P0 = Price for the security.D1 = The dividend paid at period 1.
k = The investor's required rate of return.
G = The growth rate of the dividends.
Therefore, the value of the stock is Rs.40.04, calculated as follows:

$$P0 = = Rs.40.04 \quad \frac{(Rs.3.85)(1.04)}{.14 - .04}$$

429 Liquidation Value per share = 54-20/2=17

430 Book Value = Net Worth/No. of Equity Shares

= 4700000/200000

= 23.5

432 Book Value per share=57/3=19

434 Price of share= 10/0.15=Rs.66.67

436 Dividend to be paid next year=3.00

Price of stock (P_0)=3/0.10=30.00

P/E Ratio =/30x100=10%

437 Required Rate of Return = 7+2(11-7)=15%

Next Year's Dividend = 3x1.20=3.6

2nd Year's Dividend = 3.6x1.20=4.32

Share Price =4.32x1.1/0.05=95.04

I=15

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1=0

2=3.6

3=4.32+95.04=99.36

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NPV=78.26

Dividend Yield=3.6/78.26x100=4.60%

439 **Solution:** M.V of a Stock=[(Dividend*(1+growth rate)] / (Return- growth rate)

440 **Solution:**
PV = Rs.1.36, FV = (Rs.2.00), N= 5, i = 8.02
Value of common stock = d1/ RRR – g = 1.082 (2.00)/ 0.12 – 0.08 = 2.16/0.04 = Rs.54.00
RRR = Required Rate of Return, g = growth rate

443 **Solution:** 13*3 = 39 + 1*5 = 44. 44/4 = Rs. 11.00

445 I=18

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1=0

2=2.28

3=2.5992

4=2.963

NPV=5.6023

Next Year Dividend=2.963x1.06=3.14078

Share Price=3.14078/0.12=26.17

PV of share price=26.17/1.18^3=15.92

Current Price=15.92+5.6023=21.52

446 38=3/r-7

R=14.89%

449 Expected Dividend= 1.50x1.05=1.575

Expected Dividend Yield = 1.575/15.75x100=10%

Dividend Next Year = 1.575x1.05=1.65375

Share Price Next Year = 1.65375/0.10=16.5375

Capital Gain = (16.5375-15.75)/15.75x100=5%

450 Price of Stock = D_1/ (r_e- g)

= 2 x 1.06/ (0.16-0.069)

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= 2.12/0.10=21.2

451 Price of Stock = D_1/ (r_e- g)

G = ?

Press CMPD

N = 9

I = Solve = 8.00

PV = -1

FV = 2

Price of Stock = D_1/ (K_e- g)

= 1x 1.08/ (0.15 -0.08)

= 1.08/0.07 = 15.42

452 Price of Stock = D_1/ (r_e- g)

= 2.754/0.07

= 39.34

453 r_e = Expected Return?

r_e = R_f+β (R_m - $R_{f)}$

= 5+1.10(14-5)

= 14.9

Price of Stock = D_1/ (r_e- g)

= 1.20/0.069

= 17.39

454 Dividend at the end of 5th year =2x0.95^=1.5475

Price at beginning of 5th year =1.5475/14-(-5)

= 1.5475/19=8.15

455 Price of Stock = D_1/ (r_e- g)

= 1.20x1.07/ (1.14-1.07)

= 1.284/0.07 = Rs.18.34

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456 Price of Stock = $D_1/ (r_e - g)$

40 = 2/ (1.15-g)

2/40 =1.15-g

g = 1.15-0.05

= 1.1 or 10%

457 Price of Stock = $D_1/ (r_e - g)$

= 20/ 1.15-1.10

= Rs.400

458 r_e = Expected Return?

r_e = $R_f + \beta (R_m - R_f)$

= 6+0.85(8)

= 12.8

Price of Stock = $D_1/ (K_e - g)$

= 1.5/ 0.128 -0.07

= 25.86

459 Required Rate of Return =8+2(12-8)

=16%

Dividend (D_1) =1.50x1.1=1.65

Price=1.65/0.06=27.50

EPS=1.65x100/30=5.5

P/E Ratio=Price of share/Earnings per share

=27.5/5.5=5x

464 Outstanding Shares = 37000000/12=3083333

466 Price per share= Dividend/Growth Rate

Dividend= 100x0.09=Rs.9

As Plough back Ratio is 0, so EPS=Dividend paid

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468 Price of Stock = $D_1/ (r_e - g)$

$40 = 2/ (r_e – 0.07)$

$0.05 = r_e – 0.07$

$r_e = 0.12$ or 12%

469 r_e = Expected Return?

$r_e = R_f+\beta (R_m - R_f)$

$= 6+1.0(8)$

$= 14.0$

Price of Stock = $D_1/ (r_e - g)$

$= 1.20 \times 1.07/0.07$

$= 1.284/0.07$

$= 18.34$

475 Margin Paid=200*100*0.60=12000

Profit=20*100=2000

Return on Investment=2000/12000*100=16.67%

476 Investors can buy securities worth Rs.5000

Maximum Shares investor can buy=5000/50=100 shares

Loss per share=180-150=30

Total Loss=30*100=3000

479 **Solution:** A call option has unlimited price potential which means that writing a call without the stock as a hedge will provide the greatest loss potential.

480 **Solution:** Answer is option A. Statements #1, #2 and #3 are true. Statement #4 is false because tax swaps generally take advantage of capital losses by selling bonds, which have been devalued by increasing interest rates.

481 **Solution:** Answer is option C. The exercise price for a put is the price at which you can sell the stock.Thus, a price of Rs.55 will be assured if she buys a Rs.55 put.

482 **Solution:** Answer is option B. Selling a call option will allow her to generate income from the option premium with little risk since she does not expect the stock to continue to increase. If the stock does exceed Rs.50, she would be paid what she wants for the stock

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483 **Solution:** Answer is option D. Generally, investors evaluate performance of investments based on risk adjusted returns. Therefore, A and B must be wrong since they only address one aspect of the risk-return relationship. Treynor and Sharpe ratios are performance measures in which the higher the ratio, the better the risk adjusted return. No calculation is needed for this question. D is the only reasonable answer. It is the only one that indicates that a fund should be chosen, because the performance measure is high (not low).

490 Margin requirement per share=40*0.40=Rs.16

No. of shares that can be bought=2000/16=125

491 Margin Required=100*16.75*0.45=753.75

492 Margin Required=200*100*0.60=12000

493 Initial Cash Outflow:

Buy price of Shares=100*40=4000*50%=2000

Commissions=4000*1/100=40

Total Cash Outflows=2000+40=2040

Cash Inflow at year end:

Sale Price=100*42=4200-2000=2200

Dividend Received=100*1=100

Interest Paid=2000*10/100=200

Commissions Paid=4200*1/100=42

Total Inflow=2200+100-200-42=2058

Total return=2058-2040=18

Return in %=18/2040*100=0.88%

496 Paper Loss per shares=65-40=25*100=Rs.2500

504 Return %=15000/1500*100=1000%

509 Dollar Return=-10*500=-5000

522 **Solution:**

Initial investment = 200*Rs.80	(16,000)
100 of the shares is worth Rs.80	8000
100 of the shares sells for Rs.75	7500

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Option income is Rs.600 600

Net value is +Rs.100

534 Initial outlay =Rs.100=100

Amount received on expiry of the contract =900-800=Rs.100

Therefore, No Profit No Loss

535 Time Value=Premium-Intrinsic value

=100-0=100

537 Premium Received on writing the call=Rs.100

Loss at expiration date =900-800=Rs.100

Therefore, No Profit No Loss

542 Mr. Dinakar shall sell Nifty Futures of Rs.36 Lacs (24, 00,000*1.5= 36, 00,000)

This way he will be able to protect himself, in case the market plunges.

He should sell nifty futures to the tune of Rs.36 Lacs because the stock has a beta of 1.5

543 Premium Received on Writing Put = 28.50*600=17100

Cash outflow at expiry =1250-1215=35*600=21000

Net Loss = 21000-17100=3900

546 Intrinsic Value = Stock Price – Exercise Price

= 52-50=2

Time Value = Call Premium – Intrinsic Value

= 3-2= Re.1

557 Go To Cash Flow

I = 8.5

CASH EDITOR

1 =0

2= 120000

3 = 120000

4= 120000

5 = 120000

6= 6520000

NPV= Solve=4729167

561 Press CMPD

N= 10*12

I= 9.5/12

PV=-10000000

PMT=Solve=28935

FV=20000000

565 **Solution:**
Suppose a loan of Rs 1, 00,000
Interest = 8%
EMI for 15 Years=Rs 11682.95
EMI for 30 Years=Rs 8882.74
Rs 11682.95 < 2 * 8882.74

566 **Solution:**
Annual rent receivable =300*(1000*12)*0.75 (A)
Annual upkeep & maintenance =Rs 10 lakhs (B)
Investment Planning – Question Bank IMS Proschool 43
Net income annually=Rs 17, 00,000 (A-B)
Capitalization rate=10%
Value of the complex=Net income / Capitalization rate

567 **Solution:** Average market capitalization rate: (4.20% + 5.45% + 6.00%)/3 = 5.22% Market value: Rs.
15,600/0.0522 = Rs.299, 041

A. 568 Rs.207606124

Press CMPD

N=20*12

I=8/12

PV=-30000000

PMT=100000

FV=Solve=88902041

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569 Press CMPD

N=10*12

I=Solve=0.7254*12=8.70

PV=-10000000

PMT=2000

FV=2000000

Press CMPD

N=10*12

I=Solve=0.3071*12=3.685

PV=-2000000

PMT=2000

FV=2600000

580 **Solution:** Answer is option C. Statement #1 is true. It is not necessary to have negatively correlated assets; it is only necessary to have assets that have a correlation less than positive one (+1); thus, statement #2 is false. Statement #3 is false, because diversifying across asset types is more, not less, effective than within an asset type. Statement #4 is false, because all the input variables in statement #1 help to create the efficient frontier.

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Unit-3
Investment Strategies

575. Value investing involves purchasing stocks with _____
A. Low P/E Ratios
B. Low Book Values
C. Low Dividend Yields
D. Low Margin of safety

576. Asset Allocation means_____

A. Practice of allocating investments in different equities
B. Practice of dividing resources among different categories of assets for generating optimum profit with lesser risk
C. Practice of trading shares, bonds and other instruments
D. All of the above

577. What are the reasons that one should opt for an asset allocation policy?

A. Minimize the risk
B. Maximize the profit
C. Diversify one's investment
D. All of the above

581. Which of the following statements concerning technical stock market indicators is/are correct?
I. The stock market is considered strong when the volume of the market is increasing in a rising market.
II. The market's direction will change when the percent of odd-lot short sales significantly increases or decreases.
III. Prices crossing the moving average line would be an indication of the change in the market.
A. 1 only
B. 1 & 2 only
C. 2 & 3 only
D. 1,2 & 3

582. Which of the following is a feature of Insured Asset Allocation?
A. One can establish a base portfolio value below which the portfolio should not be allowed to drop.
B. As long as the portfolio achieves a return above its base, one can exercise active
C. If the portfolio should ever drop to the base value, one should invest in risk-free assets so that the base value becomes fixed.
D. All of the above

583. Dynamic Asset Allocation policy works better when:

A. The market is moving up only

B. The market is moving down only
C. Option A & B
D. The market remains constant

584. An investor desired rate of return is 8%.If it is assumed that the stock will return 10% p.a. and bond will return 6% p.a.? What should be the strategic asset allocation of the client?

A. 45% in stock and 55% in debt
B. 50% in stock and 50% in debt
C. 55% in stock and 45% in debt
D. 40% in stock and 60% in debt

585. Mr. Namit's investment portfolio comprises Rs.2 lakh in equity, Rs.5 lakh in debt and Rs.1lakh in his bank current account. Over one year the returns on equity and debt are 5% and 12%. At the end of the year to maintain his current asset allocation, he needs to _____.

A. Do nothing.
B. He needs to move Rs, 10000/- from equity and Rs. 60000/- from debt to cash.
C. He needs move Rs.7500/- to equity from debt and Rs. 8750/-to cash from debt
D. He needs to invest Rs. 70000/- in debt and equity.

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Answers Unit 3	
575	A
576	B
577	D
578	B
579	C
580	C
581	D
582	D
583	C
584	B
585	C
586	A
587	B
588	B
589	A
590	B
591	C
592	C
593	B
594	D

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Unit-4

Regulation of an investment advisor

596. SEBI is the Regulator for _____ companies

A. Listed
B. Unlisted
C. Both A and B
D. Foreign

597. As per SEBI (Stock brokers and Sub-Brokers) Rules, 1992 share broker applies for registration to SEBI through a stock exchange of which he is admitted as a member.

A. True
B. False

598. As per SEBI (Stock brokers and Sub-Brokers) Rules, 1992 sub-brokers are not responsible of redressal of grievances of the investors as it is the responsibility of brokers.

A. True
B. False

602. An AMC cannot explain adverse variations between expense estimates for the scheme on offer and actual expenses for past schemes in

A. Financial newspapers
B. Business channels on TV
C. The offer document

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Answers Unit 4	
596	A
597	A
598	B
599	B
600	B
601	B
602	C
603	C
604	B
605	A
606	B
607	D
608	D
609	B
610	D
611	D
612	D
613	B
614	D
615	C
616	B
617	D
618	D
619	B
620	D
621	C

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Unit-5

Application to Clients

622. Assume that you are an investment adviser and one of your clients, on your advice, invested Rs.100, 000 in Treasury bonds due to mature in 2 years. If your client becomes worried that a general increase in the level of interest rates will reduce the market value of his bond portfolio, what should you say to allay your client's fears?

A. You could assuage your client's fears by claiming you foresee only stable interest rates ahead.
B. You could instruct your client to liquidate their portfolio of Treasury bonds and reinvest the proceeds in a bank.
C. Both a and b are true.
D. You could tell your client not to worry because the market prices of short-term bonds do not fluctuate very much

623. Assume you are an financial advisor and one of your clients reads something about interest-rate risk and is worried that if market interest rates declined her coupon interest income will likewise decline. His bond investments have maturities ranging from 15 to 30 years. What advice is appropriate for this client?

A. Tell the investor to liquidate her coupon-paying bonds and reinvest the money in zero coupon bonds.
B. Tell your client not to worry, her coupon income will not vary until her coupon bonds mature in 15 to 30 years.
C. Both a and b are true.
D. The client need not worry if market interest rates are expected to rise because coupon rates vary inversely with market interest rates and therefore her coupon interest could increase.
E. All the above are true.

624. A client has a cash need at the end of seven years. Which of the following investments might initially immunize the portfolio?

1. A 9-year maturity coupon bond.
2. A 7-year maturity coupon Treasury note.
3. A series of Treasury bills.

A. 1, 2, and 3.
B. 1 only.
C. 2 and 3.
D. 2 only.
E. 1 and 2.

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Unit-5

Application to Clients

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E. All the above are true.

624. A client has a cash need at the end of seven years. Which of the following investments might initially immunize the portfolio?

4. A 9-year maturity coupon bond.
5. A 7-year maturity coupon Treasury note.
6. A series of Treasury bills.

A. 1, 2, and 3.
B. 1 only.
C. 2 and 3.
D. 2 only.
E. 1 and 2.

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Answers Unit 5	
622	D
623	B
624	B
625	C
626	D
627	A
628	C
629	A
630	D
631	C

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624 **Solution:** Answer is option B. The goal of immunization is to match the investment time horizon with the duration of the portfolio. Since the duration of a coupon bond is less than its maturity, only the 9-year bond might immunize the portfolio. The other two choices will not immunize the portfolio. The best choice would be a 7-year zero-coupon bond; however, this choice is not available.

625 **Solution:** Answer is option C. Question #1 should always be asked. Question #2 is a reasonable question, since it provides the planner with a concept of the client's investment experience leading to suitability. This type of analysis is a part of data gathering. Question #3 goes to suitability and should be asked, or the age should be determined relative to risk and time horizon. The question relates to the first two stages of data collection and goals. Reinvestment of dividends does not go to suitability and will be addressed after the investment decision is made.

626**Solution:** Answer is option D.A stock index fund is a mutual fund that mirrors a stock index. Typically, the fund pays little or no dividends, and is therefore tax efficient. A is incorrect, nonleveraged equipment leasing investments have more of an income objective than a growth objective and are not tax efficient because the income is taxed each year. B is incorrect because A balanced mutual fund usually invests a large percentage of the fund assets in fixed-income securities. C is incorrect because preferred stocks often pay a large dividend and usually have an income objective.

627 **Solution:** A retiree at 60 has little appetite for risk as he no longer has any earning power. Further, he needs certainty of income. But a small amount of equity is still recommended as a hedge against inflation.
If not, if he lives until say 80, he will experience a drop in his standard of living.

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Samper Paper-1

19. Which of the following is NOT a characteristic of a balance fund?
    A. It provides both growth and income objectives
    B. It is less risky than growth funds
    C. It is more risky than income funds
    D. It must invest in both equity and bonds in equal amount

20. Disclosure statements to prospective clients include all of the following except:
    A. Performance record of other clients
    B. The method of remuneration, fees and commissions
    C. Access to internal and external complaint handling mechanism
    D. Disclosure of any conflict of interest

21. In ranking portfolio performance, which measure of risk does the Treynor Index use?
    A. Standard deviation
    B. Variance
    C. Beta
    D. Alpha

22. The following are the long-term credit ratings given by CRISIL, Which is the lowest investment grade category?
    A. AAA+
    B. BBB+
    C. BBB-
    D. AA

3. Calculate the (1) expected rate of return, E(r), from the probability distribution of returns below for the A Ltd. common share.

FIVE Possibilities	RATES OF RETURN	PROBABILITY
i=5	-0.5 = 50%	0.1
i = 4	-0.1 = -10%	0.25
i = 3	0.2 = 20%	0.3
i = 2	0.5 = 50%	0.25
i = 1	0.9 = 90%	0.1
		Total 1.0

The expected rate of return for A Ltd. is which one of the following?
    A. The E(r) is 5 percent.
    B. The E(r) is 20 percent.
    C. The E(r) is 5 percent
    D. The E(r) is 10 percent

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4. You purchase One Contract of the September Call option for Dr. Reddy's Labs at Rs 1400 strike price for a premium of Rs. 100 . The price on the date of contract expiry is Rs. 1600. The market lot is 200 shares. Your profit on the above transaction is _____ %. Ignore transaction costs.

A. 100
B. 50
C. 15
D. 10

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Answers Sample Paper 1					
1 Marks		2 Marks		4 Marks	
1	B	1	B	1	A
2	A	2	B	2	C
3	D	3	A	3	B
4	A	4	C	4	A
5	A	5	B	5	C
6	D	6	C	6	B
7	B	7	C	7	A
8	C	8	A	8	C
9	D	9	C	9	B
10	C	10	B	10	B
11	C	11	A	11	D
12	C	12	C	12	D
13	D	13	B	13	B
14	A	14	A	14	D
15	A	15	B	15	B
16	C	16	B		
17	D	17	C		
18	D	18	D		
19	D	19	D		
20	A	20	B		
21	C				
22	C				
23	B				
24	C				
25	D				
26	B				
27	A				
28	D				
29	C				
30	D				
31	C				
32	C				
33	C				
34	C				
35	B				
36	B				
37	C				
38	A				
39	C				
40	B				

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