Question 1

Bonjour Limited (BL) is a manufacturer of construction equipment. It has never been consistent in paying dividends. The new CFO of the company is quite concerned about the dividend policy, therefore, he has advised the board to follow a residual policy of dividend. In this respect, following information has been gathered:

(1) Profit after tax for this year is expected to be Rs. 25 million.

(2) Currently BL has a debt equity ratio of 30:70. In order to reduce its WACC and thus increase the value, management has decided to attain a target debt equity ratio of 40:60. Currently BL is an A+ rated company. If further debt is raised to attain target gearing level, BL's credit rating will fall to A.

Credit spread for debt, based on credit rating:

A+	3.50%
A	3.75%

(3) Corporation tax rate is 30%.

(4) BL's existing equity beta is 1.58. Risk free rate is 6% and equity risk premium is 8%.

(5) Following possible investments have been short listed which may be carried out by the end of this year, if financially worthwhile:

Project	Investment (Rs. million)	IRR
A	10.20	21.50%
B	15.00	10.00%
C	8.00	19.00%
D	7.50	12.20%
E	4.50	17.00%

REQUIRED

(a) Calculate the amount of dividend to be paid at end of year according to residual policy. **(10)**

(b) Discuss any three arguments against the validity of Dividend Irrelevance Theory by MM. **(6)**

Question 2

Aztech Limited (AL) is operating in Pakistan and engaged in manufacturing of electronic products. One of its product is A-one. Market demand for this product is expected to exist for four years. Currently AL earns a pre tax contribution of Rs. 20 per unit. It will increase with the inflation rate. Next year's production will be 40,000 units, which is expected to fall by 20% per year for the following three years.

Full tax deduction has already been allowed for the plant and machinery. At end of four years, residual value and dismantling cost will result in zero net cash flows. AL is considering to shift the production of A-one from Pakistan to Bangladesh. If production is immediately stopped in Pakistan, the excess assets would be sold for Rs. 2.3 million and redundancy cost would be Rs. 1.7 million. Both these figures are net of tax.

Following data relates to the production of A-one in Bangladesh:
- Project will require initial investment of BT 230 million.
  (BT 150 million on land and building and BT 80 million on machinery)
- Residual value of land and building after four years will be BT 450 million net of tax.
  (It will not be subject to inflation)
- Tax depreciation will be allowed on machinery only on straight line basis over four years.
- Initial working capital investment would be BT 40 million. It will increase with Bangladesh inflation.

Production and sale will be:

	Year 1	**Year 2**	**Year 3**	**Year 4**
Units	12,000	22,000	47,000	60,000

Following revenue and cost data apply to first year:
- Sale price will be Rs. 70 per unit.
- Variable cost will be BT 1,300 per unit.
- In addition to above variable cost, a component will be imported for Rs. 5 per unit.
- Fixed cost will be BT 25 million.

Selling price will remain constant however costs will increase by their countries' respective inflation rates.

Corporation tax rate in Pakistan is 30% and in Bangladesh is 20%. Double tax treaty exists between two countries. Tax losses can be carried forward and written off against future taxable profits.

Inflation rate in Pakistan is 4% and in Bangladesh is 9%. These rates are not expected to change in foreseeable future. Current exchange rate is BT/Rs. 50. All cash flows from Bangladesh will be remitted to Pakistan at each year end.

Cost of capital for this project appraisal is 20%.

Required:

Advise about the proposal to shift production to Bangladesh. **(22)**

QUESTION 3

Murad Traders is an importer of plastic gloves. However due to certain recent restrictions on imports, Murad is uncertain about his sales for next two years.
Following data relates to his profitability under normal conditions:

	Rupees
Contribution per unit	12
Variable cost per unit (including material, advertisement & others)	10
Fixed costs per year	55,000

Murad expects that change in economic conditions would effect sale price and demand. However his costs would remain unchanged. Furthermore he thinks that performance in year 2 would be effected by performance in year 1.
He has made the following forecasts keeping in view the possible economic scenerios and resulting govt. restrictions:

I)

Economic scenerios:	Probability:	Sale price (Rs./unit):
Poor	35%	20
Normal	22%	22
Good	43%	30

II)

Demand	Economic scenerios		
	Poor	Normal	Good
Demand - Year 1 (units)	4,000	6,500	9,000
Demand - Year 2 (units):			
30% chances	4,000	5,000	7,800
45% chances	4,800	5,600	8,600
25% chances	5,200	7,000	10,000

REQUIRED

Calculate expected net profit for each of the two years. **(11)**

QUESTION 4

Nawaz Zardari Limited (NZL) has decided to invest in a new expansion project. The expansion would require a total outlay of Rs. 250 million. Management is considering two alternatives to raise the required finance. The project has an NPV of Rs. 20 million if financed from option I and Rs. 28 million if financed from option II.

Option I Right issue at an exercise price of Rs. 25 to raise Rs. 250 million.

Option II Right issue of 1 for 10 at an exercise price of Rs. 24.
Balance of the finance will be raised by a USD loan from bank loan carrying a markup of LIBOR + 1.5% payable annually. Alongwith annual interest, principal would also be repaid in five equal instalments.

NZL has 40 million shares already in issue. Currently each share is being traded at Rs. 35 in the stock market. Current spot rate is Rs. / $ 100.

In case of option II, another concern will be currency and interest rate risks. No derivatives are available in respect of interest rate risks, however, a local bank has offered currency forward. Forward rates will be determined based on interest rate parity using LIBOR and LKIBOR.

Current and expect interest rates are as follows:

	LIBOR	KIBOR
1-Jan-15	4.00%	9.00%
1-Jan-16	4.50%	10.00%
1-Jan-17	5.25%	11.50%
1-Jan-18	6.00%	13.00%
1-Jan-19	7.00%	14.50%

Management has decided to announce the new investment to shareholders while offering right issue. You can assume that stock market is semi strong form efficient.

REQUIRED

(a) Calculate the theoretical ex-right price in case of each of the financing options.

(b) Calculate total repayment of loan, if currency forward is used, based on above interest rates.

(14)

QUESTION 5

Diamond Funds has a portfolio comprising of six companies' shares. The financial consultant has determined the following forecasts for next year returns:

Company name	Gearing (Debt / Total)	No. of shares	Current price	Forecast after 1 year	
				Dividend	Share price (cum-div)
			-------------------- Rs. -----------------------		
A	50%	1500	40.00	6.00	48.00
B	40%	2800	39.00	3.00	48.00
C	60%	7000	52.00	4.00	63.00
D	25%	5000	35.00	2.00	41.00
E	10%	1200	70.00	5.00	92.00
F	35%	4000	49.00	4.00	60.00

He has also calculated the Alpha values applicable to the equity returns as follows:

	Alpha value
A	3.00%
B	1.30%
C	2.70%
D	1.80%
E	4.90%
F	1.70%

Following market related information is also available:

Return on treasury bills 5%

Return on KSE 100 index:

Probability	Return
0.30	12%
0.45	17%
0.25	11%

Corporate tax rate 30%

REQUIRED

Calculate the asset beta (business risk) of existing portfolio. **(14)**

Question 6

Alpha Pharma Limited (APL) is a listed company and wants to acquire Gamma Medicines Limited (GML) to achieve greater market share and get benefit of efficient R & D department of GML. Currently both companies are wholly equity financed. However APL is planning to raise debt to finance this acquisition.

The following financial information is provided for the two companies:

	APL	GML
Current share price (Rs.)	30	20
Number of shares (million)	32	18
cost of equity	18.15%	21.75%

Financial consultant of APL has prepared following financial forecasts if GML is acquired:

Forecast financial results for year 1:

	Rs.'000
Sales	50,000
Material and labor	(20,000)
Fixed overheads (Including depreciation)	(12,000)
Operating profit	18,000

Following addition information has been provided by financial consultant:

(1) At start of 3rd year of acquisition, APL would invest Rs. 210 million in plant and machinery in order to increase production.

(2) Sales are expected to remain same in year 2 but will grow by 150% in year 3 and by 10% each in year 4 and 5.

(3) Material and labor amount to 40% of sales.

(4) Fixed overheads (including depreciation) will grow by 5% in year 2, by 70% in year 3 and by 8% each in year 4 and 5.

(5) The annual reinvestment to maintain existing level of operations is expected to be equal to depreciation. However, as a result of expansion of plant and machinery in year 3, depreciation will be increased by Rs. 7 million per year.

(6) Working capital investment in year 1 will be Rs. 2 million. Afterwards this investment would be made every year equal to 10% of change in sales.

(7) Free cash flows are expected to grow at 5% per annum after year 5.

(8) Combined asset beta is assumed to be weighted average of APL's and GML's asset betas, weighted by current market values.

(9) Debt-to-equity ratio of combined company is expected to be 30:70 in market value terms and expected cost of debt of combined company will be 7%.

Current corporation tax rate is 25% and risk free rate is 6%. KSE 100 index has moved to 16100 points from 14000 points over last 1 year.

REQUIRED

Calculate maximum premium that could be offered to GML for 100% share acquisition. **(23)**