# 373

*Roll No…………………*

*Time allowed : 3 hours* *Maximum marks : 100*

*Total number of questions : 7* *Total number of printed pages : 7*

***NOTE*** *: 1. Answer FIVE Questions including Question No.1 which is compulsory. All working notes should be shown distinctly.*

*2. Tables showing the present value of ₹1 and the present value of an annuity of ₹1 for 15 years are annexed.*

**1.** Comment on the following. Attempt ***any four*** :

(i) Financial management is science as well as art.

(ii) The nature of the industry plays an important role in capital structure decisions.

(iii) Bonus shares do not affect liquidity of the company and yet serve many ends.

(iv) As earnings of the firm increase, the customary dividend will not be altered.

(v) Working capital leverage and capital structure leverage are two different concepts.

*(5 marks each)*

**2.** (a) You are the CFO of Desire Ltd. Your company proposes to buy equipment costing ₹1,00,000. The equipment will last for 5 years. The cost of capital to the company is 10%. Your analyst has suggested the expected revenues, cost and corresponding probabilities as under :

| *Expected Revenue* | | *Expected Cost* | |
|---|---|---|---|
| *Amount (₹)* | *Probability* | *Amount (₹)* | *Probability* |
| 1,00,000 | 0.15 | 62,500 | 0.10 |
| 1,25,000 | 0.40 | 75,000 | 0.25 |
| 1,37,500 | 0.30 | 87,500 | 0.35 |
| 1,50,000 | 0.15 | 1,00,000 | 0.30 |

You wish to run a simulation model and have picked the random numbers 81, 02, 60, 04, 46, 31, 67, 25, in that order, alternatively for revenues and costs. Decide whether the project can be undertaken by the company.

*(8 marks)*

(b) From the following data determine the cost of capital using market value as weights :

| | ₹ | *Market Value (₹)* |
|---|---|---|
| Debentures @ ₹1,000 each | 15,00,000 | 1,100 each |
| Preference shares @ ₹10 each | 5,00,000 | 12 each |
| Equity shares @ ₹100 each | 20,00,000 | 200 each |
| TOTAL | 40,00,000 | |

Debentures carry 8% rate of interest, issued and redeemable at par with maturity period of 20 years and floating cost 4%.

Preference shares carry 10% dividend rate, issued and redeemable at par with maturity period of 15 years and floating cost 5%.

Equity dividend expected at the end of year is ₹20 per share whereas anticipated dividend growth rate is 5%. Corporate tax is 30%.

*(8 marks)*

(c) A customer with whom the bank had entered into 2 months' forward purchase contract for Euro 10,000 @ ₹74.50 per Euro, comes to bank after one month and requests for cancellation of the contract. On this date, the prevailing rates are :

| | |
|---|---|
| Spot 1 Euro | : ₹74.60 / 74.70 |
| One-month forward 1 Euro | : ₹74.90 / 75.04 |

What is the loss or gain to customer on cancellation of the contract ?

*(4 marks)*

**3.** (a) Arise Ltd. issued ₹1,000 optionally convertible debentures at a coupon rate of 12%, convertible into 50 equity shares on a date exactly 5 years before maturity. On the date of optional conversion the shares are quoting at ₹25 per share. Investors expect return @10% p.a. on a 5-year debenture. Will you suggest the conversion ? Show your workings.

*(8 marks)*

(b) A company is considering two financial alternatives to finance its expansion plan of ₹1 crore. First alternative : by issue of equity shares @ ₹12.50; Second alternative : by issue of 14% debentures. Tax to be considered at 40%. Its present capital structure consists of equity shares ₹20,00,000 and 8% debentures of ₹50,00,000. Expected price earnings ratio in case of first alternative is 14 and in case of second alternative is 12.

You are required to calculate the indifference point at which market price of share under both alternatives will be same.

*(6 marks)*

(c) Bling Ltd. has supplied the following data :

Operating leverage 2.5; financial leverage 3; EPS ₹30; market price per share ₹225; and capital 20,000 shares. It is proposed to raise a loan of ₹50,00,000 @ 18% for expansion. After expansion, sales will increase by 25% and fixed cost by ₹3,00,000.

You are required to work out the market price per share (MPS) after expansion, assuming tax rate @ 50%.

*(6 marks)*

**4.** Distinguish between the following. Attempt ***any four*** :

(i) 'Capital budgeting' and 'capital rationing'.

(ii) 'Finance lease' and 'sale and lease back'.

(iii) 'Counter-party risk' and 'operating risk'.

(iv) 'Forex market' and 'Euro currency market'.

(v) 'Liquidity management' and 'treasury management'.

*(5 marks each)*

**5.** (a) The following data are available for a bond :

| | |
|---|---|
| Face value | ₹1,000 |
| Coupon rate | 16% |
| Years to maturity | 6 |
| Redemption value | ₹1,000 |
| Yield to maturity | 17% |

What is the current market price, duration and volatility of this bond ? Also, calculate the expected market price, if increase in required yield is by 75 basis points.

*(8 marks)*

(b) The spot rate INR/AUD is ₹45.31 and the three-month forward rate is ₹45.45. Which currency is appreciating and depreciating ? Which is trading at a discount and at a premium ? Which currency is more expensive ? Also, compute the annual percentage premium or discount.

*(6 marks)*

(c) The following information is collected from the annual report of Joy Ltd. :

| | |
|---|---|
| Profit before tax | ₹2.50 crore |
| Tax rate | 40% |
| Retention ratio | 40% |
| Number of outstanding shares | 50,00,000 |
| Equity capitalisation rate | 12% |
| Rate of return on investment | 15% |

What should be the market price per share according to Gordon's model of dividend policy ?

*(6 marks)*

**6.** (a) Calculate the payback period, accounting rate of return, net present value and internal rate of return for the following investment :

| *Year* | *Cash flow (₹)* |
|---|---|
| 0 | (30,000) |
| 1 | 4,000 |
| 2 | 10,000 |
| 3 | 20,000 |
| 4 | 11,000 |

The rate for discounted cash flow (DCF) calculation is 12%. Accounting profits are the same as cash flow except that the initial expenditure should be depreciated over 4 years; there is no resale value at year 4.

*(10 marks)*

(b) Esha Ltd. is a company having annual credit sales of ₹30 lakh. It deals in only one product. Currently it has an average collection period of 30 days. It is anticipated that liberalisation of credit terms can lead to increase in sales as indicated below :

| *Policy* | *Increase in collection period (days)* | *Increase in sales (₹ '000)* |
|---|---|---|
| A | 15 | 200 |
| B | 30 | 300 |
| C | 45 | 350 |
| D | 60 | 375 |

The unit selling price for the product is ₹50 and its unit variable cost is ₹30. At current volume it has a unit total cost of ₹35. It also noted that the liberalisation of credit will lead to the following incidence of bad debt losses :

| *Policy* | *Increase in collection period (days)* | *Bad debts (% on sales)* |
|---|---|---|
| A | 15 | 0.5 |
| B | 30 | 1.0 |
| C | 45 | 1.5 |
| D | 60 | 2.0 |

Currently the company is free from bad debt losses. What will be the most rewarding credit policy under these circumstances ? The company expects a return of 18% on investment. Tabulate your presentation. Assume 360 days in a year.

*(10 marks)*

**7.** Write notes on the following. Attempt ***any four*** :

(i) Benefits of depository system

(ii) Participants in derivatives market

(iii) Optimal capital structure

(iv) Participants involved in the securitisation process

(v) Cost of retained earnings.

*(5 marks each)*

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*TABLE - 1* : **PRESENT VALUE OF RUPEE ONE**

| RATE | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 | YEAR 7 | YEAR 8 | YEAR 9 | YEAR 10 | YEAR 11 | YEAR 12 | YEAR 13 | YEAR 14 | YEAR 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5% | 0.9524 | 0.9070 | 0.8638 | 0.8227 | 0.7835 | 0.7462 | 0.7107 | 0.6768 | 0.6446 | 0.6139 | 0.5847 | 0.5568 | 0.5303 | 0.5051 | 0.4810 |
| 6% | 0.9434 | 0.8900 | 0.8396 | 0.7921 | 0.7473 | 0.7050 | 0.6651 | 0.6274 | 0.5919 | 0.5584 | 0.5268 | 0.4970 | 0.4688 | 0.4423 | 0.4173 |
| 7% | 0.9346 | 0.8734 | 0.8163 | 0.7629 | 0.7130 | 0.6663 | 0.6227 | 0.5820 | 0.5439 | 0.5083 | 0.4751 | 0.4440 | 0.4150 | 0.3878 | 0.3624 |
| 8% | 0.9259 | 0.8573 | 0.7938 | 0.7350 | 0.6806 | 0.6302 | 0.5835 | 0.5403 | 0.5002 | 0.4632 | 0.4289 | 0.3971 | 0.3677 | 0.3405 | 0.3152 |
| 9% | 0.9174 | 0.8417 | 0.7722 | 0.7084 | 0.6499 | 0.5963 | 0.5470 | 0.5019 | 0.4604 | 0.4224 | 0.3875 | 0.3555 | 0.3262 | 0.2992 | 0.2745 |
| 10% | 0.9091 | 0.8264 | 0.7513 | 0.6830 | 0.6209 | 0.5645 | 0.5132 | 0.4665 | 0.4241 | 0.3855 | 0.3505 | 0.3186 | 0.2897 | 0.2633 | 0.2394 |
| 11% | 0.9009 | 0.8116 | 0.7312 | 0.6587 | 0.5935 | 0.5346 | 0.4817 | 0.4339 | 0.3909 | 0.3522 | 0.3173 | 0.2858 | 0.2575 | 0.2320 | 0.2090 |
| 12% | 0.8929 | 0.7972 | 0.7118 | 0.6355 | 0.5674 | 0.5066 | 0.4523 | 0.4039 | 0.3606 | 0.3220 | 0.2875 | 0.2567 | 0.2292 | 0.2046 | 0.1827 |
| 13% | 0.8850 | 0.7831 | 0.6931 | 0.6133 | 0.5428 | 0.4803 | 0.4251 | 0.3762 | 0.3329 | 0.2946 | 0.2607 | 0.2307 | 0.2042 | 0.1807 | 0.1599 |
| 14% | 0.8772 | 0.7695 | 0.6750 | 0.5921 | 0.5194 | 0.4556 | 0.3996 | 0.3506 | 0.3075 | 0.2697 | 0.2366 | 0.2076 | 0.1821 | 0.1597 | 0.1401 |
| 15% | 0.8696 | 0.7561 | 0.6575 | 0.5718 | 0.4972 | 0.4323 | 0.3759 | 0.3269 | 0.2843 | 0.2472 | 0.2149 | 0.1869 | 0.1625 | 0.1413 | 0.1229 |
| 16% | 0.8621 | 0.7432 | 0.6407 | 0.5523 | 0.4761 | 0.4104 | 0.3538 | 0.3050 | 0.2630 | 0.2267 | 0.1954 | 0.1685 | 0.1452 | 0.1252 | 0.1079 |
| 17% | 0.8547 | 0.7305 | 0.6244 | 0.5337 | 0.4561 | 0.3898 | 0.3332 | 0.2848 | 0.2434 | 0.2080 | 0.1778 | 0.1520 | 0.1299 | 0.1110 | 0.0949 |
| 18% | 0.8475 | 0.7182 | 0.6086 | 0.5158 | 0.4371 | 0.3704 | 0.3139 | 0.2660 | 0.2255 | 0.1911 | 0.1619 | 0.1372 | 0.1163 | 0.0985 | 0.0835 |
| 19% | 0.8403 | 0.7062 | 0.5934 | 0.4987 | 0.4190 | 0.3521 | 0.2959 | 0.2487 | 0.2090 | 0.1756 | 0.1476 | 0.1240 | 0.1042 | 0.0876 | 0.0736 |
| 20% | 0.8333 | 0.6944 | 0.5787 | 0.4823 | 0.4019 | 0.3349 | 0.2791 | 0.2326 | 0.1938 | 0.1615 | 0.1346 | 0.1122 | 0.0935 | 0.0779 | 0.0649 |
| 21% | 0.8264 | 0.6830 | 0.5645 | 0.4665 | 0.3855 | 0.3186 | 0.2633 | 0.2176 | 0.1799 | 0.1486 | 0.1228 | 0.1015 | 0.0839 | 0.0693 | 0.0573 |
| 22% | 0.8197 | 0.6719 | 0.5507 | 0.4514 | 0.3700 | 0.3033 | 0.2486 | 0.2038 | 0.1670 | 0.1369 | 0.1122 | 0.0920 | 0.0754 | 0.0618 | 0.0507 |
| 23% | 0.8130 | 0.6610 | 0.5374 | 0.4369 | 0.3552 | 0.2888 | 0.2348 | 0.1909 | 0.1552 | 0.1262 | 0.1026 | 0.0834 | 0.0678 | 0.0551 | 0.0448 |
| 24% | 0.8065 | 0.6504 | 0.5245 | 0.4230 | 0.3411 | 0.2751 | 0.2218 | 0.1789 | 0.1443 | 0.1164 | 0.0938 | 0.0757 | 0.0610 | 0.0492 | 0.0397 |
| 25% | 0.8000 | 0.6400 | 0.5120 | 0.4096 | 0.3277 | 0.2621 | 0.2097 | 0.1678 | 0.1342 | 0.1074 | 0.0859 | 0.0687 | 0.0550 | 0.0440 | 0.0352 |

*TABLE - 2* : **PRESENT VALUE OF AN ANNUITY OF RUPEE ONE**

| RATE | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 | YEAR 7 | YEAR 8 | YEAR 9 | YEAR 10 | YEAR 11 | YEAR 12 | YEAR 13 | YEAR 14 | YEAR 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5% | 0.9524 | 1.8594 | 2.7232 | 3.5460 | 4.3295 | 5.0757 | 5.7864 | 6.4632 | 7.1078 | 7.7217 | 8.3064 | 8.8633 | 9.3936 | 9.8986 | 10.3797 |
| 6% | 0.9434 | 1.8334 | 2.6730 | 3.4651 | 4.2124 | 4.9173 | 5.5824 | 6.2098 | 6.8017 | 7.3601 | 7.8869 | 8.3838 | 8.8527 | 9.2950 | 9.7122 |
| 7% | 0.9346 | 1.8080 | 2.6243 | 3.3872 | 4.1002 | 4.7665 | 5.3893 | 5.9713 | 6.5152 | 7.0236 | 7.4987 | 7.9427 | 8.3577 | 8.7455 | 9.1079 |
| 8% | 0.9259 | 1.7833 | 2.5771 | 3.3121 | 3.9927 | 4.6229 | 5.2064 | 5.7466 | 6.2469 | 6.7101 | 7.1390 | 7.5361 | 7.9038 | 8.2442 | 8.5595 |
| 9% | 0.9174 | 1.7591 | 2.5313 | 3.2397 | 3.8897 | 4.4859 | 5.0330 | 5.5348 | 5.9952 | 6.4177 | 6.8052 | 7.1607 | 7.4869 | 7.7862 | 8.0607 |
| 10% | 0.9091 | 1.7355 | 2.4869 | 3.1699 | 3.7908 | 4.3553 | 4.8684 | 5.3349 | 5.7590 | 6.1446 | 6.4951 | 6.8137 | 7.1034 | 7.3667 | 7.6061 |
| 11% | 0.9009 | 1.7125 | 2.4437 | 3.1024 | 3.6959 | 4.2305 | 4.7122 | 5.1461 | 5.5370 | 5.8892 | 6.2065 | 6.4924 | 6.7499 | 6.9819 | 7.1909 |
| 12% | 0.8929 | 1.6901 | 2.4018 | 3.0373 | 3.6048 | 4.1114 | 4.5638 | 4.9676 | 5.3282 | 5.6502 | 5.9377 | 6.1944 | 6.4235 | 6.6282 | 6.8109 |
| 13% | 0.8850 | 1.6681 | 2.3612 | 2.9745 | 3.5172 | 3.9975 | 4.4226 | 4.7988 | 5.1317 | 5.4262 | 5.6869 | 5.9176 | 6.1218 | 6.3025 | 6.4624 |
| 14% | 0.8772 | 1.6467 | 2.3216 | 2.9137 | 3.4331 | 3.8887 | 4.2883 | 4.6389 | 4.9464 | 5.2161 | 5.4527 | 5.6603 | 5.8424 | 6.0021 | 6.1422 |
| 15% | 0.8696 | 1.6257 | 2.2832 | 2.8550 | 3.3522 | 3.7845 | 4.1604 | 4.4873 | 4.7716 | 5.0188 | 5.2337 | 5.4206 | 5.5831 | 5.7245 | 5.8474 |
| 16% | 0.8621 | 1.6052 | 2.2459 | 2.7982 | 3.2743 | 3.6847 | 4.0386 | 4.3436 | 4.6065 | 4.8332 | 5.0286 | 5.1971 | 5.3423 | 5.4675 | 5.5755 |
| 17% | 0.8547 | 1.5852 | 2.2096 | 2.7432 | 3.1993 | 3.5892 | 3.9224 | 4.2072 | 4.4506 | 4.6586 | 4.8364 | 4.9884 | 5.1183 | 5.2293 | 5.3242 |
| 18% | 0.8475 | 1.5656 | 2.1743 | 2.6901 | 3.1272 | 3.4976 | 3.8115 | 4.0776 | 4.3030 | 4.4941 | 4.6560 | 4.7932 | 4.9095 | 5.0081 | 5.0916 |
| 19% | 0.8403 | 1.5465 | 2.1399 | 2.6386 | 3.0576 | 3.4098 | 3.7057 | 3.9544 | 4.1633 | 4.3389 | 4.4865 | 4.6105 | 4.7147 | 4.8023 | 4.8759 |
| 20% | 0.8333 | 1.5278 | 2.1065 | 2.5887 | 2.9906 | 3.3255 | 3.6046 | 3.8372 | 4.0310 | 4.1925 | 4.3271 | 4.4392 | 4.5327 | 4.6106 | 4.6755 |
| 21% | 0.8264 | 1.5095 | 2.0739 | 2.5404 | 2.9260 | 3.2446 | 3.5079 | 3.7256 | 3.9054 | 4.0541 | 4.1769 | 4.2784 | 4.3624 | 4.4317 | 4.4890 |
| 22% | 0.8197 | 1.4915 | 2.0422 | 2.4936 | 2.8636 | 3.1669 | 3.4155 | 3.6193 | 3.7863 | 3.9232 | 4.0354 | 4.1274 | 4.2028 | 4.2646 | 4.3152 |
| 23% | 0.8130 | 1.4740 | 2.0114 | 2.4483 | 2.8035 | 3.0923 | 3.3270 | 3.5179 | 3.6731 | 3.7993 | 3.9018 | 3.9852 | 4.0530 | 4.1082 | 4.1530 |
| 24% | 0.8065 | 1.4568 | 1.9813 | 2.4043 | 2.7454 | 3.0205 | 3.2423 | 3.4212 | 3.5655 | 3.6819 | 3.7757 | 3.8514 | 3.9124 | 3.9616 | 4.0013 |
| 25% | 0.8000 | 1.4400 | 1.9520 | 2.3616 | 2.6893 | 2.9514 | 3.1611 | 3.3289 | 3.4631 | 3.5705 | 3.6564 | 3.7251 | 3.7801 | 3.8241 | 3.8593 |