# NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY <br> FACULTY OF COMMERCE DEPARTMENT OF FINANCE 

## B.COMM HONORS IN MANAGEMENT, MARKETING, BANKING, ACCOUNTING, FINANCE, RISK MANAGEMENT AND ACTURIAL SCIENCE <br> CORPORATE FINANCE CFI 2201

## SUPPLEMENTARY EXAMINATION

SEPTEMBER 2010

## Instructions

- Answer any five questions


## Question 1

(a) A Manufacturing company is considering a transaction under which it would acquire equipment at a cost of $\$ 102,000$ including maintenance costs. The available alternative is to lease it from a Leasing company for five years at an annual rental charge of $\$ 12,000$. The equipment will have a residual value of zero after the five years.

Cost of funds in the market is $8 \%$ before tax while the corporate tax rate is $42 \%$ throughout the lifespan of the equipment.
(i) Calculate the tax shield benefits and tax shield losses to the Manufacturing Company if it decides the rent the equipment.
(ii) With the aid of clear and relevant calculations, show whether it would make economic sense to lease the equipment or buy it outright. (8 marks)
(b) A Treasury bill issue is advertised by the Reserve Bank of Zimbabwe in which it seeks to raise $\$ 90$ million. Five primary dealers submit their bids as detailed below:

| Dealer | Bid rate | Amount to be invested(\$) |
| :--- | :--- | :--- |
| ABC Merchant | $25 \%$ | 10 m |
| Renaissance Merchant <br> Bank | $29 \%$ | 17 m |
| Genesis Inv Bank | $30 \%$ | 23 m |
| Tetrad Merchant Bank | $32 \%$ | 15 m |
| Metro Merchant Bank | $27 \%$ | 25 m |
| Total |  | 90 m |

(i) State three reasons why a Central bank would issue Treasury bills. (3 marks)
(ii) Calculate the rate used to float the Treasury bills. (2 marks)
(iii) Calculate the price of the Treasury bill at issuance. (2 marks)

## Question 2

The following information is available about Instant Pvt Ltd, a listed entity on the Zimbabwe Stock Exchange.

Recently paid dividend is $\$ 6$ while Retained earnings for investment in growth projects are maintained at a retention ratio of $30 \%$. The Return on Equity over the years has averaged $20 \%$ while the beta of Instant Pvt ltd share is 0.8 . The return on government securities in Zimbawe is 7\% and the Zimbabwe Stock Exchange main index has been consistent in providing an average annual return of $13.5 \%$. The current market price of Instant Pvt Ltd is $\$ 109$.

You are considering buying this share for short term investment purposes.
With aid of relevant calculations, justify your decision of buying the share or rejecting the share.
(b )ZESA Holdings issues a 6 year, $9 \%$ coupon bond which pays coupons annually. The par value of the bond is $\$ 1000$. XYZ Ltd, with a Weighted Average cost of capital of $15 \%$ is considering investing in this ZESA bond.
(i) Calculate the price per bond paid by XYZ Ltd.
(3 marks)
(ii) State four risks associated with an investment in bonds.
(iii) Calculate the duration of this bond.
(4 marks)
(iv) Find the expected change in Bond price emanating from a $0.8 \%$ change in interest rates.
(3 marks)

## Question 3

(a) An investor purchases 2000 Old Mutual shares on margin. The Initial Margin requirement is $75 \%$ while the maintenance margin level is $50 \%$. The price of the Old Mutual share on day of purchase was $\$ 9$.
(i) Show the investors margin account as it would appear in the books of the broker on day of purchase. (3 marks)
(ii) If the share price declines to $\$ 3.5$ on day 4 , how much will be required to keep account at maintenance margin level?
(3 marks)
(b) The current share price of ABC Ltd is $\$ 20$. An investor is expecting an obligation (cash payout) of $\$ 2 \mathrm{~m}$ in 3 weeks time which should come from the sale of the ABC share. Premiums on Put Options and call options are $3 \%$ and $3.5 \%$ of the going market respectively.
(i) Evaluate the strategy which the investor will use to be protected from adverse price movements.
(4 marks)
(ii) Show pay off diagrams for strategy in (i) above if strike price is $\$ 18$.
(3 marks)
(c) Amigos Pvt Ltd is a long term supplier of Power Sales Retail Stores. On 2 June 2010 , Amigos Pvt Ltd supplies merchandise valued at $\$ 60,000$ to Power Sales. The payment is in the form of a 90 day promissory note drawn on Barclays Bank. The average discount rate quoted by Merchant Banks is $23 \%$ p.a while borrowing rates are at $28 \%$. Deposit rates on 7 day and 30 day deposits are $15 \%$ and $18 \%$ respectively.

On 10 June 2010 Amigos Pvt Ltd has an urgent working capital need of \$40,000.

Evaluate the best financing strategy for this working capital need showing the net cash flows of the strategy.
(7 marks)

## Question 4

(a) The following information pertains to Big Nuz Pvt ltd.

| Amount Borrowed | Ke | $\mathrm{Kd}(1-\mathrm{T})$ |
| :--- | :--- | :--- |
| 0 | $12 \%$ | $0.0 \%$ |
| 250,000 | $12.51 \%$ | $4.8 \%$ |
| 500,000 | $13.20 \%$ | $5.4 \%$ |
| 750,000 | $14.61 \%$ | $6.9 \%$ |
| $1,000,000$ | $15.60 \%$ | $8.4 \%$ |

Given that total capital required is $\$ 1,500,000$.
(i) Calculate the weighted average cost of capital (WACC) at each level of borrowing and comment (in not more than 15 sentences) on your findings with particular reference to capital structure theories.
(10 marks)
(ii) Explain capital structure according to the Trade of theory (10 marks)

## Question 5

(a) Explain the impact of dividend policy on value of the firm according to;
(i) Modigliani and Miller ( M and M ) Dividend Irrelevance theory. (5 marks)
(ii) Bird -the-hand theory . (5 marks)
(b) Explain 5 factors that will affect a dividend pay out policy for a firm. (10 marks)

## Question 6

Provide a critical assessment of derivatives highlighting their roles, advantages and drawbacks.
(20 marks)

## End of paper

