Mobilization and Management of Finance Course
End Term Solution Date: 27/02/2017

Section II

1)

a) Increase. If receivables go up, the time to collect the receivables would increase, which increases the operating cycle.

b) Increase. If credit repayment times are increased, customers will take longer to pay their bills, which will lead to an increase in the operating cycle.

c) Decrease. If the inventory turnover increases, the inventory period decreases.

d) No change. The accounts payable period is part of the cash cycle, not the operating cycle.

2) The interest that the company could earn will be the amount of the checks times the number of days it will delay payment times the number of weeks that checks will be disbursed times the daily interest rate, so:

Interest = $58,000(7)(52/2)(.00015)
Interest = $1,583.40

3) The average collection period is the net credit terms plus the days overdue, so:

Average collection period = 30 + 6
Average collection period = 36 days

The receivables turnover is 365 divided by the average collection period, so:

Receivables turnover = 365/36
Receivables turnover = 10.1389 times

And the average receivables are the credit sales divided by the receivables turnover so:

Average receivables = $9,300,000 / 10.1389
Average receivables = $917,260.27

4) Market values can never be negative. Imagine a share of stock selling for –$20. This would mean that if you placed an order for 100 shares, you would get the stock along with a check for $2,000. How many shares do you want to buy? More generally, because of corporate and individual bankruptcy laws, net worth for a person or a corporation cannot be negative, implying that liabilities cannot exceed assets in market value.

5) The discount rate for the projects should be lower that the rate implied by the security market line. The security market line is used to calculate the cost of equity. The appropriate discount rate for projects is the firm's weighted average cost of capital. Since the firm's cost of debt is generally less that the firm's cost of equity, the rate implied by the security market line will be too high.

6)

   a) The payback period is the time that it takes for the cumulative undiscounted cash inflows to equal the initial investment.

   Project A:

   | Cumulative cash flows Year 1 = $9,500 | = $9,500 |
   | Cumulative cash flows Year 2 = $9,500 + 6,000 | = $15,500 |

   Companies can calculate a more precise value using fractional years. To calculate the fractional payback period, find the fraction of year 2's cash flows that is needed for the company to have cumulative undiscounted cash flows of $15,000. Divide the difference between the initial investment and the cumulative undiscounted cash flows as of year 1 by the undiscounted cash flow of year 2.

   Payback period = 1 + ($15,000 – 9,500) / $6,000
   Payback period = 1.917 years

   Project B:

Cumulative cash flows Year 1 = $10,500	= $10,500
Cumulative cash flows Year 2 = $10,500 + 7,000	= $17,500
Cumulative cash flows Year 3 = $10,500 + 7,000 + 6,000	= $23,500

   To calculate the fractional payback period, find the fraction of year 3's cash flows that is needed for the company to have cumulative undiscounted cash flows of

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$18,000. Divide the difference between the initial investment and the cumulative undiscounted cash flows as of year 2 by the undiscounted cash flow of year 3.

Payback period = 2 + ($18,000 – 10,500 – 7,000) / $6,000
Payback period = 2.083 years

Since project A has a shorter payback period than project B has, the company should choose project A.

    b) Discount each project's cash flows at 15 percent. Choose the project with the highest NPV.

Project A:
$NPV = -\$15,000 + \$9,500 / 1.15 + \$6,000 / 1.15^2 + \$2,400 / 1.15^3$
$NPV = -\$624.23$
Project B:
$NPV = -\$18,000 + \$10,500 / 1.15 + \$7,000 / 1.15^2 + \$6,000 / 1.15^3$
$NPV = \$368.54$

The firm should choose Project B since it has a higher NPV than Project A has

7) We need to calculate the retention ratio to calculate the sustainable growth rate. The retention ratio is:

    $b = 1 – .20$
    $b = .80$

    Now we can use the sustainable growth rate equation to get:

    Sustainable growth rate = (ROE × b) / [1 – (ROE × b)]
    Sustainable growth rate = [.13(.80)] / [1 – .13(.80)]
    Sustainable growth rate = .1161 or 11.61%

Section III

1) **Fill in the Blanks**
    a) Assets, liabilities, owner(s) equity
    b) Total shareholders' equity (net worth)
    c) Liability
    d) Profits or gains

e) Sundry creditors or accounts payable

f) Sundry debtors or accounts receivable

2)

a) Amount transferred to provision for taxation – (a)

b) Collection from debtors – (a)

c) Conversion of debentures into preference shares – (c)

d) Goods sold on credit – (a)

e) Income tax refund – (a)

f) Issue of debentures – (a)

g) Issue of shares in exchange of fixed assets – (c)

h) Long term loan from bank – (a)