THE INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS OF PAKISTAN (ICPAP)
(Suggested Solution)

Stage	Specialization	Course Code	SP-603
Examination	Summer-2012	Course Name	Advanced Financial Management
Time Allowed	03 Hours	Maximum Marks	100

NOTES:
1) All questions are to be attempted.
2) Answers are expected to the precise, to the point and well written.
3) Neatness and style will be taken into account in marking the papers.

Question No 1:-

(a) What is the Nature and Purpose of Financial Management? Also describe the stakeholders and their impact on the corporate objective? (10)

(b)

i. "A high EPS may not always maximize the stock price." Do you agree? Discuss.
ii. List out the benefits of issuing bonus shares.
iii. "Stability in payment of dividends has a marked bearing on the market price of the shares of a corporate firm." Explain the statement.
iv. Describe the responsibility of treasury manager. (2.5 x 4)

Solution Q1: Part(a)

The Nature and Purpose of Financial Management

The main purpose of financial strategy is to ensure that financial resources are available to the organization in support of its overall corporate objectives, which include financial objectives.

Management accounting is a set of tools and disciplines measuring corporate performance and to facilitate decision-making; it is designed and implemented in coordination with the company"s strategy.

Financial accounting is concerned with maintaining the records of the transactions of the firm and preparing financial statements for the benefit of

shareholders (and other external audiences) in conformity with established accounting standards.

Stakeholders and Impact on Corporate Objectives

Stakeholder groups

Shareholders: As owners of the business, they rank supreme, as reflected in US/UK models of corporate governance;

Lenders: Important if the business relies heavily on providers of loan capital (banks, bondholders);

Directors: The executive directors or senior management of the business are central since they have "hands-on" power and can serve their own interests (giving rise to agency risk);

Employees: Often referred to as a company‟s "most valuable asset"; they must be motivated and adequately compensated;

Customers: No customers, no business! How influential they are or how carefully management needs to listen to their concerns depends on the type of business activity and the competitive environment;

Suppliers: Good and reliable suppliers can be critical to corporate success;

Government: They have two major interests: (a) they receive revenue via taxes and (b) benefit indirectly when firms create employment. Environmental and other regulatory concerns are also within the scope of the government‟s interest;

Public: The general public, its opinions and ability to exert pressure through lobby groups are all relevant factor for businesses that pollute, are involved in nuclear power, or carry out other activities that may be controversial (e.g. abortion clinics).

Conflicting stakeholder interests

Conflicting interests can exist between various stakeholder groups.

Management must examine the degrees of stakeholder influence and actively manage the relationship with relevant stakeholders.

Agency theory

Agency theory addresses the risk that management will not act in the best interest of the shareholders, but will make decisions that will serve its own interests.

Examples of self-serving management behavior could include: (a) artificially boosting corporate profits in the short-term in order to earn bonuses; (b) paying too much to acquire another company for reasons of prestige or in order to "build empires"; (c) rejecting opportunities, such as takeover bids, or restructuring initiatives, that might jeopardize their positions (an orientation to maintaining the "status quo").

Influencing managerial behavior

In order to cause managers to behave in a way consistent with stakeholder interests, rewards and bonus schemes need to be carefully designed. This can be seen as the "internal" dimension to corporate governance. The other dimension -- "external" – comes in the form of regulation.

Solution Q1Part (b):

i**) The statement is true due to the following reasons:**

1. EPS may be high due to profit maximization, which itself is not a sure shot for a high stock price.
2. High EPS may be due to financial leverage effect, which increase a firm‟s risk prospects of growth rate.
3. If the business prospects of a company are not good the stock price may not go up in spite of high EPS.
4. The nature of business and the industry in which the company operates also affects the stock price and not the EPS alone.

ii) Benefits of issuing Bonus Shares

Though the effect of issuing bonus shares on shareholders wealth is in fact neutral, and bonus share can also not be issued in lieu of dividend. The companies issue bonus shares because of the following benefits:

1. Bonus issue is a signal of bright future of a company. It increases the firm‟s value.
2. Company utilizes permanently a part of the profit of the company for its businesses without affecting the liquidity.
3. After the bonus issue share price comes down and the share becomes affordable (within the reach) of the investors.
4. Bonus shares, are a capital receipt, it is not taxable. It is taxable on sale only.
5. It increases the goodwill of the company.
6. It improves market sentiments.

iii) The net cash flows generated from successful business operations are divided into dividend payments and corporate retentions. The dividend policy determines the division of earnings between the dividend distribution and reinvestment in the firm.

The distribution of earnings between the two depends upon the need of funds internally for reinvestment purposes and expectations of shareholders. It has been observed that dividends have informational value. Usually, an increase in the dividend leads to a stock price increase while a decrease in dividend results into a stock price decline. Reason being dividend conveys a positive signal to shareholders about strong profitability and financial position. Any change in dividend policy is considered by the investors that it is in response to an expected change in firm‟s profitability, which will last long. An increase in dividend payout is considered by the investors as permanent or long-term

increase in firm‟s expected earnings and considered as good news resulting in an increase in stock price. Not only increase dividend is important but also its stability is equally significant. Fluctuating dividend policy will not create the desired impact over the stock price. Hence, it is said that stability in payment of dividends has a marked bearing on the market price of the shares of a corporate firm.

iv) In a business entity, a treasury manger is expected to play a variety of roles. Along with different roles, a treasury manager has the following responsibilities:

- A treasury manger is expected to establish the operational system of the firm to ensure compliance of all statutory and regulatory guidelines. Compliance of tax provisions and payment of all Government dues must also be ensured.
- A treasury manger should be fair in dealings while playing the supportive role. No undue favour or bias should reflect in his working.
- In case of system breakdown, during periods of cash crunch and under crisis situation, a treasury manager is expected to exhibit traits of public relationships and networking.
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- A treasury manger is expected to be honest and straightforward in his dealings.
- In order to prove true professionalism, the treasury manager is required to update his knowledge as and when developments in his field take place.

Question No2: -

(a) Define Ratio Analysis and how many types of ratio are calculated? What is Economic Order Quantity (EOQ) and how it is calculated? (10)

(b) Vijay Ltd. has got to have the following capital structure:

	Rs.
Ordinary share capital	60, 00,000
8% Preference Shares	10, 00,000
Free reserves	35, 00,000
9½% Debentures	5, 00,000
Total	**1, 10, 00,000**

In addition to above, the bankers has sanctioned a cash credit limit of Rs. 10,00,000 with interest chargeable @ 10% per annum with the condition that in

case the company fails to utilize the cash credit limit in full, bank would recover commitment charges @ 8%.
The cash credit limit as such could be utilized on an average to the extent of 80% only.
Among other obligations, the company has to ensure –
i. Payment of all interest;
ii. Dividend pay – out ratio of 60%; and
iii. Dividend of 12% to equity shareholders.

You are required to calculate company's overall rate of return on capital employed assuming income – tax rate to be 35%. Also indicate cost of capital after tax. (10)

Solutions Q2 Part (a)

Ratio Analysis
Liquidity ratios
The relationship between current assets and current liabilities is used as a measure of liquidity in the firm:

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{Current assets - Inventories}}{\text{Current liabilities}}$$

Turnover ratios

1) Trade debtors (receivables)

$$\frac{\text{Trade Debtors}}{\text{Sales}} \times 365$$

2) Inventory turnover

$$\frac{\text{Inventory}}{\text{COGS}} \times 365$$

3) Trade creditors (payables)

$$\frac{\text{Trade Payables}}{\text{COGS}} \times 365$$

Economic Order Quantity (EOQ)

Within a company, there is a natural temptation to accumulate buffer stocks (raw materials and semi-finished goods) so that production is never interrupted.
Similarly, in order to avoid stock-outs, sales managers will insist on maintaining a plentiful level of finished goods. All of this costs money.
The EOQ is a method which seeks to minimize the costs associated with holding inventory.
To determine the total costs, the following data is required:

Q = order quantity

D = quantity of product demanded annually

P = purchase cost for one unit

C = fixed cost per order (not incl. the purchase price)

H = cost of holding one unit for one year

The total cost function is as follows:

Total cost = Purchase cost + Ordering cost + Holding cost
which can be expressed algebraically as follows:

TC = P x D + C x D/Q + H x Q/2

It is this total cost function which must be minimized.
Recognizing that:
- PD does not vary;
- Ordering costs rise the more frequently one places (during the year); and
- Holding costs rise the fewer times one places orders (due to larger quantities being ordered each time),

It follows that there is a trade-off between the Ordering and the Holding costs.
The optimal order quantity (Q*) is found where the Ordering and Holding costs equal each other, i.e.

C x D/Q = H x Q/2

Rearranging the above and solving for Q results in

$$Q^* = \sqrt{\frac{2CD}{H}}$$

Solution Q2 Part (b)

Dividend payable		(Rs.)
12% to equity shareholders $\left(\frac{12}{100} \times 60,00,000\right)$	=	7,20,000
8% to preference shareholders $\left(\frac{8}{100} \times 10,00,000\right)$	=	80,000
		8,00,000

Dividend Payout Ratio = 60%

$\frac{60}{100}$ x Profits After Tax = Rs. 8,00,000

Profits after tax = 8,00,000 x $\frac{100}{60}$

= Rs. 13,33,333.

Profit before tax = Profit after tax / (1 – tax rate)

= Rs. 13,33,333 / (1 – 0.35)

= Rs. 20,51,282 .....(1)

Interest on Debentures	=	5,00,000 x 9.5% =	47,500
Interest on Overdraft	=	8,00,000 x 10% =	80,000
Commitment Charges	=	2,00,000 x 8% =	16,000
			1,43,500 .....(2)

Earnings Before Interest and Taxes (EBIT) = (1) + (2)

= Rs. 20,51,282 + Rs. 1,43,500

EBIT = Rs. 21,94,782

Capital employed = Capital Structure + Overdraft

= Rs. 1,10,00,000 + 8,00,000 = 1,18,00,000

$$\text{Company's overall rate of return on capital employed} = \frac{\text{EBIT}}{\text{Capital Employed}}$$

$$= \frac{21,94,782}{1,18,00,000}$$

= 18.5998

= 18.6%

Cost of Capital after tax = EBIT (1 – Tax Rate)

= 18.6% (1 – 0.35)

= 18.6% (0.65)

= 12.09%

Question No 3:-

(a) Prepare working capital forecast and projected profit and loss account and balance sheet from the following information:

	Rs
Issued equity share capita	50, 00,000
Preference share capital	15, 00,000
Fixed assets	30, 66,667

Production during the previous year was 10, 00,000 units which is expected to be maintained during the current year. The expected ratios of cost to selling price are?

Raw material	40%
Direct wages	20%
Overheads	20%

Raw material ordinarily remains in stock for 3 months before production. Every unit of production remains in process for 2 months. Finished goods remain in stock for 3 months. Creditors allow 3 months for payment and debtors are allowed 4 months credit.

Estimated minimum cash to be held will be Rs. 2, 00,000. Lag in payment of wages and overheads are expected to be half a month. The selling price will be Rs. 8 per unit. The production is in continuous process and sales are in regular cycle. (12)

(b) How does „outsourcing" benefit the company? (08)

Solution Q 3 Part (a)

Total Production	10, 00,000 units	
Sales Rate	Rs. 8/unit	
Cost per unit of:		
Raw Material	= 8×40% = 3.20	
Wages	= 8×20% = 1.60	
Overheads	= 8×20% = 1.60	
Current Assets		**(Rs)**
Cash		2, 00,000
Raw Material 10, 00,000 × 3.20 × 3m/12 =		8, 00,000
Work-in-Progress 10, 00,000 × [3.20 RM] 0.80 Wages] [0.80 o/h] × 2/12 =		8, 00,000
Finished Goods 10, 00,000 × 6.40 × 3/12 =		16, 00,000
Debtors 10, 00,000 × 8 × 4/12 =		26, 66,667
Total:		60, 66,667

Current Liabilities		
Creditors 10, 00,000 × 3.20 × 3/12 =	8, 00,000	
Wages 10, 00,000 × 8 × 1/24 =	66,667	
Overheads 10, 00,000 × 1.60/1/24 =	66,667	9, 33,334
Working capital required		51, 33,333

Profit Statement		**(Rs)**
Sales		80, 00,000
Less:		
Raw Material	32, 00,000	
Wages	16, 00,000	
Overhears	16, 00,000	64, 00,000
Profit		16, 00,000

Balance Sheet as on……

Liabilities	(RS)	Assets	(Rs)
Capital	50,00,000	Fixed	30,66,667
Pref. Share Capital	15,00,000	Raw Material	8,00,000
Profit: Previous Years (Balancing figure)	1,00,000		
Current Year	16,00,000	Finished Good	16,00,000
Creditors	8,00,000	Debtors	26,66,667
Wages Payable	66,667	Cash	2,00,000
Overhead Payable	66,667		
Total	91,33,334		91,33,334

Solution Q 3Part (b)

Outsourcing is the practice of using outside firms to handle work normally performed within a company. Small companies routinely outsource their payroll processing, accounting, distribution and many other important functions ___ often because they have no other choice. Many large companies turn to outsourcing to cut costs. In response, entire industries have evolved to serve companies outsourcing. Outsourcing, if adopted wisely, can provide a number of long-term benefits:

(a). Control capital costs. Cost-cutting may not be the only reason to outsource, but it is certainly a major factor. Outsourcing converts fixed costs into variable costs, releases capital for investment elsewhere in your business, and allows company to avoid large expenditure in the early stages of business. Outsourcing can also make your firm more attractive to investors, since company is able to pump more capital directly into revenue-producing activities.
(b). Increase efficiency. Companies that do everything themselves have much higher research, development, marketing and distribution expenses, all of which must be passed on the customers. An outside provider‟s cost structure and economy of scale can give the firm an important competitive advantage.
(c). Reduce labor costs. Hiring and training staff for short-term or peripheral projects can be very expensive and temporary employees don‟t always live up to the expectations. Outsourcing lets the company to focus its human resources where one needs them most.

(d). Start new projects quickly. A good outsourcing firm has to resources to start a project right away. Handling the same project in house might involve taking weeks or months to hire the right people, train them and provide the support they need. And if a project requires major capital investments (such as building a series of distribution centers), the startup process can be even more difficult.
(e). Enables to Focus on core business. Every business has limited resources, and every manager has limited time and attention. Outsourcing can help the business to shift its focus from peripheral activities toward work that serves the customer, and it can help managers set their priorities more clearly.
(f). Level the playing field. Most small firms simply can‟t afford to match the inhouse support services that larges companies maintain. Outsourcing can help small firms act “big” by giving them access to the same economies of scale, efficiency and expertise that large companies enjoy.
Reduce risk. Every business investment carries a certain amount of risk. Markets, competition,

government regulations, financial conditions and technologies all change very quickly. Outsourcing providers assume and manage this risk for the company and they generally are much better at deciding how to avoid risk in their areas of expertise.

Question No 4:-

Slow Fashions Ltd is considering the following series of investments for the current financial year 2009:

Project bid proposals (Rs"000) for immediate investment with the first cash return assumed to follow in 12 months and at annual intervals thereafter.

Project	Now	2010	2011	2012	2013	2014	2015	NPV	IRR
P0801	–620	280	400	120				55	16%
P0802	–640	80	120	200	210	420	–30	69	13%
P0803	–240	120	120	60	10			20	15%
P0804	–1000	300	500	250	290			72	13%
P0805	–120	25	55	75	21			19	17%
P0806	–400	245	250					29	15%

There is no real option to delay any of these projects. All except project P0801 can be scaled down but not scaled up. P0801 is a potential fixed three-year contract to supply a supermarket chain and cannot be varied. The company has a limited capital budget of Rs1.2 million and is concerned about the best way to allocate its capital to the projects listed. The company has a current cost of finance of 10% but it would take a year to establish further funding at that rate.

Further funding for a short period could be arranged at a higher rate.

Required:
a) Draft a capital investment plan with full supporting calculations justifying those projects which should be adopted giving:
i. The priorities for investment,
ii. The net present value and internal rate of return of the plan; and
iii. The net present value per dollar invested on the plan.

b) Estimate and advice upon the maximum interest rate which the company should be prepared to pay to finance investment in all of the remaining projects available to it. (20)

Solution Q4 Part (a)

Net present value is not a sufficient criterion for choosing between projects when capital

is in short supply. On the assumption that the priority of the firm is to maximise net present value overall then the optimal ranking of projects is achieved through the profitability index as measured by the net present value per Rs of invested capital at year zero. The ranking of the projects using the net present value index is as follows:

	Investment	**NPV**	**IRR**	**PI**	**CumInv**
P0805	–120	19	17%	0.1573	120
P0802	–640	69	13%	0.1085	760
P0801	–620	55	16%	0.0892	1,380
P0803	–240	20	15%	0.0841	1,620
P0806	–400	29	15%	0.0733	2,020
P0804	–1,000	72	13%	0.0719	3,020

The first project, PO801 is now the marginal project given the available capital of Rs 1,200,000. However, this ordering of projects is not viable as PO801 cannot be varied and is either promoted in the ranking or is not produced as the plan as it stands requires an investment of Rs 1,380 million to satisfy the supermarket contract. The investment structure can be specified in one of two ways therefore:

Acceptance of PO801 ahead of PO802 (which can be scaled):

	Investment	**NPV**	**IRR**	**PI**	**CumInv**	**proportion**	**NPV**
P0805	–120	19	17%	0.1573	120	1	19
P0801	–620	55	16%	0.0892	740	1	55
P0802	–640	69	13%	0.1085	1,380	0·71875	50
P0803	–240	20	15%	0.0841	1,620		
P0806	–400	29	15%	0.0733	2,020		
P0804	–1,000	72	13%	0.0719	3,020		
						Plan NPV	124

Removal of PO801 from the plan:

	Investment	**NPV**	**IRR**	**PI**	**CumInv**	**proportion**	**NPV**
P0805	–120	19	17%	0.1573	120	1	19
P0802	–640	69	13%	0.1085	760	1	69
P0803	–240	20	15%	0.0841	1,000	1	20
P0806	–400	29	15%	0.0733	1,400	0.5	15
P0804	–1,000	72	13%	0.0719	2,400		
P0801	–620	55	16%	0.0892	740		
						Plan NPV	123

i. The revised plan should be to produce all of PO805, PO801 and a reduced scale of production on PO802 as shown in the revised schedule.
ii. The net present value of the plan is Rs 124 million

The internal rate of return cannot be calculated using the proportions of projects invested because of scale effects but must be calculated for the overall plan. Using the interpolation method and calculating the net present value of the optimum plan at 14% and 18% the IRR can be estimated by interpolation:

Discount	**NPV**
14%	12
18%	–85

***IRR* = 14%+ 12 X4% = 14.5%**
12+85

iii. The profitability index for the plan = 124/1200 = Rs 0·1033 per dollar invested.

Solution Q 4 Part (b)

When calculating the rate for short-term financing the maximum rate which should be offered is that which generates a zero net present value on those projects which do not qualify for the current plan. The internal rate of return is not appropriate as that is the rate that would be the maximum rate for investment over the life of the projects concerned. This is however, a short-term capital rationing problem. The profitability index gives the net present value of each pound invested.

Project	**Now**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
PO802 (balance of the marginal project)	–180	23	34	56	59	118	–8
P0803	–240	120	120	60	10		
P0806	–400	245	250				
P0804	–1,000	300	500	250	290		
Cash flows of rejected projects	–1,820	688	904	366	359	118	–8
Discount at 10%	–1,820	625	747	275	245	73	–5
Net present value of rejected projects	141						
Profitability index	0.07742						

Therefore these projects could support a maximum additional finance charge of the following:

Additional finance = Rs 1,820,000 * 0.0774 = Rs 141,000

Given that 10% is the rate assuming no short-term market failure for finance for this company, the maximum rate for the one year over which capital rationing is expected to hold is 17.74%.

Question No 5:-

ST-1 Working capital policy: The Calgary Company is attempting to establish a current assets ratio policy. Fixed assets are $ 600,000, and the firm plans to maintain a 50 percent debt to assets ratio. The interest rate is 10 percent on all debt. Three alternative current asset policies are under consideration: 40, 50, and 60 percent of projected sales. The company expects to earn 15 percent before interest and taxes on sales of $ 3 million. Calgary's effective federal plus states tax rate is 40 percent. What is the excepted return on equity under each alternative?

ST-2 FLOT The Upton Company is setting up new checking account with Howe National Bank. Upton plans to issue checks in the amount of $1 million each day and to deduct them from its own records at the close of business on the day they are written. On average, the bank will receive and clear the checks at 5 p.m. the third day after they are written; for example, a check written on Monday will be cleared on Thursday afternoon. The firm's agreement with bank requires it to maintain a $500,00 average compensating balance; this is 250,000 greater than the cash balance the firm would otherwise have deposit . it makes a $500,0000 deposit at the same time it open the account.

a. Assuming that the firm makes deposits at 4 P.M. each day (and the bank includes them in that day's transactions), how much must it deposit daily order to maintain a sufficient balance once it reaches a steady state? Indicate the required deposit on day 1, day 2, day 3, if any, and each day thereafter, assuming that the company will write checks for $ 1 million on day 1 and each day thereafter. 10 marks

b. How many days of float does Upton have? 5 marks

c. What ending daily balance should the firm try to maintain (1) on the bank's records and (2) on its own records? 5 marks

Solution Q5:

THE CALGARY COMPANY: ALTERNATIVE BALANCE SHEETS

	RESTRICTED (40%)	MODERATE (50%)	RELAXED (60%)
Current assets	$1,200,000	$1,500,000	$1,800,000
Fixed assets	600,000	600,000	600,000
Total assets	$1,800,000	$2,100,000	$2,400,000
Debt	$ 900,000	$1,050,000	$1,200,000
Equity	900,000	1,050,000	1,200,000
Total liabilities and equity	$1,800,000	$2,100,000	$2,400,000

THE CALGARY COMPANY: ALTERNATIVE INCOME STATEMENTS

	RESTRICTED	MODERATE	RELAXED
Sales	$3,000,000	$3,000,000	$3,000,000
EBIT	450,000	450,000	450,000
Interest (10%)	90,000	105,000	120,000
Earnings before taxes	$ 360,000	$ 345,000	$ 330,000
Taxes (40%)	144,000	138,000	132,000
Net income	$ 216,000	$ 207,000	$ 198,000
ROE	24.0%	19.7%	16.5%

ST-2 a. First, determine the balance on the firm's checkbook and the bank's records as follows:

	FIRM'S CHECKBOOK	BANK'S RECORDS
Day 1: Deposit $500,000; write check for $1,000.000	($500,000)	$500,000
Day 2: Write check for $1,000,000	($1,500,000)	$500,000
Day 3: Write check for $1,000,000	($2,500,000)	$500,000
Day 4: Write check for $1,000,000; deposit $1.000.000	($2,500,000)	$500,000

After Upton has reached a steady state, it must deposit $1,000,000 each day to cover the checks written 3 days earlier.

b. The firm has 3 days of float; not until Day 4 does the firm have to make any additional deposits.

c. As shown above, Upton should try to maintain a balance on the bank's records of $500,000. On its own books it will have a balance of *minus* $2,500,000.

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