ICMA Pakistan
Estd. 1951

# GLOCALISING SKILLS

## FOR THE COMPETITIVE ADVANTAGE

## MODEL PAPER


FOR FELLOW MEMBERS OF ACCA

# MEMBERSHIP PATHWAY EXAMINATION

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**Time Allowed: 03 Hours** **Maximum Marks: 500**

- **Multiple Choice Questions (MCQs) – Comprising 300 Marks**
- **Descriptive Questions – Comprising 200 Marks**
- **NOTE: The actual number of questions in the Final Exam Paper may differ categorically, with respect to numerical and theoretical questions [MCQs and Case Studies], as made available through this Model Paper.**

## MULTIPLE CHOICE QUESTIONS (MCQs)

## PART-A – STRATEGIC MANAGEMENT ACCOUNTING

**1.** Badar Limited has extracted the following data from a time-driven activity-based costing system designed for a customer service department:

| Activity | Quantity | Time per unit (mins) | Total Allocated Time (mins) |
|---|---|---|---|
| Orders processing | 9,500 | 30 | 285,000 |
| Addressing customers complaints | 200 | 300 | 60,000 |
| Warrant claims | 750 | 200 | 150,000 |

Total practical time available to department personnel is 625,000 minutes and the departmental budget for the period is Rs. 6,750,000.

Customer W has submitted 150 orders, made 5 complaints and submitted 12 warranty claims.

The cost of servicing customer W is _____________

| | |
|---|---|
| A | Rs. 1,804 |
| B | Rs. 8,400 |
| C | Rs. 32,727 |
| D | Rs. 90,720 |

**Reference :Traditional vs Modern Manufacturing Philosophy- Apply the techniques of activity based management in identifying multiple cost drivers/activities**

**2.** Bedford Limited with a 10% cost of capital is considering the purchase of two machine tools, M and N. Both can produce the same component at identical rates per working hour and the relevant data on the machines is as follows:

| | Machine M | Machine N |
|---|---|---|
| Capital cost (Rs.) | 1,500,000 | 2,400,000 |
| **Operating costs per working hour : (Rs. Per hour)** | | |
| Energy | 45 | 75 |
| Consumables | 90 | 120 |
| Variable overheads | 90 | 105 |

| | | |
|---|---|---|
| **Maintenance costs** | | |
| Service intervals (yearly) | 12 | 10 |
| costs of services (Rs.) | 15,000 | 12,000 |
| Random breakdowns | 3 | 1 |
| Cost of breakdowns (Rs.) | 30,000 | 45,000 |
| Expected Availability | | |
| (working hours per annum) | 1,500 | 2,000 |
| Contribution from production per hour | | |
| (excluding mc. Costs) (Rs.) | 750 | 750 |
| Expected Life (years) | 5 | 5 |
| Net salvage value at the end of year-5 (Rs.) | 150,000 | 375,000 |

Which machine is preferable for Bedford Limited?

| | |
|---|---|
| A | Machine M, Rs. 517,500 |
| B | Machine N, Rs. 735,920 |
| C | Machine M, Rs. 855,000 |
| D | Machine N, Rs. 619,260 |

Reference :Cost Planning- Life Cycle Costing

**3.** Trolex Limited is the manufacturer of smart watches. The company is preparing a product life cycle budget for a new smart watch YU-69. Development on the new watch is to commence shortly. Estimates for YU-69 are as follows:

| | |
|---|---|
| Life-cycle units manufactured and sold | 400,000 |
| **Selling price per watch (Rs.)** | 60,000 |
| Research and Development Costs | 1,500,000,000 |
| **Manufacturing:** | |
| Variable cost per watch **(Rs.)** | 22,500 |
| Variable cost per batch **(Rs.)** | 900,000 |
| Watches per batch | 500 |
| Fixed costs **(Rs.)** | 2,700,000,000 |
| **Marketing: (Rs.)** | |
| Variable cost per watch | 4,800 |
| Fixed costs | 1,500,000,000 |
| **Distribution:** | |
| Variable cost per batch **(Rs.)** | 420,000 |
| Watches per batch 160 | |
| Fixed costs **(Rs.)** | 1,080,000,000 |
| Customer-service cost per watch **(Rs.)** | 2,250 |

Ignoring time value of money, calculate the percentage of the budgeted total life-cycle costs that will be incurred by the end of the R & D and design stages.

| | |
|---|---|
| A | 7.36% |
| B | 7.70% |
| C | 8.13% |
| D | 8.46% |

Reference : Cost Planning- Life Cycle Costing

**4.** Salman Limited is engaged in the manufacturing of two products, A and B that go through same manufacturing process. The company uses activity costing method for allocating the overheads to its products. The production data related to both the products is as under:

| | **A** | **B** |
|---|---|---|
| Quantity produced | 30,000 | 10,000 |
| Material cost per unit | Rs.750 | Rs.3,000 |
| Direct Labour hours per unit | 0.75 | 0.75 |
| Direct Labour cost per direct labour hour | Rs.1,800 | Rs.1,800 |
| Machine hours per unit | 3 hours | 9 hours |
| Set-ups period | 40 | 60 |
| Orders handled per period | 50 | 200 |

| **Total Manufacturing overheads costs** | **Rs.** |
|---|---|
| Relating to machine activity | 45,000,000 |
| Relating to production run set-ups | 7,500,000 |
| Relating to order handling activity | 10,500,000 |
| | 63,000,000 |

The Full production cost per unit of Product A is _______________.

| | |
|---|---|
| A | Rs.920 |
| B | Rs. 3,020 |
| C | Rs.3,675 |
| D | Rs. 7,890 |

**Reference : Traditional vs Modern Manufacturing Philosophy- Apply the techniques of activity based management in identifying multiple cost drivers/activities**

**5.** Pendulum Limited manufactures three products which have the following cost of demand data:

| | Product-M | Product-N | Product-P |
|---|---|---|---|
| Contribution to sales ratio | 20% | 25% | 30% |
| Maximum sales value (Rs.000) | 160,000 | 200,000 | 300,000 |
| Minimum sales value (Rs.000) | 20,000 | 20,000 | 20,000 |

There are fixed costs of Rs. 140,000,000 per period.

The lowest breakeven sales value per period, subject to meeting the minimum sales value constraints, is nearest to:

| | |
|---|---|
| A | Rs. 464,000,000 |
| B | Rs. 476,000,000 |
| C | Rs. 504,000,000 |
| D | Rs. 524,000,000 |

**Reference :Multi-Product Breakeven Analysis- Analyze the sales product mix decisions**

**6.** Zest Limited manufactures two products G and H. The details for the year 2020 are shown below:

| | **Product-G Rs.** | **Product-H Rs.** |
|---|---|---|
| Selling price | 4,000 | 2,000 |
| Variable cost | 2,400 | 800 |

Total fixed costs are Rs. 46,000,000 per annum.

The company sells the two products in the sales value ratio of 7:3 and is operating at a margin of safety of 20%. During the next year. 2021, the company anticipates that the variable costs of product G and H will go up 5% and 2.5% respectively. The fixed expenses will also go up by 5%.

The quantity of product G and H sold in 2020 are:

| | |
|---|---|
| A | 17,500 units and 15,000 units |
| B | 20,575 units and 16,500 units |
| C | 17,500 units and 18,750 units |
| D | 21,875 units and 18,750 units |

**Reference : Multi-Product Breakeven Analysis- Determine the optimal mix of product**

**7.** Scholes printing press is in the business of publishing a leading magazine which has a wide customer base. It measures quality of service in terms of print quality, on time delivery and number of damaged and unsold magazines. In order to improve its business prospects and performance, the company is considering installing a scheduling and tracking system which involve an annual additional cost of Rs. 4,500,000 besides equipment costing Rs. 6,000,000 needed for installation of system.
To purchase the equipment, Scholes is planning to utilize the proceeds of an investment fetching an annual income of 10%.
Details regarding the present and future performance are given below:

| | Present | Expected |
|---|---|---|
| On-time delivery | 87% | 95% |
| Variable cost per lot of magazines damaged or unsold | 600 | 600 |
| Fixed cost | 750,000 | 750,000 |
| Number of lots of magazines damaged or unsold | 6,500 | 1,500 |

It is expected that each percentage increase in on time performance will result in revenue increase of Rs. 540,000 per annum. Required contribution margin is 45%.

The net benefit/ loss of installing the new system by Scholes printing press will be:

| | |
|---|---|
| A | Rs. 2,916,000 |
| B | Rs. 3,156,890 |
| C | Rs. 600,000 |
| D | Rs. 816,000 |

**Reference : Short term Decisions- make or buy decisions**

**8.** HTM Limited manufactures a single product that requires two components. The company purchases one of the components from two suppliers, KT Limited and GF Limited. The price quoted by KT Limited is Rs. 2,700 per hundred units of components and it is found that on average 4% of the total receipts from this supplier is defective. The corresponding quotation from GF Limited is Rs. 2,610 per hundred units, but the defective would go up to 6%. If the defectives are not detected, they are utilized in production causing a damage of Rs 2,700 per hundred units of the component.

HTM limited intends to introduce a system of inspection for the components on receipt. The inspection cost is estimated at Rs. 360 per hundred units of the components. Such inspection will be able to detect only 90% of the defective components received. No payment will be made for components found to be defective in inspection.

Assuming total requirement is 100,000 units of the components, if inspection at the point of receipt is undertaken which of the two supplier should be asked to supply.

| | |
|---|---|
| A | GF Limited, Rs. 30.263 |
| B | KT Limited, Rs. 29.432 |
| C | GF Limited, Rs. 30.975 |
| D | KT Limited, Rs. 29.250 |

Reference : Short term Decisions- acceptance/ rejection of contracts

**9.** Sialkot Sports Club Limited (SSCL) is engaged in the manufacturing of hockey sticks. Following table shows the budgeted figures for the coming year:

| | **Rs. Per unit** |
|---|---|
| Selling price | 7,200 |
| Components (1 set) | 1,800 |
| Assembling costs | 3,000 |
| Delivery cost | 1,200 |
| Contribution | **1,200** |

Market is intensely competitive where SSCL currently holds 35% market share. Annual demand of theses sticks is 150,000 units.
On reviewing previous performance it is revealed that 4% of the sticks supplied to customers were returned for free replacement because of faults. Defective components, which are initially bought in to assembling process, are held responsible for this. These returned sticks cannot be repaired and have no scrap value. Supply of faulty sticks to customers could be eliminated by implementing an inspection process immediately before the goods are delivered. This would improve customer perception thus resulting in an increase of 7% in current market share (making in all a total share of 42%).

The quality non-conformance cost for the coming year, based on the budgeted figures and sales returns rate would be:

| | |
|---|---|
| A | Rs. 13,128,000 |
| B | Rs. 2,630,400 |
| C | Rs. 10,497,600 |
| D | Rs. 75,600,000 |

Reference : Cost Management Techniques- Total Quality Management

**10.** Which one of the following statements is not an appropriate description of an organization's value chain?

| | |
|---|---|
| A | A the primary and support activities from which the organization can derive a competitive advantage |
| B | an aggregation of independent and strategically relevant activities that collectively contribute to the economic value generated by the organization |
| C | a set of interrelated activities that provide opportunities for optimizing the collective value derived from the interdependencies |
| D | a series of linked and strategically relevant activities that deliver products or services that the organization's customers value |

Reference : Externally Oriented Cost Management Techniques-Value Chain

**11.** A software manufacturer is experiencing a high level of customer complaints. Customers say that the software products are unreliable and do not meet their needs. The organization has decided to establish a relationship with two major customers (who are both computer manufacturers) to ensure that the software meets their requirements.

Which one of the following statements is correct? The manufacturer

| | |
|---|---|
| A | is using collaboration as the value driver in its value chain. |
| B | should focus on products that are popular with its customers. |
| C | is improving customer value by creating upstream linkages in the value chain. |
| D | is experiencing internal failures and needs to provide better training to its software developers. |

Reference : Externally Oriented Cost Management Techniques-Value Chain

**12.** Which one of the following statements best describes the purpose of product life cycle analysis?

| | |
|---|---|
| A | to increase the probability that new products will become 'stars' |
| B | to determine the market share and growth potential of an organization's products |
| C | to identify and manage the risks associated with an organization's product offerings |
| D | to understand and plan for the cash flow required by an organization's product offerings |

Reference : Cost Management Techniques-Cost Planning

**13.** Lime Manufacturers Limited (LML) is considering whether to implement target costing, activity-based costing, kaizen costing, customer-profitability analysis, and business-process management and continuous-improvement systems. Management at LML should be aware that these concepts generally go together in pairs.

The two pairs that would most likely go together would be:

| | Pair 1 | Pair 2 |
|---|---|---|
| **I** | business-process management and kaizen costing | continuous-improvement programs and target costing |
| **II** | business-process management and target costing | continuous-improvement programs and kaizen costing |
| **III** | customer-profitability analysis and kaizen costing | continuous-improvement programs and target costing |
| **IV** | business-process management and kaizen costing | customer-profitability analysis and activity-based costing |

Select the right pairs.

| | |
|---|---|
| A | I |
| B | II |
| C | III |
| D | IV |

Reference : Cost Management Techniques-Business Process Re-engineering

**14.** Identify the most accurate statements from the following about the undertaking of customer-profitability analysis.

| | |
|---|---|
| A | The best measure of customer profitability is customer revenue less the activity-based manufacturing cost of the products purchased. |
| B | Using activity-based costing to allocate marketing and sales administration costs to customers will provide a useful measure of customer profitability. |
| C | Despite activity-based costing being used, the allocation of customer-related costs to each individual customer as the final cost object is still problematic. |
| D | Customer-profitability analysis based on gross margins provides the basis for the development and implementation of strategies tailored to improving the profitability of individual customers. |

**Reference : Cost Management Techniques-Traditional vs Modern Manufacturing Philosophy**

**15.** HJH Limited is experiencing significant external failure costs. The management accountant uses a quality cost framework to analyze the situation.
Which one of the following strategies would lead to the greatest likely reduction in overall quality costs?

| | |
|---|---|
| A | increased spending on appraisal costs and decreased spending on external failure costs |
| B | decreased spending on appraisal costs and increased spending on internal failure costs |
| C | increased spending on prevention costs and decreased spending on external failure costs |
| D | increased spending on internal failure costs and decreased spending on external failure costs |

**Reference: Cost Management Techniques—Total Quality Management**

# PART-B – STRATEGIC FINANCIAL MANAGEMENT

**1.** Dawar Limited wants to forecast its free cash flow for the next three years. Current free cash flow along with expected annual increase in various items is as follows:

| | Expected annual increase | Rs. million |
|---|---|---|
| EBIT | 5.5% | 2,250 |
| Tax | - | 652.5 |
| Depreciation | 5.0% | 382.5 |
| Capital expenditure | 3.5% | 675 |
| Working capital requirements | 4.0% | 270 |

The applicable tax rate for the company is 29%.

By what percentage will free cash flow have increased between now and the end of year-3?

| | |
|---|---|
| A | 20.77% |
| B | 40.11% |
| C | 15.05% |
| D | 22.37% |

**Reference: Capital Investment Appraisal-Stakeholders and maximizing shareholders wealth**

**2.** Gwadar Home Products Limited is evaluating following three investment proposals. If only the project in question is undertaken, the expected present values and the amounts of investment required are:

| | | Rs. '000' |
|---|---|---|
| **Project** | **Investment** | **Expected PV** |
| 1 | 200,000 | 290,000 |
| 2 | 115,000 | 185,000 |
| 3 | 270,000 | 400,000 |

If projects 1 and 2 are jointly undertaken, there will be no economies; the investments required and present values will simply be the sum of the parts.

With projects 1 and 3, economies are possible in investment because one of the machines acquired can be used in both production processes. The total investment required for projects 1 and 3 combined is Rs.440,000.

If projects 2 and 3 are undertaken, there are economies to be achieved in marketing and producing the products but not in investment. The expected present value of future cash flows for projects 2 and 3 is Rs.620,000.

Which of the following project/ combination of projects is with highest NPV?

| | |
|---|---|
| A | Project 1 and 2 |
| B | Project 1 and 3 |
| C | Project 2 and 3 |
| D | Project 3 |

Reference: Capital Investment Appraisal-Investment Appraisal Methods

**3.** Global Textile Limited and National Textile Limited are considering the merger in a new company, Silver Textile Limited that will increase the earnings by 20% due to synergy effect. Following information relates to the companies before merger:

| | | Rs. in million |
|---|---|---|
| | **GTL** | **NTL** |
| **Equity and liabilities** | | |
| Share capital (Rs. 10 each) | 600 | 600 |
| Retained earnings | 300 | 80 |
| Total equity | 900 | 680 |
| Debt | 1,100 | 500 |
| | 2,000 | 1,180 |
| Earnings (net profits after tax) | 250 | 200 |

The financial advisor of the firm has projected the growth in corporate earnings by 20%, if the economic growth is slow and 50%, if the growth is high (applicable for both the companies). Probability of high growth and slow growth are 0.20 and 0.70 respectively. P/E multiple of textile composite sector is 9 and is projected to grow at 10 and 11 for slow and high growths, respectively while weaving sector companies will remain trading at P/E multiple of 6 in any case. After the merger, the new company will be listed in textile composite sector and will be valued accordingly.

Considering the above facts, expected value of National Textile Limited is ____________.

| | |
|---|---|
| A | 16.80 |
| B | 14.53 |
| C | 24.80 |
| D | 13.75 |

Reference: Capital Investment Appraisal-Stakeholders and maximizing shareholders wealth

**4.** Saad Limited is contemplating to make a bid to take over Khan Textile Limited. Both companies are in the same industry having similar gearing levels of 18%. WACC of Saad Limited is 19%. Saad Limited has estimated that the takeover will increase its annual cash flows over the next few years by the following amounts:

**Rs. in million**

| year | | After-tax (but before interest) cash flows |
|---|---|---|
| 2021 | | 15.60 |
| 2022 | | 18.30 |
| 2023 | | 23.70 |
| 2024 | onward | 29.10 |

Khan Textile Limited has 8% irredeemable debentures of Rs.31.5 million trading at par.

If Saad Limited makes a bid of Rs. 97 million for the entire share capital of Khan Textile Limited, it would increase shareholders' wealth by ___________________.

***Hint:*** *Use the FCFs of the target company (i.e., cash flows before interest)*

| Year | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| PV factor at 19% | 1 | 0.840 | 0.706 | 0.593 | 0.499 |

| | |
|---|---|
| A | Rs. 2.65 million |
| B | Rs. 2.71 million |
| C | Rs. 2.22 million |
| D | Rs. 2.48 million |

Reference: Capital Investment Appraisal-Stakeholders and maximizing shareholders wealth

**5.** Shariq Industries Limited desires to acquire 100% shares in Kamaal Limited. Both companies operate in the same industry and have similar gearing levels of 17%. Cost of equity of Shariq Industries Limited is 21%. Shariq Industries Limited has estimated that the takeover will increase its annual cash flows over the next few years by the following amounts:

**Rs. in million**

| year | | After-tax (but before interest) cash flows |
|---|---|---|
| 2021 | | 29.40 |
| 2022 | | 37.20 |
| 2023 | | 40.80 |
| 2024 | onward | 60.70 |

Kamaal Limited has 8% irredeemable debentures of Rs.77 million trading at par. Tax rate is 29%.

If Shariq Industries Limited makes a bid of Rs. 195 million for the entire share capital of Kamaal Limited, it would increase the shareholders' wealth by________________.

*[Hint: Use free cash flow to equity (FCFE) of the target company (i.e., cash flows after interest)]*

| year | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| Discount factor at 21% | 1 | 0.826 | 0.683 | 0.564 | 0.467 |

| | |
|---|---|
| A | Rs. 22.44 million |
| B | Rs. 21.81 million |
| C | Rs. 19.61 million |
| D | Rs. 20.07 million |

**Reference: Capital Investment Appraisal-Stakeholders and maximizing shareholders wealth**

**6.** The conversion option on an 8% convertible bond expires in 3 years' time; if unconverted it is redeemable at par in 10 years' time; conversion is for 20 ordinary shares, the current share price being 370 paisa. The current required return on unconvertible bonds with a 10 year maturity is 12%.

The conversion value of its security is ________.

| | |
|---|---|
| A | Rs. 68.8 |
| B | Rs. 70 |
| C | Rs. 77.4 |
| D | Rs. 74 |

**Reference: Cost of Capital-Investment decisions, Financing and the cost of capital**

**7.** Which of the following firms would most appropriately be valued using an asset-based model?

| | |
|---|---|
| A | An energy exploration firm in financial distress that owns drilling rights for offshore areas. |
| B | A paper firm located in a country that is experiencing high inflation. |
| C | A software firm that invests heavily in research and development and frequently introduces new products. |
| D | All of the above. |

**Reference: Capital Investment Appraisal- Stakeholders and maximizing shareholders wealth**

**8.** Suppose an analyst estimates equity value by discounting free cash flow to equity (FCFE) at the weighted average cost of capital (WACC) in the FCFE model and estimates firm and equity value by discounting free cash flow to the firm (FCFF) at the required return on equity in the FCFF model. The analyst would most likely:

| | |
|---|---|
| A | Overestimate equity value with the FCFE model and underestimate firm value and equity value with the FCFF model. |
| B | Underestimate equity value with the FCFE model and overestimate firm value and equity value with the FCFF model. |
| C | Underestimate equity value with the FCFE model and underestimate firm value and equity value with the FCFF model. |
| D | Overestimate equity value with the FCFE model and overestimate firm value and equity value with the FCFF model. |

**Reference: Capital Investment Appraisal- Stakeholders and maximizing shareholders wealth**

# PART-C – STRATEGIC MANAGEMENT

**1.** A company that manufactures ready-made garments produces two lines of clothing: winter and summer. The clothing is produced to a high standard of design and manufacture and it is sold under a widely recognized and prestigious label.
The strategy that the company is seeking to use in the highly competitive clothing market is referred to as a:

| | |
|---|---|
| A | Cost-focus strategy. |
| B | Cost leadership strategy. |
| C | Differentiation strategy. |
| D | Differentiation-focus strategy. |

**Reference : Strategic Decision Making- Other aspects of business strategy**

**2.** In comparison to the formal planning approach to strategy development, the emergent approach is not associated with which of the following?

| | |
|---|---|
| A | Visionary entrepreneurs |
| B | A response to unexpected contingences |
| C | Goal congruence |
| D | Strategy can be tried and developed as it is implemented |

**Reference : Strategic Decision Making- Strategic Planning**

**3.** Which one of the following best describes that part of the strategic management process within an organization that examines its competitive position in relation to products, production facilities, non-current assets, people, organizational structures and current operating results?

| | |
|---|---|
| A | Internal Analysis |
| B | External Analysis |
| C | SWOT Analysis |
| D | Stakeholder Analysis |

**Reference : Strategic Decision Analysis- Organization to its environment**

**4.** The _______________ is a comprehensive approach to strategy that suggests a logical sequence that involves analyses of current situation, generating choices and implementing the chosen strategy.

| | |
|---|---|
| A | Freewheeling opportunism |
| B | Incrementalism |
| C | Rational model |
| D | Emergent strategies |

**Reference: Strategic Decision Making- Strategic Planning**

**5.** In an organization, growth continues in an environment of more formal communications, budgets and focus on separate activities like marketing and production. Incentive schemes replace stock as a financial reward. However, there comes a point when the products and processes become so numerous that there are not enough hours in the day for one person to manage them all, and he or she can't possibly know as much about all these products or services as those lower down the hierarchy.

According to Grenier organizational growth model, which of the following crises does this phase ends with?

| | |
|---|---|
| A | Crises of control |
| B | Crises of red tape |
| C | Crises of Autonomy |
| D | Crises of ? |

Reference: Directions and method of growth

**6.** Which one of the following activities would be part of the performance element of corporate governance?

| | |
|---|---|
| A | Responding to changes in the business environment |
| B | Monitoring the internal control system |
| C | Establishing an audit committee |
| D | Designing and implementing a corporate code of conduct |

Reference : Strategic planning- other aspects of business strategy

**7.** ___________________ decisions commit an organization to specific products, markets, resources, and technologies over extended period of time.

| | |
|---|---|
| A | Strategic planning |
| B | Strategic formulation |
| C | Strategic evaluation |
| D | Strategic implementation |

Reference : Strategic Decision Making- Strategic planning

# DESCRIPTIVE QUESTIONS

## PART-A – STRATEGIC MANAGEMENT ACCOUNTING [100 Marks]

## Question:

New Horizon Limited (NHL) is manufacturing and selling of a single product 'Tetra' currently having an order for 6,000 product units per period to be fulfilled by the company. There are no stocks of product units at the beginning or end of the period under review. The stock level of material R remains unchanged throughout the period. The unit specifications are as follows:-

| | |
|---|---|
| Direct Materials R | 9 Sq. meter at Rs. 55 per square meter |
| Machine Time | 0.8 Running hours |
| Machine cost per gross hour | Rs. 400 |
| Selling price | Rs. 2,500 |

NHL is planning to implement a Quality Management Programme (QMP) the following additional information regarding costs and revenues are given as of now and after implementation of Quality Management Programme.

| **Before the implementation of QMP** | **After the implementation** |
|---|---|
| **1:** 7% of incoming material from suppliers scrapped due to poor receipt and storage organization | **1:** Reduced to 5%. |
| **2:** 5% of materials R input to the machine process is wasted due to processing problems. | **2:** Reduced to 3.5% |
| **3:** Inspection and Storage of Material R costs Rs. 2 per square meter purchased. | **3** No change in the unit rate. |
| **4:** Inspection during the production cycle, calibration checks on inspection equipment vendor rating and other checks cost Rs. 250,000 per period. | **4** Reduction of 40% of the existing cost. |
| **5** Production Qty. is increased to allow for the downgrading of 15.5% of the production units at the final inspection stage. Downgraded units are sold as seconds at a discount of 40% of the standard selling price. | **5** Reduction to 10.5% |
| **6:** Production Quantity is increased to allow for return from customers (these are replaced free of charge) due to specification failure and account for 7% of units actually delivered to customer. Replacement units incur a delivery cost of Rs. 250 per unit. 70% of the returns from the customers are rectified using 0.3 hours of machine running time per unit and are re-sold as 'third quality' products at a | **6** Reduction to 3.5% |

| | |
|---|---|
| discount of 50% on the standard selling price. The remaining return units are sold as scrap for Rs. 125 per unit | |
| **7:** Product liability and other claims by customers is estimated at 4% of sales revenue from standard product sale. | **7**: Reduction to 2% |
| **8:** Machine idle time is 30% of Gross machine hrs. used (i.e. running hour = 70% of gross/ hrs.) | **8:** Reduction to 12.5% |
| **9:** Sundry costs of Administration, Selling and Distribution total- Rs. 6,00,000 per period. | **9:** Reduction by 20% of the existing. |
| **10:** Prevention programme costs Rs. 2,00,000 | **10:** Increase to Rs. 6,00,000 |

The Total Quality Management Programme will have a reduction in Machine Run Time required per product unit to 0.7 hr.

**Required:**

**a)** Prepare summaries showing the calculation of (i) Total production units (pre inspection), (ii) Purchase of Materials R (Square meters), (iii) Gross machine Hours. In each case, the figures are required for the situation both before and after the implementation of the Quality Management Programme so that orders for 6,000 products can be fulfilled. **(50 Marks)**

**b)** Prepare Profit and Loss Account for NH for the period showing the profit earned both before and after the implementation of the total Quality programme. **(50 Marks)**

**Reference: Cost Management Techniques- Total Quality Management**

# PART-B – STRATEGIC FINANCIAL MANAGEMENT [50 Marks]

## Question:

Chamber Sanitary Limited (CSL) is a multinational company primarily engaged in the manufacturing of of wide range of sanitary products for both national and international market. The higher management of the company is considering to setup a manufacturing unit of product 'R' in UAE. The life cycle of Product 'R' is almost complete but production for further 2 years is under review, which is expected to produce a net cash inflow of Rs. 600 Million next year and Rs. 460 Million in the last year of Product 'R' life.

**Product 'F':**
CSL has already decided to replace Product 'R' with Product 'F' whose production will commence in 2 years' time. Product 'F' is expected to have life cycle of 10 years. It could be either manufactured in factory situated in Karachi or in Faisalabad manufacturing unit owned by the company. The location of factory situated in Karachi is near the market place, therefore, if Product 'F' is manufactured in Faisalabad, the company will have to bear a transportation cost of Rs. 2,000 per unit. Production costs will be the same for both factories. Product 'F' will require additional equipment and workers will need training: this will cost Rs. 1,200 Million at either location. 250,000 units of Product 'F' will be made each year and each unit is expected to generate a net cash inflow of Rs. 5,000 in addition to transportation costs. If Product 'F' is made in Karachi, the factory will be closed and sold at the end of product's life.

**Product 'G'**
The higher management is considering the further possibility: Product 'G' could be produced in Karachi factory and Product 'F' at Faisalabad unit. Product 'G' must be introduced in 1 year's time and will remain in production for the period of 3 years. If it is introduced, the manufacturing of Product 'R' will have to cease a year earlier than planned. If this happened, output of Product 'R' will be increased by 15% to maximum capacity next year, its last year, to build stock prior to product's withdrawal. The existing staff would be transferred to Product 'G'.

The equipment required to make Product 'G' would cost Rs. 800 Million. 65,000 units of Product 'G' would be made in the first year: afterwards production would rise to 90,000 units a year. Product 'G' is expected to earn net cash inflow of Rs. 14,000 per unit. After 3 years' production of Product 'G', the factory located in Karachi would be discontinued and sold. (Product 'F' would not be transferred back to the factory located in Karachi at that stage; production would continue at Faisalabad unit)

**Sale of Factory:**
It is expected that the factory in Karachi could be sold for Rs. 1,100 Million at any time between the beginning of Year-2 and the end of Year-12. If the factory is sold, CSL will make redundancy payments of Rs. 400 Million and the sale of equipment will raise Rs. 70 Million.

Equity Beta of CSL is 0.5. The risk-free rate is 8% and the market premium is 9%.
The cost of debt net of tax is 9%.
The capital structure of the CSL is 60% Debt and 40% Equity.

**Required:**

**(a)** Evaluate the three options for CSL and determine the best financially viable option for the company. **30**

**(b)** Calculate and discuss the sensitivity of the option in Part (A) to: **20**

**(i)** changes in transportation costs

**(ii)** changes in the selling price of the factory

**Reference: Capital Investment Appraisal- Investment Appraisal/ Risk and uncertainty- Risk Analysis Techniques**

# PART-C – STRATEGIC MANAGEMENT [50 Marks]

## Question:

Glasgow Corporation is one of the largest conglomerated public limited company operating in Pakistan for the last 50 years. It was a venture of Dynamic Pvt. Limited which started their business primarily as chemical manufacturing company later acquiring existing chemical distributors and retailers as the result of many successful mergers and acquisitions embarking growth pace of the business. The company was keen to proceed further and not restricted itself in only one industry, thus pulling itself out of its comfort zone and expanding its roots in diversified industries typically including textile, cosmetic, pharmaceuticals and automobile companies. Presently, the company is governed by the pioneers of the business Dynamic Pvt. Limited having 40% shares, while 30% stake was held by financial institutions, 25% by Glasgow employees and remaining 5% with the general public.

**Environmental Implications:**

It has been more than 5 decades since the establishment of Glasgow Corporation chemical factory which from inception, was surrounded by agricultural land connected with a lake that stretches alongside the factory area ultimately dropping down to the sea. All the chemical untreated waste of the company forms a passage from the vicinity of factory dumping into the lake. Over the years, with increased urbanization need for proper infrastructure and facilities became essential for the locality like residential areas, schools, hospital and market as well as increasing need of operating factory at 100% capacity required employees to be settled near the premises of the factory area along with their families.

The factory is located in the area controlled by the Government and requires renewal of license each year to continue its operations. The present government, discovered about the activities of the companies and hazardous waste that forms the part of lake leading to sea and showed deep concern on the impact this would have on the lives of habitants. Considering the severity of the event, the government decided to penalize the company and withheld its license in order to restrict it from further polluting the environment. As a response during the court trial, the company countered its activity by mentioning it as a core requirement for the operations else whole of the process would become rather uneconomical to the level that it could develop going concern issues for the company.

The court after final hearing, gave verdict of penalizing the company for dumping untreated waste in the lake as it was against the applicable law that is, The Pakistan Environmental Protection Act 1997, and breach of corporate social responsibility and thus, summoned it to ensure adherence to the guidelines to avoid any strict action for the future, however, the court finally directed the government to renew the license of the company allowing it to dump only treated waste in the lake as the licensing includes no restrictions and the activity is critical to the sustenance of the company.

**Changing Dynamics of Automobile Industry:**

The auto sector continues to flourish as one of the best performing creating avenues for revenues, employment creating room for research and development and innovations for the market players. Despite probability of deceleration in growth, Government's auto policy has been foreseen to uplift industrial progress pulling down the barriers for many new players in the market with entirely new models. Patron Pvt. Limited a subsidiary of Glasgow Corporation is one of the key market players in the industry having considerable market share and huge investment in place which is expected to increase in the coming years. The company is primarily involved in the manufacturing of all scale trucks to facilitate the transportation business. Although trucking industry has been exposed to consistent declination where the work at certain government projects have halted due to imposition of high taxes on non-filers, so are the supplies of trucks and the respective payments, resulting disruption of the work flow and the multiple upward price revisions due to currency depreciation, economic slowdown to curtail domestic demand and price-sensitive potential buyers refrained from making purchases.

**Required:**

You are a CMA Corporate Consultant, having wide range of experience, and have been appointed as an Advisor to provide guidance on plan of action to the management on the following:

**Question Number 1**

How being a diversified conglomerate could be beneficial for Glasgow Corporation in achieving economies of scale and creating competitive advantage? **(35 Marks)**

**Question Number 2**

Discuss how crucial is the synchronization and harmony amongst the team members to bring forth synergic affect in the decision making? **(15 Marks)**

**Reference: Strategic Decision Analysis- Directions and Methods of Growth/ Change Management- Managing resistance to Change**

**THE END**