**ASSOCIATION OF ACCOUNTING TECHNICIANS OF SRI LANKA**

CURRICULUM 2020

# PILOT PAPER

# Level III

# 302 - MANAGEMENT ACCOUNTING & FINANCE (MAF)

A publication of the Education and Training Division

# Association of Accounting Technicians of Sri Lanka

## 302 - Management Accounting & Finance (MAF)

**Instructions to Candidates (Please Read Carefully)**

**Time Allowed:**

| | | |
|---|---|---|
| Reading | : | 15 Minutes |
| Writing | : | 03 Hours |

**Structure of Question Paper:**

- This paper consists of three Sections; Section A, Section B and Section C.
- All the questions of Section A, Section B and Section C should be answered.

**Marks:**

- Allocation of marks for each section:

| Section | Marks |
|---|---|
| Section A | 20 |
| Section B | 30 |
| Section C | 50 |
| **Total** | **100** |

- Marks for each question are shown with the question.

**Answers:**

- All answers should be written in the booklet provided, answers written on the question paper will not be considered for marking.
- Begin your answer of each question on a new page.
- All workings should be clearly shown.
- Do not write on the Margins.

**Answer Booklets:**

- Instructions are shown on the front cover of each answer booklet.

**Calculators:**

- Candidates may use any calculator except those with the facility for symbolic algebra and differentiation. No programmable calculators are allowed.

**Attached:**

- Action verb checklist – Each question will begin with an action verb (excluding OTQ's).
- Students should answer the questions based on the definition of the verb given in the checklist.

**Four (04) Compulsory Questions**

(Total 20 marks)

**SECTION A**

## *Question 01*

Budgetary control refers to how well managers utilize budgets to monitor and control costs and operations in a given period.

**You are required to:**

**(a)** **State** three (03) advantages of rolling budget. **(03 Marks)**

**(b)** **List** four (04) objectives of a Budgetary control system. **(02 Marks)**

**(Total 05 Marks)**

## *Question 02*

Variable cost and selling price of products X and Y of **ABC Ltd** are as follow:

| | **X (Per unit) (Rs.)** | **Y (Per unit) (Rs.)** |
|---|---|---|
| Selling price | 100 | 80 |
| Direct Material (Rs.10 per kg) | 20 | 15 |
| Direct Labour | 15 | 20 |
| Variable overhead | 20 | 18 |

The company decided to produce product X and Y product, 350 units and 300 units respectively for the next month. However raw material quantity is limited to 1,000 kg per month.

**You are required to:**

**Calculate** the optimum product mix for the month. **(05 Marks)**

## *Question 03*

The following details are given for **Alloy Ltd**, a trading company for the year ended 31st March 2019:

| | | |
|---|---|---|
| Sales for the year | - | Rs.8,000,000/- |
| Gross Profit | - | 25% on cost of sales |
| Average finished goods inventory for the year | - | Rs.560,000 |
| Trade receivables turnover ratio | - | 7.5 times |
| Trade payables settlement period | - | 40 days |

**You are required to:**

**Calculate** the length of working capital cycle for the year ended 31st March 2019. **(05 Marks)**

### *Question 04*

Standard costing is a technique of costing by which costs of products or services are predetermined and are compared with actual costs incurred.

**You are required to:**

(a) **State** three (03) advantages of standard costing. **(03 Marks)**

(b) **List** two (02) limitations of standard costing. **(02 Marks)**

**(Total 05 Marks)**

***End of Section A***

## Three (03) Compulsory Questions

(Total 30 marks)

## SECTION B

### *Question 05*

A Company produces two Products **EXE** and **WYE** and forecast information is as follow.

| | **EXE** | **WYE** |
|---|---|---|
| | **Rs. (per unit)** | **Rs. (per unit)** |
| Selling price | 100 | 120 |
| Direct Materials | 50 | 68 |
| Direct Labour | 25 | 30 |
| Variable Overheads | 5 | 6 |

For the year 2020 the company expects to produce and sell 200,000 units of EXE where they expect to produce and sell product WYE maintaining the normal sales ratio of 4:1 between EXE & WYE respectively. The annual total fixed cost has been estimated at Rs.3,000,000/-.

**You are required to calculate** the following:

(a) Combined Profit Volume Ratio. **(04 Marks)**

(b) Break-Even Point of EXE in units and in Values. **(03 Marks)**

(c) Margin of safety for EXE & WYE in units. **(03 Marks)**

**(Total 10 Marks)**

## *Question 06*

Capital structure of **Beeta PLC**, a company that is listed on the Colombo Stock Exchange, is given below:

(1) **Beeta PLC** has 120 million ordinary shares currently trading at Rs.60 per share. The company paid a dividend of Rs.7.50 per ordinary share few days ago. The company expects the dividend growth rate to be 4% from the next financial year.

(2) There are 40 million irredeemable preference shares in issue which is currently trading at Rs.25/- per share. These preference shares are paid dividend of Rs.2.75 per share.

(3) The company has 10 million irredeemable debentures in issue at Rs.100 per debenture. The interest is paid at 10.75% per annum. The current trading price is Rs.99.40 per debenture.

(4) The company's income tax rate is 14%.

**You are required to calculate** the following:

(a) Cost of ordinary shares. **(02 Marks)**

(b) Cost of irredeemable preference shares. **(02 Marks)**

(c) Cost of irredeemable debenture. **(02 Marks)**

(d) Weighted average cost of capital. **(04 Marks)**

**(Total 10 Marks)**

## *Question 07*

Budgeted and actual results of **Alba limited** for the month of December 2019 are given below. The company did not maintain any opening inventory or closing inventory:

| | **Budgeted (Rs.)** | **Actual (Rs.)** |
|---|---:|---:|
| Sales | 2,400,000 | 1,800,000 |
| Direct Material | 800,000 | 650,000 |
| Direct labour | 500,000 | 320,000 |
| Variable overhead | 300,000 | 230,000 |
| **Total Contribution** | **800,000** | **600,000** |
| Fixed cost | 500,000 | 400,000 |
| **Profit for the month** | **300,000** | **200,000** |

Budgeted and actual numbers of units produced and sold during the month were 100,000 units and 60,000 units respectively.

**You are required to:**

(a) **Prepare** the flexed budget (Budgetary control statement) based on the above. **(07 Marks)**

(b) **State** three (03) solutions for cash deficits of the business organization. **(03 Marks)**

**(Total 10 Marks)**

***End of Section B***

| | |
|---|---|
| **Two (02) Compulsory Questions**<br>(Total 50 Marks) | **SECTION C** |

### *Question 08*

**(A)** **(a)** **Gray Ltd.** manufactures a product through several consecutive processes. The following details are available for the month of December 2019:

| | |
|---|---|
| Material introduced | 1,000 kg at Rs.150/- per kg. |
| Direct labour | Rs.79,475/- |
| Production overhead | Rs.49,755/- |
| Output transferred to process II | 830 kg |
| Normal loss | 5% of inputs and scrap items can be sold for Rs.7.50 per kg |

There are no opening work in progress. Closing work in progress at the end of month was 50 kg and degree of completion was as follow:

| | |
|---|---|
| Material | 100% |
| Direct labour | 70% |
| Production overhead | 60% |

**You are required to:**

**Prepare** the statement of equivalent units, cost & valuation and the process account for the month of December 2019 under the Weightage Average. **(13 Marks)**

**(b)** Faced with rapidly changing global business environment, many companies are changing their costing works with digital technology.

**You are required to:**

**List** two (02) advantages of digital costing. **(02 Marks)**

**(B)** A company manufactures a product using two types of materials M1 and M2 . Standard cost details per unit are given below:

| | **Rs.** |
|---|---|
| Direct materials M1- 8 Kg @ Rs.20/- per Kg | 160 |
| Direct Materials M2- 12 Kg @ Rs.10/- per Kg | 120 |
| Direct Labour - 4 Hours @ Rs.60/- per Hour | 240 |

Actual information for the month of December 2019 is as follows:

| | Rs. |
|---|---|
| Direct material (M1: 7,500 Kg) | 140,400 |
| Direct material (M2: 12,000 Kg) | 130,000 |
| Direct Labour (4,200 hours) | 273,000 |

Number of units produced and sold was 1,000 units for the month of December 2019.

**You are required to compute the following variances:**

(a) Direct material price variance.

(b) Direct material mix variance.

(c) Direct material yield variance.

(d) Direct labour rate variance. **(10 Marks)**

**(Total 25 Marks)**

## *Question 09*

**(A)** **Delta Ltd** is considering to launch a new product through a new machinery. It has already spent Rs.250,000/- on a technical feasibility study. New machinery cost is Rs.4,000,000/- and useful life of the machinery is 5 years. Additional working capital requirement is Rs.400,000/- and it will be recovered at the end of 5th year.

The following information is relating to a new product:

(1) Sales and variable cost for next 5 years from this new product are as follow:

| Year | Sales (Rs.) | Variable cost (Rs.) |
|---|---|---|
| 1 | 2,200,000 | 600,000 |
| 2 | 2,400,000 | 700,000 |
| 3 | 2,800,000 | 1,000,000 |
| 4 | 3,000,000 | 1,100,000 |
| 5 | 3,500,000 | 1,250,000 |

(2) Fixed maintenance cost including depreciation on new machinery is Rs.1,400,000/- per annum.

(3) Depreciation is charged on the straight line method at cost. The company claims capital allowance at 25% per annum on machinery for tax purpose. It is assumed that tax is paid in the same year.

(4) Corporate tax rate is 14% and cost of capital is 15%.

**You are required to:**

**Assess** the viability of the above investment using Net present Value (NPV) computation.

**(15 Marks)**

**(B)** **Furni Ltd.** produces and sells furniture. The Company has received an order from a client to manufacture 75 customised tables at a price of Rs. 22,500 per table. These tables are expected to require the following resources and costs:

- **Wood** – 8 square metres of wood is required per table. This required quantity of wood for this order is not available in stock. The current market price is Rs.365/- per square meter.
- **Polish** – each table requires 0.5 litres of a special type of polish. The company has 40 litres of this polish that was purchased at Rs.1,400/- per litre, sometime ago in stock. This polish is not being used for the other orders and would be disposed of at Rs.700/- per litre if not used for this order.
- **Other Material** – the other material cost per table is expected to be Rs.4,500/- and needs to be purchased from the market.
- **Labour** – 18 hours of labour time is required per table and labour is normally paid at the rate of Rs.600/- per hour. At present all skilled labour is occupied with the other orders and the company would need to pay overtime at 1.5 times of the normal pay to meet the labour requirement for this order.
- **Variable Overhead -** variable overhead cost per table is Rs.2,000/-.

**You are required to:**

**Assess** whether **Furni Ltd.** should accept this order or not.

*(Support your answer with calculations.)* **(05 Marks)**

**(C)** A company is considering whether to add new product into its products range. If it goes for the new product, probability of success is 60% and probability of failure is 40%. The initial cost of the new production facility will be Rs.400,000/-. If the product is success estimated profits and the related probabilities of the product under the possible market conditions are given below:

| Market conditions | Probability | Profit (Rs.) |
|---|---|---|
| Favourable | 0.2 | 500,000 |
| Moderate | 0.5 | 600,000 |
| Adverse | 0.3 | 300,000 |

If the proposal is failure, company can recover only Rs.100,000/- out of its initial cost of the production facility.

**You are required to:**

(a) **Draw** a decision tree

(b) **Assess** the course of action the company has to take. **(05 Marks)**

**(Total 25 Marks)**

***End of Section C***

# Action Verbs Check List

| Level of competency | Description | Action Verbs | Verb Definitions |
|---|---|---|---|
| Analysis (4) | Draws Connections Among Ideas and Solve Problems | **Analyze** | Examine in details to find the solution or outcome |
| | | **Differentiate** | Constitute a difference that distinguishes something |
| | | **Discuss** | Examine in detail by arguments |
| | | **Compare** | Examine to discover similarities |
| | | **Contrast** | Examine to show differences |
| | | **Outline** | Make a summary of significant features |
| | | **Communicate** | Share or exchange information |
| Application (3) | Uses and Adapts Knowledge in New Situations | **Apply** | Put to practical use |
| | | **Calculate** | Ascertain or reckon with mathematical computation |
| | | **Demonstrate** | Prove or exhibit with examples |
| | | **Prepare** | Make or get ready for particular purpose |
| | | **Solve** | Find solutions through calculations and/or explanation |
| | | **Assess** | Determine the value, nature, ability or quality |
| | | **Graph** | Represent by graphs |
| | | **Reconcile** | Make consistent/compatible with another |
| Comprehension (2) | Explains Ideas and Information | **Define** | Give the exact nature, scope or meaning |
| | | **Explain** | Make a clear description in detail using relevant facts |
| | | **Describe** | Write and communicate the key features |
| | | **Interpret** | Translate in to understandable or familiar terms |
| | | **Recognize** | Show validity or otherwise using knowledge or contextual experience |
| Knowledge (1) | Recalls Facts and Basic Concepts | **List** | Write the connected items |
| | | **Identify** | Recognize, establish or select after consideration |
| | | **State** | Express details definitely or clearly |
| | | **Relate** | Establish logical or causal connections |
| | | **Draw** | Produce a picture or diagram |

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CURRICULUM 2020

# SUGGESTED ANSWER

# Level III

# 302 - MANAGEMENT ACCOUNTING & FINANCE (MAF)

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**Four [04] Compulsory Questions**

[Total 20 Marks]

**SECTION - A**

## Answer to Question 01

| | |
|---|---|
| **Unit 3** | **- Different types of budgets and Planning & Controlling vs Budgeting.** |
| Learning outcomes | - Explain different approaches to budgeting. |
| | - Discuss objectives of budgeting and budgetary process of an organization. |

**(a) Advantages of a rolling budget**

(1) It reduces uncertainty in budgeting

(2) Force managers to reassess the budget regularly and to produce up to date budget.

(3) Planning and control will be based on a recent plan which is more realistic.

(4) It brings better understanding, responsibility and objectives between employees of the company.

(5) It is easy to assess the actual performance against budget.

**(Any three points – 3 marks)**

**(b) Objectives of a budgetary control system**

(1) It compels planning.

(2) It coordinates activities.

(3) It communicates of activities.

(4) Motivates managers to perform well.

(5) Establishes a system of control.

(6) Evaluates performance.

(7) Delegates authority to budget holders.

(8) Ensures achievement of the managers' objectives.

**(Any four points – 2 marks)**

**(Total – 5 Marks)**

## Answer to Question 02

| | |
|---|---|
| **Unit 1** | **- Introduction to Management Accounting, relevant cost in decisions making and decisions under risks and uncertainty.** |
| Learning outcomes | - Assess short term decisions. |

| | χ | y |
|---|---|---|
| Selling price | 100 | 80 |
| Variable cost | (55) | (53) |
| Contribution | 45 | 27 |
| DM per unit | 2kg | 1.5kg |
| Contribution per kg | 22.5 | 18 |
| Rank | 1 | 2 |

product mix

χ = 350 x 2 = 700

γ = 200 x 1.5 = 300

1000

**(5 Marks)**

## Answer to Question 03

| | |
|---|---|
| **Unit 7** | **- Working Capital Management.** |
| Learning outcomes | - Calculate the working Capital Cycle. |

Cost of sales = 8,000,000/ 1.25 = 6,400,000

Inventory resident period = (Average inventory / cost of sales) * 365 days.

= (560,000 / 6,400,000) * 365

= 31. 93

= 32 days

Trade receivables collection period = 365 / turnover ratio

= 365 / 7.5

= 48.67 days

= 49 days

Working capital cycle = Inventory resident period + Trade receivables collection period – Trade payables settlement period

Working capital cycle = 32 + 49 – 40 = 41 days. **(05 Marks)**

## Answer to Question 04

| Unit 4 | - **Standard Costing and Cost of Capital.** |
|---|---|
| Learning outcomes | - Apply Standard Costing. |

**(a)**

(1) It helps management in formulating price and production policy.

(2) It acts as a yardstick of performance.

(3) It reduces available wastage and losses.

(4) It facilitates to reduce clerical and accounting cost and managerial time.

(5) Employees are more responsible.

(6) It aids in budgeting control and in decision making.

(7) Setting standards means setting goals and targets.

**(Any three points - 3 Marks)**

**(b)**

(1) It may be costly and time consuming to implement and to keep up to date standard costing system. Because it requires high technical skills.

(2) Inefficient staff is incapable of operating this system.

(3) Since it is difficult to set correct standards, it is difficult to ascertain correct variances.

(4) Industries which are subject to frequent changes need constant revisions of standards. Revisions may be more expensive.

(5) For small companies, standard costing is expensive.

(6) Standard costing may not be effective in industries which deal in non-standardized products or jobs according to customer's requirements.

**(Any two points - 2 Marks)**

**(Total - 5 Marks)**

**Four [03] Compulsory Questions**

[Total 30 Marks]

**SECTION - B**

## Answer to Question 05

| | |
|---|---|
| **Unit 1** | **- Introduction to Management Accounting, relevant cost in decisions making and decisions under risks and uncertainty.** |
| Learning outcomes | - Apply cost volume profit (CVP) analysis. |

**(a)**

| **Rs. Per unit** | **EXE** | **WYE** |
|---|---|---|
| Selling price (Rs.) | 100 | 120 |
| Direct Materials | 50 | 68 |
| Direct Labour | 25 | 30 |
| Variable Overheads | 5 | 6 |
| **Contribution** | **20** | **16** |

Sales Units of WYE = 200,000 / 4 * 1 = 50,000 units

<u>Combined PV ratio</u>

Combined PV ratio = Combined contribution / combined sales value

= [(200,000* 20) + (50,000* 16)] / [(200,000 * 100) + (50,000 * 120)]

= 4000,000 + 800,000 / 20,000,000 + 6,000,000

= 4,800,000 / 26,000,000

= **18.46%** **(04 Marks)**

**(b)** **<u>Break-even point of Exe</u>**

Break-even sales value = Total fixed cost / combined PV ratio

= 3,000,000 / 0.1846

= **Rs.16,250,000/-**

Break-even sales of Exe = 16,250,000 * (20,000,000 / 26,000,000)

= Rs 12,500,000

Break-even quantity of Exe = 12,500,000 / 100

= **125,000 units** **(03 Marks)**

**(c)** **Margin of safety of Exe**

| | | |
|---|---|---|
| Margin of safety | = | 200,000 – 125,000 |
| | = | 75,000 units |

**Margin of safety of Wye**

| | | |
|---|---|---|
| Breakeven units of Wye | = | (16,250,000 – 12,500,000) / 120 |
| | = | 31,250 units |
| Margin of safety | = | 50,000 – 31,250 |
| | = | 18,750 units |

**(03 Marks)**

**(Total 10 marks)**

## Answer to Question 06

| | |
|---|---|
| **Unit 5** | **- Sources of Capital and Cost of Capital.** |
| Learning outcomes | - Calculate Cost of equity, debt & WACC. |

**(a)** Cost of ordinary shares

$$= \frac{do\ (l+g)}{po} + g$$

$$= \frac{7.5(1+0.04)}{60} + 0.04$$

= 17% **(02 Marks)**

**(b)** Cost of preference shares

$$= \frac{d}{po}$$

$$= \frac{2.75}{25}$$

= 11.00% **(02 Marks)**

**(c)** **Cost of irredeemable debentures**

| | | |
|---|---|---|
| Par Value of a Debenture | | 100.00 |
| Market Value of a debenture | | 99.40 |
| Interest | 100 x 10.75% = | 10.75 |
| Tax | | 14% |
| Post tax interest | 10.75 x (1 - 14%) | 9.25 |
| **Cost of Debt** = | $\frac{9.25}{99.4} \times 100 = 9.30\%$ | |

**(02 Marks)**

**(d) Weighted average cost of capital**

| | | *Rs.'000* |
|---|---|---:|
| Ordinary Share Capital | *120 mn shares x Rs. 60* | 7200,000 |
| Preference Share Capital | *40 mn shares x Rs. 25.00* | 1,000,000 |
| Value of Debentures | *10 mn debentures x Rs. 99.40* | 994,000 |
| Total | | **9,194,000** |

| | **Weight** | **Cost of Capital** | **WACC** |
|---|---|---|---|
| Ordinary shares | 78% | 17% | 13.26 |
| Preference shares | 11% | 11% | 1.21 |
| Debentures | 11% | 9.3 | 1.023 |
| | | | 15.5% |

**(04 Marks)**

**(Total – 10 marks)**

## Answer to Question 07

| | |
|---|---|
| **Unit 1** | **- Different types of budgets and Planning & Controlling vs budgeting.** |
| Learning outcomes | - Prepare budgetary control statements and discuss Control and behavioral issues.<br>- Discuss solution for Cash surplus and deficits and disadvantages of budgeting. |

**(a) Budgetary control statement**

| | **Fixed budget** | **Flexed budget** | **Actual** | **Variance** |
|---|---:|---:|---:|---:|
| **No. Units produced and sold** | **100,000** | **60,000** | **60,000** | |
| | | | | |
| Sales | 2,400,000 | 1,440,000 | 1,800,000 | 360,000 |
| | | | | |
| Less: Direct material | 800,000 | 480,000 | 650,000 | (170,000) |
| Direct Labour | 500,000 | 300,000 | 320,000 | (20,000) |
| Variable Overheads | 300,000 | 180,000 | 230,000 | (50,000) |
| Total Contribution | 800,000 | 480,000 | 600,000 | 120,000 |
| Fixed cost | 500,000 | 500,000 | 400,000 | 100,000 |
| Profit / (Loss) for the year | 300,000 | (20,000) | 200,000 | 220,000 |

**(07 Marks)**

**(b)** (1) Renegotiate suppliers' contracts.

(2) Paying incentive to customers who pay faster.

(3) Reduce expenses.

(4) Improve sales and collect from debtors. **(Any three points – 03 marks)**

**(Total – 10 marks)**

**Two [02] Compulsory Questions**

[Total 50 Marks]

**SECTION - C**

## Answer to Question 08

**Unit 2 – Process Costing and Digital Costing**

**Unit 4 – Standard Costing and Variance Analysis**

Learning Outcome
- Assess Process Costing
- List Features of process Costing
- Calculate basic , mix , yield , planning and operating variances and discuss their importance
- Prepare the operating statement

**(A) (a)**

**Process I Account**

| | Kg | Rs. | | Kg | Rs. |
|---|---|---|---|---|---|
| Material | 1,000 | 150,000 | Finished Goods | 830 | 245,680 |
| Labour | - | 79,475 | Normal Loss | 50 | 375 |
| Production Overheads | - | 49,755 | Abnormal Loss | 70 | 20,720 |
| | | | Closing WIP | 50 | 12,455 |
| | **1,000** | **279,230** | | **1,000** | **279,230** |

**Statement of Equivalent Units, Costs & Valuation**

| | Material | Labour | Production Overheads | |
|---|---|---|---|---|
| Finished Goods | 830 | 830 | 830 | |
| Closing Work-in-progress | 50 | 35 | 30 | |
| Abnormal Loss | 70 | 70 | 70 | |
| **Equivalent Units** | **950** | **935** | **930** | |
| | | | | |
| Input Cost | 150,000 | 79,475 | 49,755 | |
| (-) Normal Loss Scrap value | (375) | | | |
| Total Cost | 149,625 | 79,475 | 49,755 | |
| Cost per Unit | 157.50 | 85 | 53.5 | = 296 |
| | | | | |
| **Valuation** | | | | |
| Finished Goods | $296 \times 830$ = | **245.680** | | |
| Closing Work-in-progress | 7875 | 2975 | 1605 | **= 12,455** |
| Abnormal Loss | $70 \times 296$ = | **20,720** | | |

**(13 Marks)**

**(b)** (1) Analysis and computation are easy.

(2) Operating cost will be reduced using technology for costing.

(3) It is more accurate. **(Any two points - 2 marks)**

**(B) (a)**

Direct material Price variance = Actual Quantity (Standard Price – Actual Price)

Direct Material M1 = 7500 * 20 - 140,400 = 9,600 (F)

Direct Material M2 = 12,000 * 10 – 130,000 = 10,000 (A)

400 A

**(b)** Direct Material Mix variance = Std Price (Actual usage at std mix – actual usage at actual mix)

Direct Material M1 = 20 [(8/20 * 19,500) – 7,500] = 6,000 (F)

Direct Material M2 = 10 [(12/20 * 19,500) – 12,000] = 3,000 (A)

3,000 F

**(c)** Direct material yield variance = Std Price * (Std usage in std mix – Actual usage in std mix)

Direct material M1 = 20[(20,000 * 8/20) – (19,500 * 8/20)] = 4,000 (F)

Direct material M2 = 10[(20,000 * 12/20) – (19500 * 12/20)] = 3,000 (F)

7,000 F

**(d)** Direct Labour rate variance = Act labour Hrs (Std rate – Act rate)

= 4,200 (60 – 65)

= 21,000 (A)

**(10 Marks)**

**(Total 25 Marks)**

## Answer to Question 09

**Unit 1 – Introduction to Management Accounting , Relevance cost in decision making and decisions under risk and uncertainty**

**Unit 6 – Capital Investment Appraisals**

Learning outcomes - Assess different methods of making decisions under risk and uncertainty

- Assess investment using DCF and non DCF methods

**(A)**

***Rs.'000***

| Year | 0 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| Initial cost | (4,000) | | | | | |
| Working capital | (400) | | | | | 400 |
| Sales | - | 2,200 | 2,400 | 2,800 | 3,000 | 3,500 |
| Variable cost | | (600) | (700) | (1000) | (1,100) | (1,250) |
| Maintenance cost | | (600) | (600) | (600) | (600) | (600) |
| Tax payment (Note 1) | - | - | (14) | (28) | (42) | (231) |
| | (4,400) | 1000 | 1,086 | 1,172 | 1,258 | 1819 |
| DF 15% | 1 | 0.869 | 0.756 | 0.658 | 0.572 | 0.497 |
| Present value | (4,400) | 869 | 821 | 771 | 720 | 904 |

**NPV = <u>(315)</u>**

**Note - 1**

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Profit / (loss) | 200 | 300 | 400 | 500 | 850 |
| Deprecation | 800 | 800 | 800 | 800 | 800 |
| Capital Allowance | (1000) | (1000) | (1000) | (1000) | |
| | - | 100 | 200 | 300 | 1,650 |
| Tax 14% | - | 14 | 28 | 42 | 231 |

As the NPV is negative the project is not financially feasible.

**(15 Marks)**

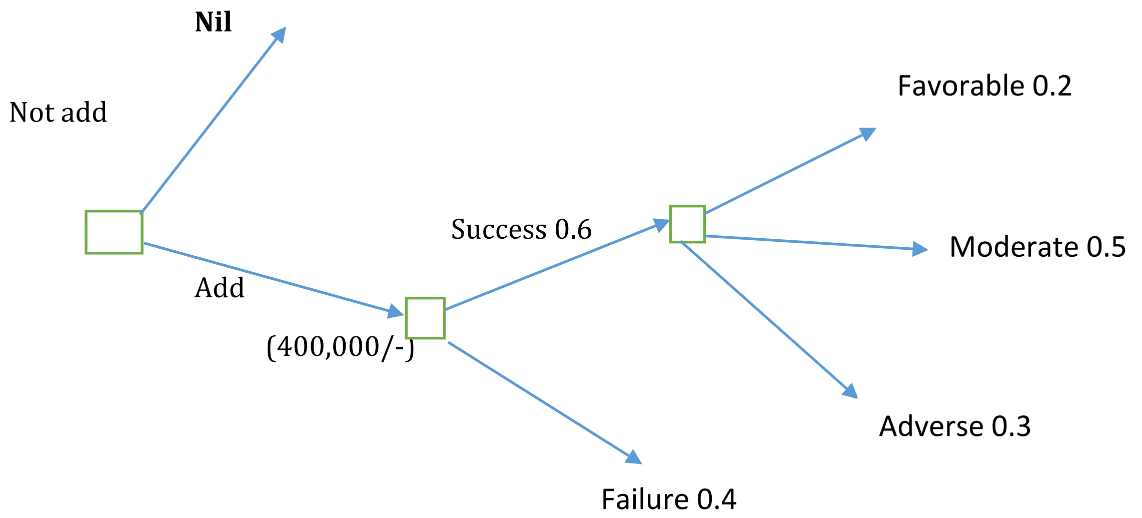
**(B)**

| | | Rs. |
|---|---|---|
| Wood | *365 per sq. mtr x 8 sq. mtr x 75 tables* | 219,000 |
| Polish | *Purchase price - not relevant* | - |
| | *Opportunity Cost - 0.5 litres x 700 per litre x 75 tables* | 26,250 |
| Other Material | *4,500 per table x 75 tables* | 337,500 |
| Labour | *18 hours per table x Rs. 600 per hr x 1.5 x 75 tables* | 1,215,000 |
| Variable Overheads | *2,000 per table x 75 tables* | 150,000 |
| Total Relevant Cost | | **1,947,750** |
| Price of the Contract | *22,500 per table x 75 tables* | 1,687,500 |
| Net Financial Impact | | **(260,250)** |

**Since the net financial impact is negative, the company should not accept the order.**

**(05 Marks)**

**(C) (a)**




**(b)** Expected value of success = (500,000 * 0.2) + (600,000 * 0.5) + (300,000 * 0.3) = 490,000

Expected value of failure = 100,000

Expected value of adding new line = (490,000 * 0.6) + (100,000 * 0.4) – 400,000 = (66,000)

Adding the new product gives a negative expected value of Rs.66,000/-.

Therefore the company should not go for the new product line. **(05 Marks)**

**(Total 25 Marks)**