

STRICTLY CONFIDENTIAL

THE PUBLIC ACCOUNTANTS EXAMINATION
COUNCIL OF MALAWI

2013 EXAMINATIONS

FOUNDATION STAGE

PAPER 3 : MANAGEMENT INFORMATION

WEDNESDAY 4 DECEMBER 2013

TIME ALLOWED : 3 HOURS

9.00 AM - 12.00 NOON

SUGGESTED SOLUTIONS

SECTION A

1. (a) (iv)
(b) (ii)
(c) (i)
(d) (iii)
(e) (ii)
(f) (i)
(g) (iv)
(h) (iii)
(h) (i)
(i) (iii)
(j) (ii)
(k) (iv)
(l) (iii)
(m) (ii)
(n) (iv)
(o) (i)
(p) (iii)
(q) (ii)
(r) (iv)
(s) (iii)
(t) (i)

SECTION B

Answer FIVE questions ONLY from this Section

2. (a) (i) Re-order level = Maximum usage in lead time
 $= 100,000 \times 300$
 $= 30,000,000$

(ii) Re-order quantity = $\sqrt{\frac{2.Co.D}{c_c}}$

$$= \sqrt{\frac{2 \times K1000^1 \times (100,000^1 \times 48 \times 5)}{K200 \times 60\%}}$$

$$= \sqrt{\frac{48,000,000,000}{120}}$$

$$= \underline{\underline{20,000 \text{ units}}}$$

(iii) Minimum level
 $= \text{Re-order level} - \text{Average usage in average lead time}$
 $= 30,000,000 - (100,000 \times 250)$
 $= \underline{\underline{5,000,000 \text{ units}}}$

(iv) Maximum level
 $= \text{Re-order level} + \text{Order quantity} - \text{Minimum usage in lead time}$
 $= 30,000,000 + 20,000 - (100,000 \times 200)$
 $= 30,020,000 - 20,000,000$
 $= \underline{\underline{10,020,000 \text{ units}}}$

- (b) (i) That there is a known, constant stockholding cost.
(ii) That there is a known, constant ordering cost.
(iii) That rates of demand are known.
(iv) That there is a known, constant price per unit.
(v) That replenishment is made instantaneously, i.e. the whole batch is delivered at once.
- (c) (i) The assumption that all costs are known and constant i.e. ordering costs, unit costs, etc. This is likely to be so. However, determining the

carrying cost is a subjective matter based on estimates of interest rates which may vary.

- (ii) Demand forecasting is notoriously difficult.

3. (a) Materials Variances

		K	
(i)	Actual cost AQ x SP (660,000 x K20)	12,540,000 13,200,000	Price Variance K660,000 Favourable
(ii)	SQ x SP (130,000 x 5 x K20) 660,000 x K20	13,000,000 13,200,000	Usage Variance K200,000 Adv.
(iii)	Labour rate variances		
	Actual wages AH x SR (533,000 x K30)	16,256,500 15,990,000	Rate Variance K266,500 Adv.
(iv)	Labour efficiency variance SH x SR (130,000 x 4 x K30) 533,333 x K30	15,600,000 15,990,000	Efficiency Variance K390,000 Adv.
(v)	Fixed Overhead Variances		
	Actual overheads	10,000,000	Expenditure Variance K400,000 Adv.
	Budgeted overheads (120,000 x 4 x K20)	9,600,000	
(vi)	Fixed o/h capacity variance AH x QAR (533,000 x K20) 120,000 x 4xK20	10,660,000 9,600,000	Capacity Variance K1,060,000 Favourable
(vii)	Fixed o/h efficiency variance SH x OAR (130,000 x 4 x K20) 533,000 x K20	10,400,000 10,660,000	Efficiency Variance K260,000 Adv.2

- (b) Both standards and budgets are concerned with setting performance and cost levels for control purposes. They are therefore, similar in principle although they differ in scope. Standards are a unit concept, i.e. they apply to particular products, to individual operations or processes.
Budgets are concerned with totals; they lay down cost limits for functions and departments and for the firm as a whole.

4. (a) (i) Workings

Variable cost per can:

	K
Total costs	560,000,000
Fixed costs	<u>160,000,000</u>
Total variable costs	<u>400,000,000</u>
Number of cans	400,000,000
∴ Variable cost/can	4,000,000 = K100

The present position is as follows:

	K
Sales (4,000,000 x K200)	800,000,000
Less: variable cost (4,000,000 x K100)	<u>400,000,000</u>
= contribution	400,000,000
Less fixed costs	<u>160,000,000</u>
= Net profit	<u>240,000,000</u>

On the assumption that fixed costs do not change, the special order will produce the following contribution:

	K
Sales (1,000,000 x K130)	130,000,000
Less: variable cost (1,000,000 x K100)	<u>100,000,000</u>
= contribution	<u>30,000,000</u>

Thus, based on the assumptions shown, the special order looks worthwhile. 1

(ii) However, there are several other factors which would need to be considered before a final decision is taken.

- (1) Will the acceptance of one order at a lower price lead other customers to demand lower prices as well?
- (2) Is this special order the most profitable way of using the spare capacity?
- (3) Will the special order lock up capacity which could be used for future, full price business?
- (4) Is it absolutely certain that fixed costs will not alter?

(b) (i) Information held in batch processing files is always out of date, since it is only as recent as the last time a batch of transactions was submitted for

processing.

- (ii) Transactions are passed to the computer centre for processing by specialist computer staff, with output being returned to the user to be stored or used at will.
- (iii) It is easy to schedule processing at set times and therefore easier to organize work on a large computer with many competing users.
- (iv) It is easier to control the input and processing of data with batch processing than with on-line processing.
- (v) Batch processing has been declining in use as on-line processing has been installed to enable users to access up-to-date information.

		Project cash flows	Cumulative
Year 1		4,000,000 x K20 = K80,000,000	K80,000,000
2		K80,000,000	K160,000,000
3		K80,000,000	K240,000,000
4		K80,000,000	
5		K80,000,000	

$$\therefore \text{Payback} = 2 \frac{40,000,000}{80,000,000} \frac{1}{2} \text{ years} = 2.5 \text{ years}$$

Note: Depreciation and fixed overheads are excluded.

- (ii) NPV

$$80,000,000 \times A_5 \left[\begin{array}{l} \\ 20\% \end{array} \right] = 80,000,000 \times 2.991 = K239,280,000$$

Less investment	<u>K200,000,000</u>
	<u>39,280,000</u>

Note to markers: Discounting of the cash flows year by year should also be given full marks

- (b) All DCF measures use cash flows and make due allowance for the time value of money.

Use of cash flows:

All DCF methods use cash flows and not accounting profits. Accounting profits are invariably calculated for stewardship purposes and are period oriented thus necessitating accrual accounting with its conventions and assumptions.

For investment appraisal purposes, a project orientated approach using cash flow is preferred because it is more objective and the accounting conventions regarding such matters as revenue/capital expenditure and stock valuation become largely redundant. The cash flows to be included are the net after tax incremental cash flow effect of the project i.e. the difference in cash flow between having and not having the project.

Time value of money:

There is a general acceptance that any serious attempt at investment appraisal must make due allowance for the time value of money. Money has a time productivity i.e. money received earlier can be put to use, for example it can be invested to earn interest. This means that sums arising at different times cannot be compared directly, they must be reduced to equivalent values at some common date. The common date may be at any time but discounting methods typically use now, i.e. the present time, as the common date.

- (c) Assuming that finance is available, the decision to invest will be based on three main factors:
 - (i) The investor's beliefs about the future. Surveys have consistently shown that confidence in the future is a more important influence than such factors as marginal taxation and interest rates.
 - (ii) The alternatives available in which to invest, and, if so, which of the competing investment opportunities is the most favourable.
 - (iii) The investor's attitude to risk. The potential return from investment is conventionally expected to be proportional to the risk involved. The risk associated with individual projects and with combinations of projects and the decision maker's attitude to risk are all key factors in investment decisions.

6. (a) **Workings**

Fully complete production	=	Input – closing WIP
	=	360,000 – 80,000
	=	280,000 kg
Normal loss	=	28,000 kg (10% x 280,000.0 kg)
Abnormal loss	=	Actual loss – normal loss
	=	36,000 – 28,000
	=	8,000 kg
.∴ Good output	=	280,000 – 36,000
	=	244,000 kg 1

	Cost K	Completed Units	Abnormal Loss	WIP	Total Equiv Units	Cost/ Units K
Previous process	8,300,000	244,000	8,000	80,000	332,000	25.00
Conversion cost	<u>5,840,000</u>	244,000	8,000	40,000	292,000	<u>20.00</u>
	<u>14,140,000</u>					<u>45.00</u>

Completed units $(244,000 \times K45)$ = K10,980,000
 Abnormal loss $(8,000 \times K45)$ = K360,000

WIP

Previous process $(80,000 \times K25)$ = K2,000,000
 Conversion cost $(40,000 \times K20)$ = K800,000

	Distillation Process Account			
	Kg	K	Kg	K
Input from mixing	360,000	8,300,000	Finished goods	244,000
Labour		3,800,000	Abnormal loss	8,000
Overheads		2,040,000	Normal loss	28,000
	<u>360,000</u>	<u>14,140,000</u>	Closing WIP	<u>80,000</u>
				<u>360,000</u>
				<u>2,800,000</u>
				<u>14,140,000</u>

- (b) Normal process losses are unavoidable losses arising from the nature of the production process and it is therefore logical and equitable that the cost of such losses is included as part of the cost of good production. If any value can be recouped from the sale of imperfect articles or materials then this would be credited to the process account thus reducing the overall cost.
- Abnormal process losses are those losses above the level deemed to be the normal loss rate for the process. These losses cannot be foreseen and are due to such factors as plant breakdown, industrial accidents, inefficient working or unexpected defects in materials.

It is an important costing principle that abnormal conditions should be excluded from routine reporting and only normal costs (which include normal process losses) charged to production. Accordingly, the cost effects of abnormal losses must be excluded from the Process Account. Abnormal losses will be costed on the same basis as good production and therefore like good production, will carry a share of the cost of normal loss.

7. (a) Arguments for the use of marginal costing in routine cost accounting:
- (i) It is simple to operate.

- (ii) No apportionments, which are frequently on an arbitrary basis, of fixed costs to products or departments. Many fixed costs are indivisible by their nature e.g. Managing Director's salary.
- (iii) Where sales are constant, but production fluctuates, variable costing shows a constant net profit whereas absorption costing shows variable amounts of profit.
- (iv) Under or over absorption of overheads is almost entirely avoided. The usual reason for under/over absorption is the inclusion of fixed costs into overhead absorption rates and the level of activity being different from that planned.
- (v) Fixed costs are incurred on a time basis and do not relate to activity. Therefore it is logical to write them off in the period they are incurred and this is done using variable/marginal costing.
- (vi) Accounts prepared using marginal costing more nearly approach the actual cash flow position.
- (b) Limitations of break-even and profit charts:
 - (i) The charts are reasonable pointers to performance within normal activity ranges, say 70% to 120% of average production. Outside this relevant range, the relationship depicted almost certainly will not be correct.
 - (ii) Fixed costs are likely to change at different activity levels. A stepped fixed cost line is probably the most accurate representation.
 - (iii) Variable costs and sales are unlikely to be linear. Extra discounts, overtime payments, etc make it likely that variable cost and revenue lines are some form of a curve rather than a straight line.
 - (iv) The charts depict relationships which are essentially short term. This makes them inappropriate for planning purposes where the time scale stretches over several years.
- (u) The charts and CVP analysis make the assumption that all variable costs vary according to the same activity indicator, usually sales or production. This is a gross over-simplification and reduces the accuracy of the charts and CVP analysis.
- (c) Advantages of labour incentive schemes:
 - (i) Increases production thereby increasing wages but also reducing overheads per unit, particularly where there are substantial fixed overheads.

- (ii) May enable a firm to remain competitive in inflationary conditions.
 - (iii) May improve morale by ensuring that extra effort is rewarded.
 - (iv) More efficient workers may be attracted by the opportunity to earn higher wages.
- (d) (i) A transaction file is a file that contains records that relate to individual transactions that occur from day to day. Transaction records must all be processed. Because all transaction records must be processed, transaction records that are input to a computer at the same time are referred to as transactions file of input records.
- (ii) All receipts and payments of cash are recorded in the cash book, and so the cash book acts as a transaction file.

A master file is a file that contains:

- reference data which is normally updated/alterred infrequently; and also
- transactions data which is built up over time.

For example, in a purchase ledger system, the master file is the purchase ledger itself. This is a file that consists of 'standing' reference data for each supplier and transaction data for each supplier.

E N D