Mark Scheme (working draft)

<mark>SERIES</mark> Dec 2018

PEARSON LCCI (<mark>PAPER CODE</mark>) <mark>PAPER</mark> NAME ASE 20098

Post Standardisation



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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

| Question Number | Answer (AO2) 5 | | | | | | Mark |
|--------------------|--|--|--|------------------|-------------------|-----|-------------|
| 1(a) | Maximum demand | (1 000) | (600) | (400) | (750) |) | |
| | Product | Aye | Bee | Cee | Dee | | |
| | \$ per unit Selling price | 69 | 92 | 143 | 68 | | |
| | Less Variable costs: Direct material | 24 | 32 | 60 | 20 | | |
| | Direct labour Variable overhead | 20 <u>10</u> | 24 <u>12</u> | 32 <u>16</u> | 16 <u>8</u> | | |
| | (1) | 54 | 68 | 108 | 44 | | |
| | Contribution per unit M/C hours per unit (1) | \$ <u>15</u> 3 | <u>\$24</u> 6 | <u>\$35</u> 5 | <u>\$24</u> 4 | (1) | |
| | Cont per m/c hour | \$5 | \$4 | \$7 | \$6 | (1) | |
| | Order of priority (10F) | 3 | 4 | 1 | 2 | | |
| Question Number | Answer (AO2) 4 | | | | | | (5) Mark |
| 1(b) | Production schedul Machine hours availal Product Cee 400 x 5 Product Dee 750 x 4 Product Aye 1 000 x Balance of machine h Product Bee 350 units x 6 machine | e ble = 3 = ours ne hours | $ \begin{array}{r} 10 \ 100 \\ 2 \ 000 \\ 3 \ 000 \\ \underline{3 \ 000} \\ 2 \ 100 \\ \end{array} $ | (1 (1 (1 | OF) OF) OF) | | |
| Question | Answer $(AO2) 5$ | | | | | | (4) |
| Number | | | | | | | Mark |

| 1(c) | Contribution scheduleProduct Cee 400 x \$35 =\$14 000Product Dee 750 x \$24 =\$18 000Product Aye 1 000 x \$15 =\$15 000 (10F)Product Bee 350 x \$24 = $$8 400$ (10F)Total contribution\$55 400Less fixed costs\$14 800 (2)Profit\$40 600 (10F)Fixed costs = (1 000 x 2.5 x \$2) \$5 000 + (600 x 3 x \$2) \$3 600 + (400 x 4 X \$2) \$3 200 + (750 x 2 x\$2) \$3 000 = \$14 800 (2)Note: \$13 300 = 1 mark. | |
|----------|---|------|
| Ouestion | Answer (AO1) 2 | (5) |
| Number | | Mark |
| 1(a) | Labour hours (1) Direct material (1) Accept any other reasonable answer Total for question 1 = 16 marks Total for question 1 = 16 marks | |
| | | (2) |

| Question Number | Answer (AO2) 16 | | | Mark |
|--------------------|--|-------------------------------------|--|------|
| 2(a) | Profit as per financial accounts | \$\$ 260 94 | 40 (1) | |
| RM 2 540 | <u>Inventory adjustments</u> Raw materials – opening (74 480 – 77 10 (1) | 0) (2 620) | | |
| = 2 | (1) | 60) 5100 | | |
| WIP 8 970 | (1) (1) (12 (12 (12 (12 (12 (12 (12 (12 (12 (12 | 6 210 | | |
| =2 | WIP - closing (43 460 - 40 700) (1) | 2 760 | | |
| FG (1.650) | Fin Goods – opening (125 840 – 131 080 |) (5 240) | | |
| = 2 | Fin Goods – closing (158 050 – 155 775) | <u>2 275</u> | | |
| | | <u>8 545</u> 269 485 | | |
| | AddDepreciation (31 155 – 29 180)1Interest charges6Discounts Allowed513282 | 975 450 080 3 505 2 990 | (1) (1) (1) | |
| | LessProfit on sale of asset4Over absorbed overheads4Dividends received7Sundry investment income8Notional rent charge22 | 500 600 550 250 500 | (1) (1) (1) (1) (1) (47 | |
| | <u>400)</u> | | <u></u> | |
| | Profit as per cost accounts (10F) | | 235 590 | |
| | Must contain all 14 items for the OF to | otal | | |
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| Question Number | Answer (AO1) 2 (AO3) 2 | Mark | | | |
|--------------------|---|------|--|--|--|
| 2b | 1 mark for initial point and 1 mark for development | | | | |
| | A non-integrated system has two, distinct, sets of accounts - cost accounts and financial accounts, which need to be kept in agreement by a reconciliation (or the use of control accounts) (1). | | | | |
| | Both sets of accounts may have different valuations for inventory OR they may have also used different methods to calculate any depreciation charges (1) | | | | |
| | There are items, such as discounts allowed or discounts received, which are only recorded in the financial accounts (1) | | | | |
| | There are items, such as notional rent, which are only recorded in the cost accounts (1) | | | | |
| | Total marks for question 2 = 20 marks | | | | |
| Question | Answer $(A \cap 2) = 6$ | (4) | | | |
| Number | | Mark | | | |
| 5(4)(1) | <pre>Machine Aye Annual depreciation \$800,000 / 5 years = \$160 000 Cost saving \$100 000 plus depreciation \$160 000 = \$260,000 (1) Machine Bee Annual deprecation \$900 000 / 5 years = \$180 000 Cost saving \$100,000 plus depreciation \$180,000 = \$280,000 (1)</pre> | | | | |
| | Machine Aye Machine Bee | | | | |
| | ^{Year} \$000 ^{15%} \$000 \$000 15% \$000 | | | | |
| | 0 800) 1.000 800.00) (1QFD 0) 0 (900.00) | | | | |
| | $1-5_{260}$ 3.353 $\frac{871.78}{(1)}$ 280 $3.355_{3.35}$ $\frac{938.84}{(1)}$ (10F) | | | | |
| | NPV <u>71.78</u> <u>38.84</u> | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | (6) | | | |

| Question Number | Answer (AO2) 6 | Mark | | |
|--------------------|--|------|--|--|
| 3(a)(ii) | | | | |
| | Internal rate of return @ 20% | | | |
| | \$000 \$000 \$000 \$000 Year 0 (800) 1.000 (800.00) (900) 1.000 (900.00) 1-5 260 2.992 <u>777.92</u> 280 2.992 <u>837.76</u> NPV (22.08) (10F) (62.24) | | | |
| | (10F) | | | |
| | IRR for Project Aye = $15\% + \{5\% \times [71.78 \div (71.78 + 22.08)]\}$ (10F) = 18.82% (10F) | | | |
| | IRR for Project Bee | | | |
| | = 15% + {5% × [38.84 ÷ (38.84 + 62.24)]} (10F) = 16.92% (10F) | (6) | | |
| Question | Answer (AO5) 2 | Mark | | |
| 3(b) | Management should purchase Machine Aye (1) as it has a greater positive NPV / higher IRR. (1) | (2) | | |
| Question | Answer (AO1) 2 (AO3) 2 | Mark | | |
| 3(C) | An example of a long-term decision might be the need to build a new production line to introduce a new (or improved) product (1) The techniques used: payback; discounted cash flow; average rate of return; and internal rate of return (1) NOT absorption costing An example of a short-term decision might be "increasing production over the next three months in order to meet an unexpected increase in demand" (1) Techniques used include: break-even analysis; limiting factors; and marginal costing (1) | | | |

| Question Number | Answer (AO3) 2 (AO4) 2 (AO5) 2 | Mark | | |
|--------------------|---|------|--|--|
| 3(d) | The NPV method recognises that money has a time value. (1) This method calculates the present values of future cash flows and selects projects that have a positive net cash flow (1) It assumes that reinvestment occurs at the projects cost of capital (1) | | | |
| | The IRR method calculates the interest rate at which the NPV is zero. (1) This method chooses projects that have a rate of return which is higher than the cost of capital (1) It assumes that reinvestment occurs at the IRR rate (1) | | | |
| | Two max | | | |
| | The IRR does not rely on any external data (i.e. a discount rate), it is purely a function of the inflows and outflows of that project (1) The IRR does not assess the financial impact on a firm; it only requires meeting a minimum return rate (1) | | | |
| | The NPV and IRR methods can rank two projects differently, depending on the size of the investment (1) | | | |
| | There are differences when dealing with mutually exclusive projects, if there are unusual patterns of cash flow, e.g. if there are costs incurred at the end of the project (1) | | | |
| | Two max | | | |
| | Total for question 3 = 24 marks | (6) | | |

| Question | Answer (AO2) 10 | Mark |
|--------------------|--|------|
| 4(a) | | магк |
| T (a) | Workings: Sales value = 50 000 x \$48.00 = \$2 400 000 (1) Total production costs = \$850 000 + \$460 000 + \$620 000 = \$1 930 000 (1) $ \begin{array}{ccccccccccccccccccccccccccccccccccc$ | |
| | | (10) |
| Question Number | Answer (AO4) 6 | Mark |
| 4(b) | Inventory: Hold sufficient inventory to meet the customer's needs (1) Don't hold excessive amounts, which would tie up working capital / holding costs (1) Trade receivables: Offer attractive settlement terms to encourage customers to purchase products (1). However, cash must be collected early enough, in order pay creditors, and purchase more inventory (1) Trade payables: The company needs to get the best possible terms, discounts and repayment period (1), whilst ensuring that suppliers are still supply products (1) 3 x 2 marks maximum | |
| | | (6) |

| Question Number | Answer (AO1) 2 (AO3) 2 | Mark |
|--------------------|--|------|
| 4(c) | 1 mark for initial point and 1 mark for development Any two of the following: | |
| | Capable of being understood (1) by the person receiving it - so that it can be interpreted correctly. (1) | |
| | Must be relevant (1) – meaningful to the person relying on it (1) | |
| | Must be complete (1) – contain all the necessary information. (1) | |
| | Must be readily accessible (1) - in the desired form, when needed. (1) | |
| | Must be reliable (1) - it should be consistent and verifiable. (1) | |
| | Must be concise (1) – it should be 'to the point' and not over-detailed (1) | |
| | Must be cost-effective (1) - the cost of gathering/processing information must be weighed against the benefits derived from its use.(1) | |
| | Must be timely (1) – available when required (1) | |
| | Must be accurate (1) – so the person using the information is confident (1) | (4) |
| | Total marks for question $4 = 20$ | |
| Question Number | Answer (AO2) 4 | Mark |
| 5(a) | Workings: 2 500 units of Exe x 2 = 5 000 and 2 000 units of Whye x $\frac{1}{2}$ | |
| | = 3 000 = 8 000 machine hours (1) | |
| | Overheads = \$176 000 / 8 000 m/c hours = \$22.00 per machine ho (10F) | |
| | Production overhead cost per unit: Exe \$44.00 (1OF) Whye \$33.00 (1OF) | |
| | Must be clearly labelled if the labour and materials are included | |
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| Question Number | Answer (AO2) 12 | Mark | |
|--------------------|---|------|--|
| 5(b) | Activity based costing - workings Exe Whye | | |
| | Cutting Operations: Exe 30 000 & Whye 16 000 = 46 000 \$69 000 / 46 000 = \$1.50 per operation (1) 18.00 12.00 (10F) | | |
| | Forming Operations: Exe 5 000 & Whye 6 000 = 11 000 \$33 000 / 11 000 = \$3.00 per operation (1)6.009.00(10F) | | |
| | Machine set up Exe = 125 (2 500 / 20) Whye = 50 (2 000 / 40) = 175 batches. \$ 7 000 / 175 = \$40 per batch (1) 2.00 1.00 (10) | | |
| | Inspection Exe = $2500 \times 2 = 5000$. Whye = $2000 \times 2 = 4000$ \$45000 / $9000 =$ \$5 per inspection (1) 10.00 10.00 (10F) | | |
| | Material handling Exe = 125 requisitions (2 500 / 20). Whye = 125 requisitions (2 000 / 16) = 250 requisitions \$22 000 / 250 = \$88 per requisition (1) Exe = \$88 / 20 = \$4.40. Whye = \$88 / 16 = \$5.50 4.40 5.50 (10F) | | |
| | Production overhead cost per unit: <u>40.40</u> (10F) <u>37.5</u> (10F) | | |
| | Must be clearly labelled if the labour and materials are included | | |
| Question | Answer (AO1) 2 (AO3) 2 | (12) | |
| Number 5(c) | 1 mark for initial point and 1 mark for development | магк | |
| | | | |
| | It is expensive and time consuming to introduce (1) – the benefits obtained from an ABC system might not justify the costs (1) | | |
| | It might be difficult to identify appropriate cost drivers (1) – it might not be possible to allocate all overhead costs to specific activities (1) | | |
| | The choice of BOTH activities and cost drivers might not be appropriate (1) – once again, it might not be possible to allocate all overhead costs to specific activities (1) | | |
| | Only accept the model answer | | |
| | Total marks for question 5 = 20 | (4) | |