



VOTRE LIEN AVEC CE QUI COMPTE — CONNECTS YOU TO WHAT MATTERS

ADM 2341X
MANAGERIAL ACCOUNTING
Spring/Summer 2017
Quiz No. 2
Solutions

..... / 20 marks

NAME: _____

STUDENT #: _____

Statement of Academic Integrity:

The School of Management does not condone academic fraud, an act by a student that may result in a false academic evaluation of that student or of another student. Without limiting the generality of this definition, academic fraud occurs when a student commits any of the following offences: plagiarism or cheating of any kind, use of books, notes, mathematical tables, dictionaries or other study aid unless an explicit written note to the contrary appears on the exam, to have in his/her possession cameras, radios (radios with head sets), tape recorders, pagers, cell phones, or any other communication device which has not been previously authorized in writing.

Statement to be signed by the student:

I have read the text on academic integrity and I pledge not to have committed or attempted to commit academic fraud in this examination.

Name: _____ (signature)

Note:

A quiz received without the signature of the student will not be graded and will receive a score of zero.

Question No. 1 (10 marks)

Davidson Manufacturing Inc. (DMI) uses a normal cost system and currently assigns manufacturing overhead to its products using a plant-wide rate based on machine hours. DMI has two departments: Department A and Department B. The company is considering switching from a plant-wide rate to departmental rates for assigning manufacturing overhead. Consider the following data:

	<u>Department A</u>	<u>Department B</u>
Estimated Total Manufacturing Costs	\$47,750	\$16,050
Estimated Total Machine Hours	25,000	15,000

Required: (*Note: Carry all intermediate computations to three decimal places*)

(a) The plant-wide overhead rate is: (1 mark)

(b) The departmental overhead rate for Department B is: (1 mark)

(c) Assume Job K9 used 21.5 machine hours from Department A and 47.5 machine hours from Department B. Assume also that Job L3 used 42.5 machine hours from Department A and 16.5 machine hours from Department B. (8 marks)

(i) Total manufacturing cost assigned to Job K9 using the plant-wide rate is:

(ii) Total manufacturing cost assigned to Job K9 using departmental rates is:

(iii) Total manufacturing cost assigned to Job L3 using the plant-wide rate is:

(iv) Total manufacturing cost assigned to Job L3 using the department rate is:

Question No. 1 (continued) (10 marks)

Answer:

(a) Plant-wide rate = $\$63,800/40,000$ machine hours = **$\$1.595$ per machine hour**.

(b) Departmental Rate for Department B = $\$16,050/15,000$ machine hours = **$\$1.07$ per machine hour**.

Note: Departmental rate for Department A (not asked for) = $\$47,750/25,000$ machine hours = $\$1.91$ per machine hour

(c) (i) Job K9 using plant-wide rate = 69 hours \times $\$1.595/\text{machine hour}$ = **$\$110.055$** .

(ii) Job K9 using departmental rate = $(21.5$ hours \times $\$1.91/\text{machine hour}$) + $(47.5$ hours \times $\$1.07/\text{machine hour}$) = $\$41.065 + \$50.825 =$ **$\$91.89$** .

(iii) Job L3 using plant-wide rate = 59 hours \times $\$1.595/\text{machine hour}$ = **$\$94.105$** .

(iv) Job L3 using departmental rate = $(42.5$ hours \times $\$1.91/\text{machine hour}$) + $(16.5$ hours \times $\$1.07/\text{machine hour}$) = $\$81.175 + \$17.655 =$ **$\$98.83$** .

* deduct one (1) mark for any rounding errors

Question No. 2 (6 marks)

Kwik Clean Limited manufactures two models of brooms: the Model X2; and the Model T3. The budgeted number of brooms to be produced, by month and model, is as follows:

	Model X2	Model T3
July	10,000	15,000
August	6,000	10,000
September	9,000	14,000
October	8,000	12,000

It takes 3 kilograms of direct materials to produce one unit of Model X2 and 7 kilograms of direct materials to produce Model T3. The company's policy is to maintain an inventory of direct materials on hand at the end of each month equal to 5% of the next month's production needs. The cost per kilogram of materials is \$3 for Model X2 and \$5 for Model T3.

Required:

Prepare a direct materials budget for each model for the month of September.

Answer:

*Kwik Clean Limited
Direct Materials Budget
For the Month of September 30*

	Model X2	Model T3
<i>Units to be produced</i>	9,000	14,000
<i>Direct materials per unit</i>	<u>3 kgms.</u>	<u>7 kgms.</u>
<i>Total kilograms needed for production</i>	27,000	98,000
<i>Add: Desired ending direct materials (kilograms)*</i>	<u>1,200</u>	<u>4,200</u>
<i>Total materials required</i>	28,200	102,200
<i>Less: Beginning direct materials (kilograms)**</i>	<u>(1,350)</u>	<u>(4,900)</u>
<i>Direct materials purchases</i>	26,850	97,300
<i>Cost per kilogram</i>	<u>\$3</u>	<u>\$5</u>
<i>Total cost of direct materials purchases</i>	<u>\$80,550</u>	<u>\$486,500</u>

**5% x 8,000 units x 3 kilograms = 1,200 kilograms
5% x 12,000 units x 7 kilograms = 4,200 kilograms*

***5% x 9,000 units x 3 kilograms = 1,350 kilograms
5% x 14,000 units x 7 kilograms = 4,900 kilograms*

Question No. 3 (4 marks)

Shillington Company has budgeted sales revenue as follows for the next 6 months in 2017:

July	\$ 90,000
August	100,000
September	80,000
October	70,000
November	110,000
December	60,000

Past experience has indicated that 80% of sales each month are on credit and that collection of credit sales occurs as follows: 60% in the month of sale, 35% in the month following the sale, and 3% in the second month following the sale. The other 2% is uncollectible.

Required:

Prepare a schedule which shows expected cash receipts from sales for the month of November.

Answer:

<i>Carlson Company</i>	
<i>Expected Cash Receipts from Sales</i>	
<i>For the Month Ended November 30</i>	
<u>September sales</u>	
<i>Credit sales: (\$80,000 × .80 × .03)</i>	<i>\$ 1,920</i>
<u>October sales</u>	
<i>Credit sales: (\$70,000 × .80 × .35)</i>	<i>19,600</i>
<u>November sales</u>	
<i>Credit sales: (\$110,000 × .80 × .60)</i>	<i>52,800</i>
<i>Cash sales: (\$110,000 × .20)</i>	<u><i>22,000</i></u>
<i>Total cash receipts</i>	<u><u><i>\$96,320</i></u></u>