

MAC1501 DISCUSSION CLASS

September 2018
Facilitated by: Mr SKM Sithole



Define tomorrow . UNISA College of Accounting Sciences

LECTURE OUTLINE

PART 1 (30 MINUTES)

- Marking of assignments
- October/November 2018 examination guidelines

PART 2 (180 MINUTES)

- Various learning units for discussion.

MARKING OF ASSIGNMENTS

- MCQ assignments are marked by a computer at a central place (Assignment Division located at the Main Campus).
- Owing to the extension of the due date of selected modules' assignments that were due between 29 June 2018 and 15 August 2018, the marking of these assignments only commenced on 13 September 2018.

MARKING OF ASSIGNMENTS

- The solution to assignment 01 will be available by the end of September 2018.
- It has come to our attention that during the marking of assignment 01, question 2 was taken into account. The request for remark has been sent to the assignment division, where the MCQs marking takes place, to rerun the marking system without taking into account question 2.

MARKING OF ASSIGNMENTS

- Regrettably, question 20 did not provide adequate information. So too this question will be ignored when the remark is done. Assignment 01 will therefore be remarked out of 18 questions.
- With regards to the marking of assignment 02, which is a written assignment, paragraph 7.7 on page 9 of tutorial letter 101/3/2018 refers.

MARKING OF ASSIGNMENTS

- For your information, par 7.7 states that:
“It is the practice of the Department of Management Accounting not to mark the whole assignment. Depending on the length and degree of difficulty of an assignment, only one or two questions or parts of these questions may be marked. Your mark for the whole assignment, therefore, will be the marks you obtained for the specific section(s) that have been marked”.

MARKING OF ASSIGNMENTS

- You were required to answer ALL the questions as they might form part of the selected questions for marking. The lecturers cannot inform you upfront on which question(s), or parts thereof, will be selected for marking.
- The suggested solutions to assignments 01 and 02 will only be available online on myUnisa. NO PRINTED COPIES will be mailed to students.

EXAMINATION ADMISSION

Information regarding the calculation of year mark, final mark as well as the examination admission criteria is included in **SECTION 8, pages 10 to 11** of tutorial letter **101/3/2018** for this module.

EXAMINATION PERIOD

- As you may know, this module is offered in a semester period of fifteen weeks.
- This means that as you are registered for the second semester, you will write the examination in **October/November 2018** and the supplementary examination will be written in **May/June 2019**.

YEAR/SEMESTER MARK

Illustrative example:

If student X submits both assignments and obtains the following marks:

Assignment 01: 85%

Assignment 02: 60%

$$\begin{aligned}\text{Semester mark} &= (85 \times 25\%) + (60 \times 75\%) \\ &= 66,25\%\end{aligned}$$

How many marks should student X attain in order to pass the examination?

FINAL MARK

Student X must get a final mark of 50 marks, accordingly, using the above semester mark the final mark will be determined as:

$$(\text{Semester mark} \times 20\%) + (\text{exam mark} \times 80\%) = 50$$

$$(66,25 \times 20\%) + 80\% \text{ exam mark} = 50$$

$$\text{Exam mark} = 36,75/80\%$$

$$\text{Exam mark} = 45,9 (46\%)$$

So student X must get at least 46% in order to pass

FINAL MARK

What if student Y submits only compulsory assignment 01 and obtains 80%?

$$[(80 \times 25\%) \times 20\%] + 80\% \text{ exam mark} = 50$$

$$\text{Exam mark} = 46/80\%$$

$$\text{Exam mark} = 57,5 (58\%)$$

So student Y must get at least 58% in order to pass. The above illustration means that the lower the semester mark, the higher the marks you have to obtain in the exam!

SUBMINIMUM POLICY

- If you do not obtain a **subminimum of 40%** in the examination; your **year/semester mark** will not be taken into consideration.
- You also need to obtain a **subminimum of 40%** in the examination for you to qualify for the **supplementary examination**

FINAL YEAR (FI) CONCESSION POLICY

- The students must meet all of the following criteria to qualify for FI concession should they FAIL the forthcoming exam:
- The student must **be registered** to complete an **undergraduate** qualification at **Unisa**. The outstanding modules must be the modules outstanding to complete the qualification.

FI POLICY

- The student must have sat for and failed the examination in the **one/two** outstanding module(s) during the last examination session. This requirement does not apply to **aegrotat** students who meet all the other requirements.
- The student must have **no more than two** modules outstanding.

FI POLICY

- Practical modules are not included in this policy.
- Students who meet the criteria must reregister pending the finalisation of the procedure. If the student is successful the registration is cancelled and the fees are refunded. If unsuccessful, the registration remains in place and the student continues with his/her studies.

FI POLICY

- Students who meet the criteria will be informed by the Directorate: Student Assessment Administration in January 2019 and invited to contact the relevant lecturer with a view to being given an opportunity to complete the modules by way of alternative assessment deemed appropriate by the academic department. Lecturers may also contact students after receiving notification by DSAA.

OCT/NOV. 2018 EXAM GUIDELINE

The final examination for this module will count 100 marks. The duration of the paper is 120 minutes (i.e. 2 hours) and it is available in English only.

The Examination Section will determine the final examination date – your lecturers cannot influence it in any way. However, you may access the examination timetable by logging in to <https://my.unisa.ac.za> (desktop and mobile website) and clicking on My admin.

OCT/NOV. 2018 EXAM GUIDELINE

Your examination question paper consists of **FIVE (5)** questions, each worth between **10 and 35 marks**. Compulsory **Assignment 02** reflects the standard and the type of questions you can expect in the examination.

OCT/NOV. 2018 EXAM GUIDELINE

While preparing for the examination, it is very important that you work through **all** your **assignments** and do as many questions, activities and examples in the **study guide**, as possible.

Also work through the self assessment questions contained in the two sets of the **question banks** available on myUnisa under additional resources of this module site.

OCT/NOV. 2018 EXAM GUIDELINE

You need to know the **whole syllabus** for the examination. In other words, your examination paper will cover **all 14 learning units** of the syllabus. The marks are distributed per topic as follows:

OCT/NOV. 2018 EXAM GUIDELINE

Topic	Estimated marks
MCQs (various learning units)	10
Accounting for and valuation of purchased inventory; and payroll accounting	35
Assignment of overheads & Product cost accumulation for inventory valuation and profit calculation	20
Budgeting	20
Ratio analyses	15

END OF SESSION 1



PAYROLL ACCOUNTING

Labour recovery rate



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LABOUR RECOVERY RATE

- The labour recovery rate is a rate that aims to recover all the cost of labour from the cost of production.
- The preparation of a company's budget will start with the sales budget. After determining how many units the company is budgeting to sell, a production budget is prepared to ensure that sufficient units will be available for sale in inventory.

LABOUR RECOVERY RATE

Once we know the number of units to be produced, we can prepare the budgets for **materials**, **labour requirements** as well as the **factory overheads**.

LABOUR RECOVERY RATE

In addition to the **normal wage** due to an employee, **employee benefits** such as the employer's share of the pension fund contribution and the medical aid scheme, vacation pay and bonuses form a substantial **element of labour cost**.

These total costs that relates to the employee are called '**cost to company**'/CTC.

LABOUR RECOVERY RATE

In addition to the compensated absences like **vacation leave** and **public holidays**, there are other times that workers do not produce any output.

These times are called **idle time**.

LABOUR RECOVERY RATE

Normal idle time is anticipated and even planned for in the budget (e.g. the time that employees spend attending meetings and training sessions, or times that equipment undergo routine maintenance).

LABOUR RECOVERY RATE

- Although in practice, a rate is calculated per department or cost centre, the scope of this module only involves the calculation of the total **annual expenditure per hour** for **one employee**.

LABOUR RECOVERY RATE

The calculation of **labour recovery rate** exercise involves the following two basic calculations:

- productive hours; and
- total labour costs/cost to company

LABOUR RECOVERY RATE

• The labour recovery rate is then determined by dividing the **total budgeted labour cost** by the **total budgeted productive hours** per employee for the year.

Labour recovery rate- Worked Example

Let's work through the following example, which is example 6.4, on page 156 of study guide, adapted:

Labour recovery rate- Example

- Mars limited indicates that 25 000 units of Product A are budgeted to be produced in 2019. It takes a mixer 90 minutes to mix one unit of Product A.
- The company employs twenty (20) mixers and one supervisor. The factory supervisor's annual salary totals R240 000. The normal rate for mixers is R50 per hour.

Labour recovery rate- Example

Additional information:

- The mixers work an eight hour day.
- The factory operates five (5) days a week (i.e. Monday to Friday).
- There are 12 paid public holidays annually, of which 2 falls on a Saturday.
- Each employee is entitled to a one and half (1,5) hour tea/lunch break a day.
- Each employee is entitled to three (3) weeks' vacation leave.

Labour recovery rate- Example

Additional information:

- Employee pension contributions are calculated at 7,5% of the normal wage and the employer pension contributions are calculated at 15% of normal wage.
- UIF contributions are calculated at 1% of the gross wage for both employer and employee.

Labour recovery rate- Example (cont..)

Additional information:

- Unavoidable stoppages are estimated at 5% of available production time.
- Overtime is remunerated at one and half (1,5) times the normal rate. Assume that the overtime hours are distributed equitably over productive weeks and each worker clocks the same number of overtime hours.

Labour recovery rate- Example (cont..)

REQUIRED:

Calculate the following

1. Total annual hours available for production for all mixers
2. Production time required for the year
3. The anticipated overtime hours for the year
4. The labour recovery rate for one mixer

Labour recovery rate- Example (cont..)

REQUIRED:

Calculate the following

5. Total annual overtime premium.
6. The direct labour budget for the year

Labour recovery rate- Example

1.

Total hours inclusive lunch-break (8 x 5)	40,00
Less: lunch-break (1,5 x 5)	7,50
Available production hours for a week	32,50
Hours available in a year (52 x 32,5 hrs)	1 690
Less: Vacation leave (3 weeks x 32,5 hours)	97,5
Public holidays (10 days x 6,5 hours)	65,0
	1 527,5
Annual available hours (1 527,5 x 20)=	30 550

Labour recovery rate- Example

2. Production time required
 Budgeted units 25 000 x 90/60 minutes (or 1,5hrs)
= 37 500 hrs

Labour recovery rate- Example

3. Anticipated overtime for the year
 Production time require (37 500 - 30 550)
= 6 950 hrs

Labour recovery rate - Example

4. Hourly recovery rate:

Mixer = R120 640*/1 451,1* hours
 = R83,14 per hour

Determined as follows...

Labour recovery rate- Example

Mixer:

Normal annual wage (52 – 3 wks annual leave x40 hrs x R50	R98 000
Add: annual leave (3 x 40 hrs R50)	6 000
Employer contribution:	
Pension fund (15% x 98 000 + 6 000)	15 600
UIF (1% x 104 000)	1 040
Total labour cost per year	120 640

Labour recovery rate- Example

Mixer:

Annual available hours (1)	1 527,5
Less: idle time (1 527,5 x 5%)	76,4
Total productive hours	1 451,1

Labour recovery rate- Example

5.

Overtime premium $(6\ 950 \times R50 \times 0,5) = R173\ 750$

Or

$(R50 \times 1,5 \times 6\ 950) - (R50 \times 6\ 950) = R173\ 750$

Labour recovery rate- Example

6. Direct labour cost budget

Production hours x labour recovery rate

= 37 500 hrs x R83,14

= R3 117 750

END OF SESSION 2



ASSIGNMENT OF OVERHEADS

Overhead absorption rate

Assignment of overheads to departments



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The need for overhead absorption rate

The need for overhead absorption

Actual overhead for the period is not known until the end of the period.




Using an absorption rate makes it possible to estimate total job costs sooner

Overhead Absorption Rate

The predetermined overhead rate (or overhead absorption rate) is used to apply overhead to jobs. It is determined before the period begins.

$$\text{Overhead absorption rate} = \frac{\text{Budgeted total overhead costs}}{\text{Estimated total units in the allocation base (or factor) for the coming period}}$$

Ideally, the allocation base is a factor that "drives" overhead costs (that is, as the actual amount of the base or factor increases, overhead increases, and vice versa).

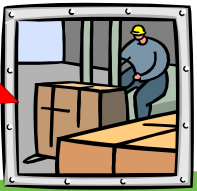


Accumulating Product Costs

Direct materials and direct labour costs are traced directly to jobs.

On the other hand, because overhead costs cannot be traced directly to jobs, overhead must be "absorbed" (that is, allocated) to jobs.

The overhead absorption rate is used to apply overhead to products.



Application of Overhead

The overhead absorption rate is based on **estimates** and is determined before the period begins.

The **actual** amount of the **allocation base** (or factor), such as units produced, direct labour hours, or machine hours, is measured during the period.

Overhead absorbed = OH absorption Rate × Actual activity

Calculating the Overhead Rate – Example

Assume overhead is absorbed based on direct labour hours.

Total **estimated** overhead for the year is R640,000.

Total **estimated** labour cost is R1,400,000.

Total **estimated** labour hours are 160,000 hours.

$$\text{overhead absorption rate} = \frac{\text{Estimated total overhead costs for the coming period}}{\text{Estimated total units in the allocation base (or factor) for the coming period}}$$

$$\frac{R640,000}{160,000 \text{ direct labour hours (DLH)}} = R4.00 \text{ per DLH}$$

Total Amount of Overhead absorbed

The company's overhead absorption rate is R4.00 per direct labour hour (DLH).

170,000 direct labour hours were worked during the period.

To calculate the **total overhead absorbed** (that is, the overhead absorbed to all jobs that were in process) during the year:

$$\begin{aligned} \text{Absorbed Overhead} &= \text{Absorption Rate} \times \text{Actual DLH} \\ \text{Absorbed Overhead} &= \text{R4.00 per DLH} \times 170,000 \text{ DLH} = \\ &\text{R680,000} \end{aligned}$$

Actual Compared with Amount Absorbed

Under absorbed Overhead

Actual amount of overhead exceeds amount absorbed to production.

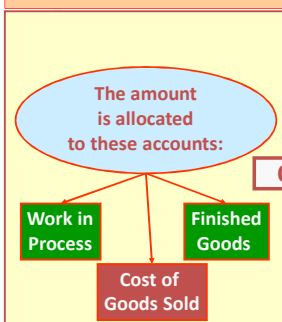
Over absorbed Overhead

Amount absorbed to production exceeds actual amount of overhead.

Amount of overhead absorbed to production	R680,000
Actual amount of overhead incurred	<u>650,000</u>
Over-absorbed overhead	R30,000

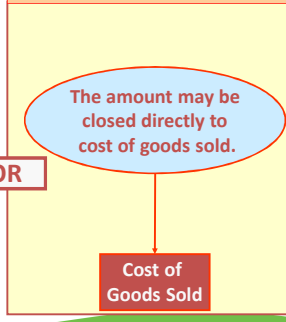
Disposition of the over/under absorbed overheads

If balance is material



OR

If balance is *not* material



Summary of over/under-absorbed overheads

If overhead is:	Assuming not material:
UNDER-ABSORBED (Applied OH is less than actual OH)	INCREASE Cost of Goods Sold
OVER-ABSORBED (Applied OH is greater than actual OH)	DECREASE Cost of Goods Sold

Absorption of overheads- worked example

Let's work through the following example:

Absorption of overheads- worked example

	CASE 1	CASE 2
Budgeted overheads	R1 297 800	R1 354 390
Budgeted direct labour hours	(c)	52 700
Overhead absorption rate	R25,20	(a)
Actual labour hours	50 900	(b)
Over/(under) absorbed overheads	(d)	(R25 700)

Absorption of overheads- worked example

- Assume that the actual overheads incurred were as per budget.
- The overheads are absorbed on the basis of direct labour hours.

Absorption of overheads- worked example

REQUIRED:

- Calculate the missing figures represented by (a) to (d)

Absorption of overheads- worked example

	CASE 2	CASE 1
Budgeted overheads	R1 297 800	R1 354 390
Budgeted direct labour hours	(c)	52 700
Overhead absorption rate	R25,20	R25,70
Actual labour hours	50 900	(b)
Over/(under) absorbed overheads	(d)	(R25 700)

R1 354 390/52 700

Absorption of overheads- worked example

	CASE 1	CASE 2
Budgeted overheads	R1 297 800	R1 354 390
Budgeted direct labour hours	(c)	52 700
Overhead absorption rate	R25,20	R25,70
Actual labour hours	50 900	51 700
Over/(under) absorbed overheads	(d)	(R25 700)

$(R1\ 354\ 390 - R25\ 700)/25,70$

Absorption of overheads- worked example

	CASE 1	CASE 2
Budgeted overheads	R1 297 800	R1 354 390
Budgeted direct labour hours	51 500	52 700
Overhead absorption rate	R25,20	R25,70
Actual labour hours	50 900	51 700
Over/(under) absorbed overheads	(d)	(R25 700)

$R1\ 297\ 800/R25,20$

Absorption of overheads- worked example

	CASE 1	CASE 2
Budgeted overheads	R1 297 800	R1 354 390
Budgeted direct labour hours	51 500	52 700
Overhead absorption rate	R25,20	R25,70
Actual labour hours	50 900	51 700
Over/(under) absorbed overheads	(R15 120)	(R25 700)

$(R25,20 \times 50\ 900) - R1\ 297\ 800$

END OF SESSION 3



Production Departments

All manufacturing activities required to convert direct materials into finished goods take place in **production department**.

The Surgery Department at Mount Sinai Hospital.

The Geography Department at the University of Washington.

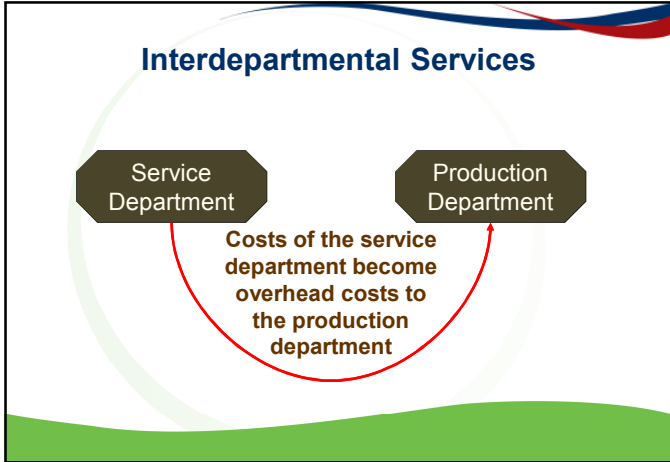
A Production Department at Toyota.

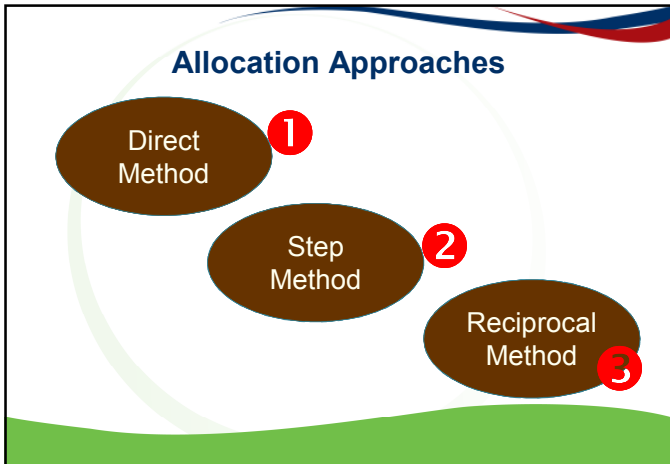
Service Departments

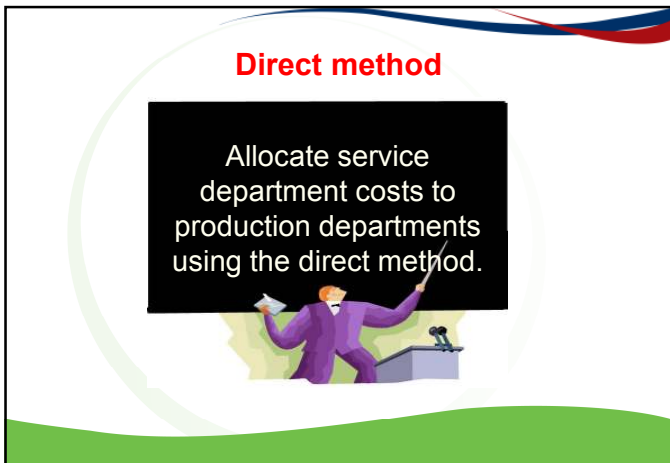
Service departments do not directly engage in production activities. However they render essential service that enable the production departments to perform their central activities.

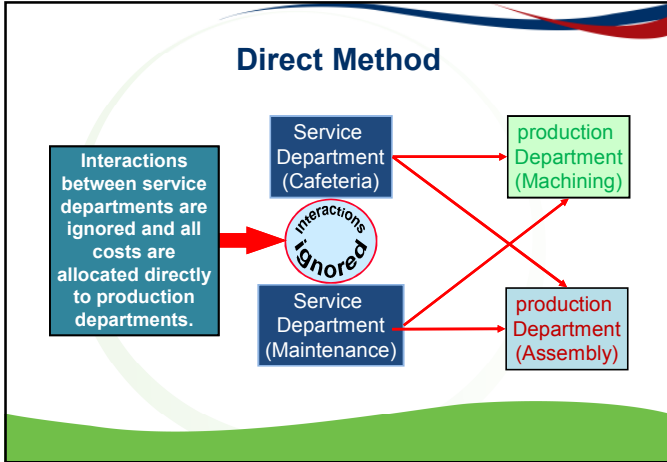
The Maintenance Department at Toyota.

The Human Resources Department at Toyota.









Direct Method – Example 1

	Service Departments		Operating Departments	
	Cafeteria	Maintenance	Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Number of employees	15	10	20	30
Square meters occupied	5,000	2,000	25,000	50,000

Service Department	Allocation Base
Cafeteria	Number of employees
Maintenance	Square meters occupied

Direct Method – Example 1

	Service Departments		Operating Departments	
	Cafeteria	Maintenance	Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Cafeteria allocation	?		?	?
Maintenance allocation		?	?	?
Total after allocation	?	?	?	?

How much of the Cafeteria and Maintenance costs should be allocated to each production department using the direct method of cost allocation?

Direct Method – Example 1

	Service Departments		Operating Departments	
	Cafeteria	Maintenance	Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Cafeteria allocation	(360,000)		144,000	?
Maintenance allocation		?	?	?
Total after allocation	R \$ 0	?	?	?

$$R360,000 \times \frac{20}{20 + 30} = R144,000$$

Allocation base: Number of employees

Direct Method – Example 1

	Cafeteria maintenance		Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Cafeteria allocation	(360,000)		144,000	216,000
Maintenance allocation		?	?	?
Total after allocation	?	?	?	?

$$R360,000 \times \frac{30}{20 + 30} = R216,000$$

Allocation base: Number of employees

Direct Method – Example 1

	Service Departments		Operating Departments	
	Cafeteria	Maintenance	Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Cafeteria allocation	(360,000)		144,000	216,000
Maintenance allocation		(90,000)	30,000	?
Total after allocation			R 574,000	?

$$R90,000 \times \frac{25,000}{25,000 + 50,000} = R30,000$$

Allocation base: Square meters occupied

Direct Method – Example 1

	Service Departments		Operating Departments	
	Cafeteria	Maintenance	Machining	Assembly
Departmental costs before allocation	R 360,000	R 90,000	R 400,000	R 700,000
Cafeteria allocation	(360,000)		144,000	216,000
Maintenance allocation		(90,000)	30,000	60,000
Total after allocation	0	0	R 574,000	R 976,000

$$R90,000 \times \frac{50,000}{25,000 + 50,000} = R60,000$$

Allocation base: Square meters occupied

Direct Method and Step method

The key point to understand regarding both the direct method (and step method):

Any amount of the allocation base attributable to the service department whose cost is being allocated is always ignored.

Direct method - Example 2

Ubombo Limited has two production departments, namely P1 and P2. The company has also one service department, namely S1 that provides service services to the production departments. The management accountant must apportion the budgeted overheads in the ratio 50:30:20 to P1, P2 and S1.

Direct method - example 2

- Fill in the missing figures (i) to (iv):

	P1	P2	S1
Apportionment ratio	50	30	20
Department overheads before allocation	R336 000	R240 000	(i)
Budgeted service department apportionment	(ii)	46 500	
Total budgeted overheads	(iii)	(iv)	

Direct method- example 2

	P1	P2	S1
Apportionment ratio	50	30	20
Budgeted allocated expenses	R336 000	R240 000	R124 000
Budgeted service department apportionment	(ii)	46 500	
Total budgeted overheads	(iv)	(v)	

$R46\ 500 \times 80/30 = R124\ 000$

Direct method- example 2

	P1	P2	S1
Apportionment ratio	50	30	20
Budgeted allocated expenses	336 000	240 000	124 000
Budgeted service department apportionment	77 500	46 500	
Total budgeted overheads	(iv)	(v)	

$R124\ 000 \times 50/80 = R77\ 500$
OR
 $R124\ 000 - R46\ 500$

Direct method- example 2

Apportionment ratio	50	30	20
Budgeted allocated expenses	336 000	240 000	124 000
Budgeted service department apportionment	77 500	46 500	
Total budgeted overheads	413 500	(iv)	

$R336\ 000 + R77\ 500 = R413\ 500$

Direct method- example 2

	P1	P2	S1
Apportionment ratio	50	30	20
Budgeted allocated expenses	336 000	240 000	124 000
Budgeted service department apportionment	77 500	46 500	
Total budgeted overheads	413 500	286 500	

$R240\ 000 + R46\ 500 = R286\ 500$

EXAM PREPARATION

Self assessment questions



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SELF ASSESSMENT QUESTIONS



- Work through questions 3 and 4 set out on pages: 127 to 128 of the study guide.

SELF ASSESSMENT QUESTIONS



Work through example 6.4 (page 156-158) as well as question 4 as set out on pages 163 of the study guide.

SELF ASSESSMENT QUESTIONS



Work through example 7.4 (page 189) as well questions 2 and 5 set out on pages: 216 to 219 of the study guide.

SELF ASSESSMENT QUESTIONS



Work through activity 8.1 set out on pages: 229 of the study guide.

SELF ASSESSMENT QUESTIONS



Work through question 3 set out on pages: 297 to 298 of the study guide.

SELF ASSESSMENT QUESTIONS

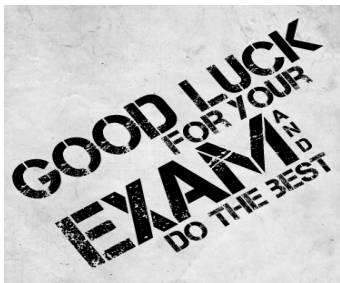


Work through question 4 set out on page 350 of the study guide.

SELF ASSESSMENT QUESTIONS



Remember to download and work through the additional questions, as included in the set of two questions banks, that are available under additional resources of the MAC1501 SITE on myUnisa.



Thank **you**

Define tomorrow.

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