

ELEC352 - Task 3 - Part B

Group number: 03	
PM: Wenhan Hu	Secretary: Dequn Teng

1. Please calculate your answers on paper then enter your **Depreciation Value** in the box below.

Residual value after 3.5 years: £210.59
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$$Results = 252 \times (1 - 0.05)^{3.5} = 210.59$$

2. Please complete the table below

Absorption base	OAR	Unit Cost
Labour Hours	2.95	3193.43
% on wages	75.65%	2616.69
% on prime cost	22.60%	3199.18
Machine hours	5.8	3317.1

$$OAR_{labour\ hours} = \frac{overheads}{labour\ hours} = \frac{17400}{5900} = 2.95$$

$$OAR_{\%on\ wage} = \frac{overheads}{wages} \times 100\% = \frac{17400}{23000} \times 100\% = 75.56\%$$

$$OAR_{\%on\ prime\ cost} = \frac{overheads}{prime\ cost} \times 100\% = \frac{17400}{23000 + 54000} \times 100\% = 22.60\%$$

$$OAR_{machine\ hours} = \frac{overheads}{machine\ hours} = \frac{17400}{3000} = 5.8$$

$$unit\ cost_{labour\ hours} = OAR_{labour\ hours} \times direct\ labour\ hours + prime\ cost = 3193.43$$

$$unit\ cost_{\%on\ wages} = OAR_{\%on\ wage} \times Direct\ Wages + prime\ cost = 2616.69$$

$$unit\ cost_{\%on\ prime\ cost}$$

$$= OAR_{\%on\ prime\ cost} \times (Direct\ Wages + Direct\ materials) + prime\ cost$$

$$= 3199.18$$

$$\begin{aligned} \text{unit cost}_{\text{machine hours}} &= OAR_{\text{machine hours}} \times \text{Direct machine hours} + \text{prime cost} \\ &= 3317.1 \end{aligned}$$

3. In no more than **200 words** explain which of the four possible Overhead Absorption Rates is most appropriate for your project and why.

It is sensible to divide the overheads across cost units according to the percentage on wages. According to the calculation, the percentage on wages is 75.65% meaning that the wages form a major part of the total cost. As for the percentage on prime cost, according to the calculation, it was just 22.60%, which is far lower than the percentage on wages. Consequently, it is not sensible to divide the overheads across cost units on prime cost. The Overhead Absorption Rate of labour hours is only 2.95, which is lower than the Overhead Absorption Rate of machine hour at 5.8. As a result, it is not appropriate to use the overhead absorption rate of labour hour. Through comparison between the overhead absorption rate on the wages and machine hours, it is more appropriate to use the former with the reason that the ratio of the percentage of wages and prime cost is greater than the ratio of the labour and machine hours. That has shown the proportion of the wage expended in the project is significant. So, it is most appropriate to use the percentage on wages overhead absorption rate.

Appendix 1

Project Management Module

Group 03 Virtual Project Management Committee

Minutes of the meeting on the 2020/12/18

Group Name/Number: Group 03

Meeting Date 2020/12/11
and time :

Meeting Topic: Weekly Review Meeting

Location:	Teams
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Attendees:	(Project Manager) Wenhan Hu
	(Secretary) Dequn Teng
	Qiyang Ding
	Haohan Niu
	Gan Fang
Apologies:	
Absences:	

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1. Brainstorm and understand the OAR and unit costs

- Talk about what is OAR and unit cost
- Read the PPT and figure out how to calculate these things

2. Brainstorm the usage of OAR and unit costs

- Discuss how to use OAR and unit costs to analyse the project

3. Allocation of future tasks

- Dequn Teng will write up minutes and mainly review the results of calculation
- Wenhan Hu will calculate OAR and unit costs
- All the other members will review the results of calculation
- All the members will further discuss the usage of OAR and unit costs next meeting

4. Agree the date, time, and place for the next meeting.

- The next meeting to be held on the 18th of December in Teams.

5. Any other Business

- N/A

ACTIONS SUMMARY – For review at next meeting		
Future agreed Actions	Initials	Due date
1. All the members read the contents about OAR and unit costs.	ALL	2020/12 /18
2. Wenhan Hu will calculate the OAR and unit costs.	HW	2020/12 /18
3. Dequn Teng will review the results of calculation	TD	2020/12 /18
4. All the members will discuss why OAR and unit cost provide useful information for our projects	ALL	2020/12 /18
5.		
6.		
7.		
8.		
9.		

Appendix 2

Project Management Module

Group 03 Virtual Project Management Committee

There will be a meeting of the above committee at 14:00 on 2020/12/11.

Agenda

- 1. Brainstorm and understand the OAR and unit costs**
- 2. Brainstorm the usage of OAR and unit costs**
- 3. Allocation of future tasks**
- 4. Agree the date, time, and place for the next meeting.**