

ACCA FINAL ASSESSMENT

Management Accounting

December 2014

Question paper

Time allowed **2 hours**

This paper is divided into 2 sections:

Section A: All 35 questions are compulsory and **MUST** be attempted.

Section B: All **THREE** questions are compulsory and **MUST** be attempted.

Formulae Sheet is on page 3

Do not open this paper until instructed by the supervisor

This question paper must not be removed from the examination hall

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Paper F2

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FORMULAE AND TABLES

Regression analysis

$$y = a + bx$$

$$a = \frac{\sum y}{n} - \frac{b \sum x}{n}$$

$$b = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$$

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{(n \sum x^2 - (\sum x)^2)(n \sum y^2 - (\sum y)^2)}}$$

Economic order quantity

$$= \sqrt{\frac{2C_o D}{C_h}}$$

Economic batch quantity

$$= \sqrt{\frac{2C_o D}{C_h \left(1 - \frac{D}{R}\right)}}$$

Present value table

Present value of 1, i.e. $(1 + r)^{-n}$

Where r = discount rate

n = number of periods until payment

Periods (n)	Discount rate (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

Periods (n)	Discount rate (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065

Annuity table

Present value of an annuity of 1, i.e. $\frac{1 - (1+r)^{-n}}{r}$

Where r = discount rate

n = number of periods

Periods (n)	Discount rate (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
Periods (n)	Discount rate (r)									
	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	1.713	1.690	1.668	1.647	1.626	1.605	1.585	1.566	1.547	1.528
3	2.444	2.402	2.361	2.322	2.283	2.246	2.210	2.174	2.140	2.106
4	3.102	3.037	2.974	2.914	2.855	2.798	2.743	2.690	2.639	2.589
5	3.696	3.605	3.517	3.433	3.352	3.274	3.199	3.127	3.058	2.991
6	4.231	4.111	3.998	3.889	3.784	3.685	3.589	3.498	3.410	3.326
7	4.712	4.564	4.423	4.288	4.160	4.039	3.922	3.812	3.706	3.605
8	5.146	4.968	4.799	4.639	4.487	4.344	4.207	4.078	3.954	3.837
9	5.537	5.328	5.132	4.946	4.772	4.607	4.451	4.303	4.163	4.031
10	5.889	5.650	5.426	5.216	5.019	4.833	4.659	4.494	4.339	4.192
11	6.207	5.938	5.687	5.453	5.234	5.029	4.836	4.656	4.486	4.327
12	6.492	6.194	5.918	5.660	5.421	5.197	4.988	4.793	4.611	4.439
13	6.750	6.424	6.122	5.842	5.583	5.342	5.118	4.910	4.715	4.533
14	6.982	6.628	6.302	6.002	5.724	5.468	5.229	5.008	4.802	4.611
15	7.191	6.811	6.462	6.142	5.847	5.575	5.324	5.092	4.876	4.675

SECTION A – ALL 35 QUESTIONS ARE COMPULSORY AND MUST BE ATTEMPTED

Each question is worth 2 marks

1 Which of the following are direct expenses?

- (i) The cost of special designs, drawings or layouts.
- (ii) The hire of tools or equipment for a particular job.
- (iii) Salesmen's wages.
- (iv) Rent, wages and insurance of a factory.

- A (i) and (ii)
- B (i) and (iii)
- C (i) and (iv)
- D (iii) and (iv)

2 Storm plc has just developed a new product to be called the Rain and is now considering putting it into production.

Which of the following costs/revenues would be relevant to an NPV calculation?

- (i) Costs incurred in the development of rain amounting to \$480,000
- (ii) Purchase of new machinery at a cost of \$2,400,000 payable immediately
- (iii) Depreciation charge for the new machinery of \$600,000 per annum
- (iv) Sales price of \$80 per rain

- A (i) and (iii)
- B (ii) and (iv)
- C all of them
- D none of them

- 3 It is 20X2 and Beach Ltd is calculating its budget for the 20X3. Beach wants to adjust its forecast for inflation using indices.

Calculate the index using the Paasche price index and the following data.

Product	20X1		20X2	
	Quantity	Price	Quantity	Price
Towel	250	\$2.50	275	\$2.00
Bucket	300	\$1.75	325	\$2.25
Spade	450	\$0.85	400	\$1.00

- A 96.65
 B 105.32
 C 94.94
 D 103.46
- 4 A company wants to calculate the economic order quantity. The following data is available in a spreadsheet

	A	B
1	Monthly demand	1,000
2	Cost of placing an order	\$25
3	Cost of holding one unit of inventory	\$2.50
4	Economic order quantity	??

What formula is required to calculate the EOQ?

- A $B4 = \text{SQRT}((2 * B3 * B1 * 12) / B2)$
 B $B4 = \text{SQRT}(2 * B3 * B1 * 12) / B2$
 C $B4 = \text{SQRT}((2 * B2 * B1 * 12) / B3)$
 D $B4 = \text{SQRT}(2 * B2 * B1) / B3$
- 5 Kiveton Cleaning Services supplies its employees with protective clothing. One such item is protective gloves.

Records from the stores department for January showed:

1 Jan	Opening inventory	150 pairs @ \$2 each
7 Jan	Purchases	40 pairs @ \$1.90
15 Jan	Issues	30 pairs
29 Jan	Issues	35 pairs

Calculate the value of the issues and the closing inventory if the FIFO method is used to price the usage.

	Issues	Closing inventory
A	\$130	\$246
B	\$129	\$247
C	\$246	\$130
D	\$247	\$129

6 The following data is available for Tallus Ltd in period 2.

Actual overheads	\$225,900
Actual machine hours	7,530
Budgeted overheads	\$216,000

Using the data above, and assuming that the budgeted overhead absorption rate was \$32 per hour, calculate the budgeted number of machine hours to be worked (to the nearest hour).

- A 7,059
- B 6,750
- C 6,900
- D 7,000

7 Binsey Ltd uses regression analysis to forecast future monthly costs. Using historic information the accountant has produced the following equation which will be used to predict future monthly costs:

$$TC = 4Q + 600$$

Where Q is the number of units produced each month.

Which of the following statements is correct?

- A Variable costs = \$600 per unit, Fixed costs = \$400 per month
- B Annual fixed costs = \$48,000
- C Annual fixed costs = \$7,200
- D Variable costs = \$40 per unit, Fixed costs = \$7,200 per month

- 8 Burgess operates a continuous process into which 3,000 units of material costing \$9,000 was input in a period.

Conversion costs for this period were \$11,970 and losses, which have a scrap value of \$1.50, are expected at a rate of 10% of input. There was no opening or closing inventory and output for the period was 2,900 units.

What was the output valuation?

- A 20,271
B 20,520
C 20,970
D 22,040
- 9 When opening inventory was 10,000 litres and closing inventory was 12,000 litres, a company had a profit of \$72,000 using absorption costing.
- If the fixed overhead absorption rate was \$5 per litre, what would be the profit under marginal costing?**
- A \$62,000
B \$82,000
C \$72,000
D \$75,000
- 10 Mountain Venture has net assets of \$540,000 and made profits of \$280,000 for the year. The cost of capital used by the business is 8%.

Calculate the ROI and RI for Mountain Venture.

	ROI	RI
A	4%	\$43,200
B	15%	\$22,400
C	48%	\$517,600
D	52%	\$236,800

- 11 **If a company compares its procedures with another non-competing company this form of benchmarking is known as:**
- A Strategic
B Competitive
C Functional
D Internal

12 A large retailer sells a popular calculator for which the following information is available:

Average sales	= 75 per day
Maximum sales	= 95 per day
Minimum sales	= 50 per day
Lead time	= 12 – 18 days
Re-order quantity	= 1,750 units

Based on the data above, at what level of inventory would a replenishment order be issued?

- A 1,050
- B 1,330
- C 1,710
- D 1,750

13 A company had a budgeted fixed production overhead of \$7,500 with budgeted output of 1,000 units. The company absorbs overheads using labour hours and had budgeted to work 10,000 hours. Actual output was 790 units, 8,848 hours were worked and the actual overhead was \$6,800.

What were the fixed overhead capacity and efficiency variances for the period?

	<i>Capacity</i>	<i>Efficiency</i>
	\$	\$
A	864 (A)	1,575 (F)
B	864 (A)	711 (A)
C	1,575 (A)	711 (F)
D	864 (F)	711 (F)

14 If a population is very large but opinions need to be sourced in the most efficient way from the entirety of a couple of random groups, which method of sampling would be the most appropriate?

- A Random
- B Multi-stage
- C Cluster
- D Quota

- 15** A company makes a product that uses two materials. Standard cost information is given below:

Material A: 2 kg × \$7

Material B: 3 litres × \$11

In a period 1,300 units were made, and the following actual results were recorded:

Material A: 2,600 kg were bought at a cost of \$18,400 and 2,400 kg were used

Material B: 3,900 litres were bought at a cost of \$38,800 and 4,000 litres were used.

The company maintains its inventory at standard cost.

What was the total price variance reported in the period?

\$	Adv/Fav
----	---------

- 16** The value for money concept used in assessing performance in a not for profit organisation revolves around the 3Es.

The 3Es are:

(i) Efficiency

(ii) Effectiveness

(iii) Ecology

(iv) Economy

A (i), (ii) and (iii)

B (i), (iii) and (iv)

C (ii), (iii) and (iv)

D (i), (ii) and (iv)

- 17** A company sells a product with the following unit standard cost card:

	\$
Selling price	50
Variable cost	20
Fixed production overhead	5
	—
Gross profit	25
	—

This card is based on budgeted sales of 1,700 units.

Actual selling price was \$48, unit variable costs were \$22 and unit fixed cost \$4. Actual sales were 1,800 though 1,900 units were made. The company currently uses marginal costing.

What was the sales volume variance?

- A \$2,500 (F)
- B \$3,000 (F)
- C \$2,800 (F)
- D \$2,600 (F)

18 The following statements relate to process costing:

- 1 The higher the net realisable value of normal losses the lower will be the cost per unit of normal output.
- 2 The higher the abnormal losses the higher will be the cost per unit of normal output.

Are the statements true or false?

	<i>Statement 1</i>	<i>Statement 2</i>
A	False	False
B	False	True
C	True	False
D	True	True

19 A veterinarian should take on average 20 minutes to stitch up a dogs wound. In one day the veterinarian stitched up 5 dogs taking 1 hour in total to do so.

Calculate the efficiency ratio for the veterinarian.

- A 100%
- B 83%
- C 167%
- D 33%

20 The numbers below have been calculated to use in a linear regression analysis, in order to estimate the total cost line for a company.

x = number of units

y = total costs (in \$000)

$\sum x$ = 25

$\sum y$ = 271

$\sum xy$ = 550

$\sum x^2$ = 65

$\sum y^2$ = 30,275

n = 15

Calculate the variable cost per unit using regression analysis:

- A \$1.55
- B \$2.38
- C \$4.21
- D \$5.45

21 Over the last two months the following production costs were incurred by Department Z:

	<i>Level of activity</i>	<i>Production cost</i>
May	2,180 units	\$13,405
June	3,200 units	\$15,700

In July budgeted production was 2,560 units. The budgeted production cost would be:

- A \$14,260
- B \$15,740
- C \$12,560
- D \$14,552.5

22 One of the machines in the moulding department of Grape Ltd is nearing the end of its useful life and they are considering purchasing a replacement machine.

Estimates have been made for the initial capital cost, sales income and operating costs of the replacement machine, which is expected to have a useful life of three years:

Initial investment \$500,000

Cash flows

Year	Sales income	Operating costs
1	\$280,000	\$100,000
2	\$330,000	\$120,000
3	\$390,000	\$130,000

The company appraises capital investment projects using a 10% cost of capital.

Calculate the NPV of this machine.

\$

23 Which of the following statements are true?

- (i) Financial Accounting provides information on the future performance of a business
 - (ii) Management Accounting uses historical data
 - (iii) Financial Accounting provides information on the past performance of a business
 - (iv) Management Accounting provides information on the future performance of a business
- A (i), (ii) and (iii)
B (ii), (iii) and (iv)
C (i), (iii) and (iv)
D (i), (ii) and (iv)

24 Field is considering a new project. Details of the proposed project are as follows:

Life of project: 6 years
Initial cost: \$85,000
Annual savings: \$24,000
NPV at 5%: £36,824

Calculate the internal rate of return for this project to the nearest 1%

- A 18%
B 19%
C 20%
D 21%

25 Which of the following are features of Activity Based Costing?

- (i) Cost pools
 - (ii) Cost drivers
 - (iii) Low levels of overhead costs
- A (i) only
B (i) and (ii) only
C (iii) only
D (i), (ii) and (iii)

26 Which one of the following would NOT be classified as a production overhead in a food processing company?

- A The cost of renting the factory building
- B The salary of the factory manager
- C The depreciation of equipment located in the materials store
- D The cost of ingredients

27 A company produces two types of tables, the farmhouse and the cottage which require 10 and 16 labour hours respectively. The budgeted data for the next period is as follows:

	<i>Farmhouse</i>	<i>Cottage</i>
Sales	7,500	12,000
Opening inventory of finished goods	1,800	2,400

Closing inventory of finished goods are expected to be reduced by 50%.

What are the total budgeted labour hours for the next period?

- A 295,200
- B 267,000
- C 238,800
- D 210,600

28 The instruction to a market researcher is to ‘stop equal numbers of men and women to do the questionnaire’.

What type of sampling is being used?

- A Stratified sampling
- B Quota sampling
- C Cluster sampling
- D Random sampling

29 ABC Ltd sells to both cash and credit customers. It expects that 40% of its sales will be paid for in cash and of the remainder, 50% will be paid the month after sale, 40% two months after sale and the rest will remain unpaid.

<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>
\$000s	\$000s	\$000s	\$000s	\$000s	\$000s
100	120	140	150	160	180

Forecast the amount of cash that will be received in the month of April.

\$

- 30** You are advised that ABC Ltd purchases its goods for resale in the month before they are sold and they take 2 months credit.

Which month's sales will involve ABC paying for goods in May?

- A February
- B March
- C April
- D May

- 31 Which of the following are advantages of using the Balanced Scorecard approach to appraising performance?**

- (i) Performance is appraised from a much wider view point
- (ii) Managers can easily distort measures to their advantage
- (iii) Comparison with different organisations is made easier
- (iv) It should lead to long term success rather than short term improvements

- A (i) only
- B (i) and (ii) only
- C (i) and (iii) only
- D (i) and (iv) only

- 32** A company uses standard costing. There are six standard hours required to produce one unit, while production staff are paid at the standard rate of \$9 per hour. Budgeted production is 700 units per month.

In November, 750 units were produced, taking 4,750 hours at a cost of \$41,150.

The labour variances were:

	<i>Labour rate</i>	<i>Labour efficiency</i>
A	\$1,600 Favourable	\$2,250 Adverse
B	\$1,600 Adverse	\$2,250 Favourable
C	\$3,350 Adverse	\$4,950 Favourable
D	\$3,350 Favourable	\$4,950 Adverse

- 33** A company that operates a standard costing system reported favourable labour rate variances though the labour efficiency variance was adverse.

Which of the following could explain both of these variances?

- (i) The use of inexperienced staff
- (ii) A machine breakdown
- (iii) Higher quality of material being purchased than expected
- (iv) A lower than expected sales demand

- A (i) only
- B (i) and (ii) only
- C (i) and (iii) only
- D (i) and (iv) only

- 34** Puffle plc wants to produce a pie chart to represent the sales levels in its 6 regions. The sales are as follows:

Region	Sales value \$000s
1	352
2	410
3	248
4	178
5	578
6	368

What would be the angle on the pie chart for region 5 (to the nearest whole degree)?

°

- 35** Which of the following costs have a variable cost behaviour?

	1,840 units	4,700 units
(i) Materials	\$9,200	\$23,500
(ii) Labour	\$12,880	\$42,300
(iii) Rent	\$2,000	\$4,000

- A (i) only
- B (i) and (ii)
- C (ii) and (iii)
- D (i), (ii) and (iii)

SECTION B – ALL THREE QUESTIONS ARE COMPULSORY AND MUST BE ATTEMPTED

1 Jeremy Fisher Ltd makes a single high technology product, the Osca.

The following is a copy of the original budget and actual performance of the company for the year ended 30 April 20X6.

Budgeted and Actual Operating Statement for the year ended 30 April 20X6

	Budget		Actual	
	\$000	\$000	\$000	\$000
Volume	50,000		72,000	
Revenue		2,000		3,600
Material	350		530	
Labour	400		480	
Electricity	195		248	
Maintenance	275		380	
Rent and rates	250		300	
Depreciation	160		160	
Administration	100		140	
Operating profit		270		1,362

Assumptions made when preparing the original budget:

- Both materials and labour are variable costs
- Electricity is a semi-variable cost. The budgeted fixed cost is \$20,000
- Maintenance is a stepped cost and increases by the same amount for every 10,000 units, or part of 10,000 units, produced
- All other expenses are fixed
- There is no opening or closing inventory of Osca.

Complete the operating statement to show a flexed budget, the actual results, and the resulting variances for the year ended 30 April 20X6.

Flexed Budgeted and Actual Operating Statement for the year ended 30 April 20X6

	Flexed Budget		Actual		Variance	Adverse/ favourable
	\$000	\$000	\$000	\$000		
Volume	72,000		72,000			
	\$000	\$000	\$000	\$000	\$000	A or F
Revenue				3,600		
Material			530			
Labour			480			
Electricity			248			
Maintenance			380			
Rent and rates			300			
Depreciation			160			
Administration			140			
Operating profit				1,362		

(10 marks)

- 2 GW Tech Ltd's manufacturing division is called 7g. It has been manufacturing the STIX mobile phone for the past few years. 7G operates an integrated standard cost system in which:

- purchases of materials are recorded at standard cost
- direct material costs and direct labour costs are variable
- production overheads are fixed and absorbed using direct labour hours.

The budgeted activity and actual results for the month of November 20X6 are as follows:

		Budget		Actual
Production (phones)		200,000		190,000
Direct materials	10,000 kgs	\$4,500,000	9,595 kgs	\$3,838,000
Direct labour	20,000 hrs	\$200,000	20,000 hrs	\$240,000
Fixed overheads		\$1,250,000		\$1,375,000
Total cost		\$5,950,000		\$5,453,000

Your colleague has already correctly calculated the following information:

- labour rate variance of \$40,000 adverse
- labour efficiency variance of \$10,000 adverse.

Calculate the following information for November:

- (i) **standard price of materials per kilogram** (1 mark)
- (ii) **standard usage of materials for actual production** (1 mark)
- (iii) **the total standard cost for actual production.** (1 mark)
- (iv) **Complete the operating statement reconciling the standard total cost for actual production with the actual total cost of actual production.** (6 marks)

Budgeted cost for 190,000 units			
	Variance	Adverse/ Favourable	
Direct material price variance			
Direct material usage variance			
Labour rate variance	\$40,000	A	
Labour efficiency variance	\$10,000	A	
Fixed overhead expenditure variance			
Fixed overhead capacity variance			
Fixed overhead efficiency variance			
Actual cost for 190,000 units			

- (v) **Which of the following variances would not be shown in an operating statement produced under a marginal costing system (tick each appropriate answer)? (1 mark)**

	Tick
Direct material price variance	
Direct material usage variance	
Labour rate variance	
Labour efficiency variance	
Fixed overhead expenditure variance	
Fixed overhead capacity variance	
Fixed overhead efficiency variance	

- 3** Clean Ltd is considering expanding its business by acquisition and has obtained details of First Blade Ltd, which is for sale for \$3 million. First Blade Ltd manufactures wiper blades that are distributed to the motor repair market, while Clean Ltd supplies directly to the major motor manufacturers. First Blade Ltd also operates a next-day delivery service for customers, whereas Clean Ltd offers a two-week delivery service.

The administration costs of First Blade Ltd will fall by \$400,000 if the company is acquired by Clean Ltd.

The following information has been gathered for both Clean Ltd and First Blade Ltd.

	Clean Ltd	First Blade Ltd
Statement of profit or loss	\$000	\$000
Revenue	5,150	3,500
Cost of sales	(3,090)	(1,575)
Gross Profit	2,060	1,925
Sales and distribution costs	(850)	(875)
Administration expenses	(750)	(875)
Operating profit	460	175
Statement of financial position extracts		
Net assets	4,000	2,500
Inventory	500	388

Additional data		
Units sold	82,400	42,000
Units produced	80,000	43,500
Budgeted production	82,000	40,000
Budgeted labour hours	41,000	20,000
Standard direct labour hours for actual production	40,000	21,750
Actual direct labour hours	37,500	22,000

Calculate the following performance indicators for BOTH companies (to 2 decimal places):

	Clean Ltd	First Blade Ltd
(i) Gross profit margin		
(ii) Distribution costs as a percentage of turnover		
(iii) Admin expenses as a percentage of turnover		
(iv) Operating profit margin		
(v) Return on Capital Employed		
(vi) Capacity ratio		
(vii) Efficiency ratio		

(7 marks)

- (viii) Recalculate the Return on Capital Employed in the event that Clean Ltd decides to increase its share capital by \$3m in order to purchase the net assets of First Blade Ltd for \$3 million. (3 marks)