

ACCA INTERIM ASSESSMENT

Management Accounting

2014

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.

NOTE: this assessment does not fully replicate the exam style. In the exam there will be 3 long form questions covering Budgeting, Standard costing and Performance appraisal. This assessment has 3 questions covering Budgeting.

Formulae Sheet is on page 3

Do not open this paper until instructed by the supervisor

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Paper F2 and FMA

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FORMULAE AND TABLES**Regression analysis**

$$y = a + bx$$

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

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

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

Economic order quantity

$$= \sqrt{\frac{2C_oD}{C_h}}$$

Economic batch quantity

$$= \sqrt{\frac{2C_oD}{C_h(1 - \frac{D}{R})}}$$

PRESENT VALUE TABLEPresent 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	4.968	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)
- B (iii) and (iv)

2 Which of the following would usually be classified as indirect production labour costs?

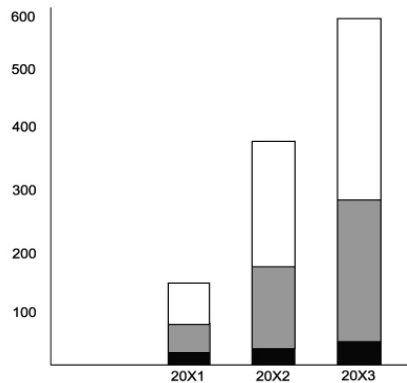
- (i) Sales director's salary.
- (ii) Supervisor's salary.
- (iii) Regular weekly overtime premium.

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

3 A sample taken in such a way that every member of the population has an equal chance of being selected is known as:

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

4 What type of graph is this?



- A Compound bar chart
- B Simple bar chart
- C Percentage component bar chart
- D Component bar chart

5 The following represent the materials transactions for a company for the month of July 20X7:

	\$000s
Materials purchases	150
Issued to production	126
Materials written off	8
Returned to stores	4
Returned to suppliers	3

The material inventory at 31 July 20X7 was \$26,000.

What was the opening balance on the materials inventory account at 1 July 20X7?

- A \$9,000
- B \$11,000
- C \$15,000
- D \$17,000

6 The following details are available for a company:

	<i>Budgeted</i>	<i>Actual</i>
Expenditure	\$176,400	\$250,400
Machine hours	4,000	5,000
Labour hours	3,600	5,400

If the company absorbs overheads using labour hours then, during the period, overheads were:

- A under-absorbed by \$29,900
- B under-absorbed by \$14,200
- C over-absorbed by \$14,200
- D over-absorbed by \$64,990

7 Cost accounting is mainly concerned with providing information for:

- A managers
- B inland revenue
- C customers
- D shareholders

8 A company makes and sells one product. The price is \$50 per unit. The cost card is:

	\$
Direct material	22.00
Direct labour	5.50
Direct expense	0.50
Overheads	15.00
Total unit cost	43.00

60% of overheads are fixed, the remainder are variable overheads.

During September, 10,000 units were sold. The contribution for September was:

\$

9 Rees Ltd operates a total absorption costing system. Budgeted fixed overheads for 20X1 were \$15,000 and budgeted production was 10,000 units.

During 20X1, the actual fixed overheads amounted to \$12,470 and actual production was 9,400 units. What adjustment is required in respect of absorption of overheads?

- A Increase profit by \$1,630
- B Decrease profit by \$1,630
- C Increase profit by \$900
- D Decrease profit by \$900

10 Which of the following statement is true when applied to fixed costs?

- A Overhead costs are always fixed costs
- B As production levels increase, fixed cost per unit decreases
- C Fixed costs are always irrelevant in a decision-making situation
- D As the level of activity changes, fixed costs will also change

11 A company makes two products, Reds and Blues. Total fixed overheads to absorb during May are \$60,000. Budgeted production levels for Reds for May are 10,000 units. Twice as many Blues as Reds are to be produced. Each Red takes 1 hour of labour and each Blue takes 0.25 hours. Overheads are to be absorbed on a labour hour basis.

What is the overhead absorption rate for each finished Blue?

\$	per unit
----	----------

12 The following data relates to two activity levels of an out-patients' department in a hospital:

Number of consultations by patients	9,000	11,500
Overheads	\$169,750	\$189,125

The variable cost per consultation:

- A is approximately \$7.75
- B is approximately \$16.45
- C is approximately \$18.86
- D cannot be calculated without more information

13 A process has the follow information relating to it for a particular period:

Input units	10,000 litres
CWIP	3,000 litres
CWIP degrees of completion	
Material	100%
Conversion	60%
Material cost	\$90,000
Conversion cost	\$52,800

What is the value of the completed output (there are no losses in the process)?

\$

14 In December a firm recorded a profit of \$25,000 using marginal costing principles. The opening inventory in December was 20,000 units; the inventory level had increased by 10% at the end of the month. If the fixed overhead absorption rate was \$0.50 per unit, the profit using absorption costing would be:

- A \$26,000
- B \$25,000
- C \$24,000
- D \$27,000

- 15 Sam is an assembly worker earning \$12 per hour for a basic 35-hour week. Any overtime is paid at a premium of 50%.**

In the last 4-week period Sam was paid for 150 hours, during this time 15 hours were classed as idle due to a machine breaking down. Also included in the number of hours are 4 hours' overtime spent working for an urgent job at the request of the customer.

How much should be charged to the production overhead account for the 4-week period?

- A \$216
- B \$240
- C \$288
- D \$360

The following information is to be used for questions 16 and 17.

A component has a reorder quantity of 2,000 units. The demand varies between 100 units and 500 units per week. The lead time is steady at two weeks.

- 16 The reorder level to ensure that stockouts are avoided should be:**

- A 200 units
- B 2,000 units
- C 1,000 units
- D 1,500 units

- 17 The average inventory level if stockouts are to be avoided is:**

- A 1,400 units
- B 1,200 units
- C 1,000 units
- D 2,000 units

- 18 The finishing department of Aquarius Ltd uses process costing for some of its products. 1,700kgs of material were input to the process at a cost of \$1,830. Two employees worked on this process. Each employee worked 40 hours per week for 4 weeks and was paid £8 per hour. Overheads are absorbed on the basis of £12 per labour hour. Aquarius Ltd expects a normal loss of 2% during this process, which it then sells for scrap at 50p per kg. 1,600kg of good output are produced.**

What is the value of the loss transferred to the income statement (to the nearest \$)?

\$

- 19 A company has four departments: Assembly, Finishing, Maintenance and Administration.**

Budgeted data for each department is shown below:

	<i>Assembly</i>	<i>Finishing</i>	<i>Maintenance</i>	<i>Administration</i>
Allocated overheads	\$90,000	\$100,000	\$10,000	\$10,000
Direct labour hours	5,000	6,000	Nil	Nil
Machine hours	10,000	3,000	2,000	Nil
% of time spent maintaining machinery	60	40	Nil	Nil
Number of staff	60	120	10	10

The most appropriate production overhead absorption rate to use in the Assembly department would be:

- A \$9.60 per machine hour
 - B \$9.90 per machine hour
 - C \$17.33 per labour hour
 - D \$18.33 per labour hour
- 20 You are putting together a price quote for a potential customer. To do so, you need to calculate the labour costs of the workers involved in the job. You have estimated that the job will take 210 labour hours of work. However, 20% of the total labour hours worked is always idle time.**

If the wage rate is \$7.50 per hour, what will be the total labour cost of the job?

- A \$1,575.00
 - B \$1,890.00
 - C \$1,968.75
 - D \$2,000.50
- 21 Which of the following are the basic principles of TQM?**
- (i) Get it right, first time.
 - (ii) Continuous improvement.
 - (iii) Customer focus.
- A (i), (ii) and (iii)
 - B (ii) and (iii)
 - C (i) and (ii)
 - D (iii) only

22 The cost of a product is given by the equation $y = 7,250 + 37x$. What is the total cost for 250 units?

- A \$15,275
- B \$16,500
- C \$17,500
- D \$18,275

23 The following information is relevant for a production process for Period 5:

Direct material cost	12,000
Direct labour cost	7,000
Overheads	5,000

The process produces joint products X and Y, which are then sold at the prices given below.

	<i>Product X</i>	<i>Product Y</i>
Units	3,000	9,000
Sales price per unit	\$7	\$5

How much cost would be incurred by Product Y if the joint costs were apportioned on market value?

- A \$7,636
- B \$8,000
- C \$16,000
- D \$16,364

24 Which of the following are characteristics of service costing?

- (i) Simultaneous production and consumption of the service
 - (ii) Homogeneity
 - (iii) Perishability
 - (iv) Tangible output
- A (i) and (ii)
 - B (ii) and (iii)
 - C (i), (ii) and (iv)
 - D (i) and (iii)

25 Information required by a business can be sourced both internally and externally. Which of the following is a benefit of internally sourced information?

- A wide range of information available
- B information can be accessed easily
- C information may not be accurate
- D sourcing information will be time consuming

- 26 The double entry for direct production materials returned to stores would be:**
- A Dr Finished goods control account Cr Material inventory account
 - B Dr Material inventory account Cr Work-in-progress control a/c
 - C Dr Production overhead control a/c Cr Work-in-progress control a/c
 - D Dr Material inventory account Cr Production overhead control a/c
- 27 A company uses components at the rate of 300 units per month, which are bought in at a cost of \$1.12 each from the supplier. It costs \$17.50 each time to place an order, regardless of the quantity ordered. The supplier offers a 4% discount on the purchase price for order quantities of 1,000 items or more. The current EOQ is 750 units. The total holding cost is 20% per annum of the value of inventory held.**
- What is the change in total cost to the company of moving to an order quantity of 1,000 units?
- A \$158 additional cost
 - B \$3 additional cost
 - C \$3 saving
 - D \$158 saving
- 28 Smith Inc operates a total absorption costing system. Budgeted fixed overheads for a period were \$375,000 and budgeted production was 15,000 units.**
- During the period, the actual fixed overheads amounted to \$418,000 and actual production was 17,000 units. Overheads have been:
- A under-absorbed by \$43,000
 - B under-absorbed by \$7,000
 - C over-absorbed by \$7,000
 - D over-absorbed by \$43,000
- 29 A company expects a normal loss of 10% of input in a process. Information for period 8 is as follows:**
- Material input 400 litres costing \$8 a litre
 Conversion costs \$4,800
 Output 330 litres
- Losses are identified when the process is 60% complete.
 There is no opening or closing work in progress.
- What is the value of the completed output?
- A \$515
 - B \$3,474
 - C \$6,897
 - D \$7,484

30 Inspection and testing of products would be classified as:

- A Prevention costs
- B Appraisal costs
- C Internal failure costs
- D External failure costs

31 How many stages are there in the Product life cycle?

- A 3
- B 4
- C 5
- D 6

32 The following data is to be presented in a pie chart:

Shirt sales for the London store

Red	50
Pink	45
Blue	90
Green	20
Black	100
White	200

What angle would the section be for the blue shirts?

- A 18°
- B 64°
- C 90°
- D 126°

33 Which of the following are included in the costs of holding inventory includes:

- (1) interest on capital held in tied up inventory
 - (2) the costs of ordering replacement inventory
 - (3) the cost of insurance.
- A (1) and (2) only
 - B (2) and (3) only
 - C (1) and (3) only
 - D All of them

The following data applies to questions 34 and 35.

A factory manufactures fizzy drinks. During October work commenced on 11,000 litres.

OWIP 2,000 litres

Costs incurred so far

 Materials \$3,000

 Conversion \$583

Degrees of completion

 Materials 100%

 Conversion 50%

Completed output 9,000 litres

CWIP 4,000 litres

Degree of completion:

 Materials 100%

 Conversion 50%

Costs incurred in Period 1:

 Materials \$10,461

 Conversion \$24,700

34 Using the FIFO method of valuing production, how many Equivalent units are there for the Conversion costs?

A 7,000

B 9,000

C 10,000

D 11,000

35 Using the FIFO method of valuing production, what is the value of the completed output?

A \$8,744

B \$23,947

C \$26,417

D \$30,000

(70 marks)

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

- 1 The following information has been provided to complete the cash budget for Armadillo Ltd for the three months ended 31st December.

Actual sales are:

- August \$10,000
- September \$15,000

Forecast sales are:

- October \$7,000
- November \$8,000
- December \$7,000

Based on previous experience the debt collection policy is:

- 50% of cash is received in the month of sale,
- 20% one month after sale
- The remainder two months after sale

Purchases

- Credit purchases were \$8,000 in August and are forecast to increase by 2% in September and then decrease by 1.5% for the last 3 months of the year. Payments are made one month after purchase.

Expenses

- Wages are forecast to be \$2,000 each month, rent for the year is \$6,000, paid in 12 equal monthly instalments. Depreciation of planting equipment is charged at 5% reducing balance. The carrying amount from the planting equipment at the start of the year was \$10,000. The depreciation is charged quarterly, the last charge was in September.

Bank loan

- A bank loan of \$50,000 has been negotiated and this will be paid into the business bank account in October. The principal element of the bank loan is to be repaid in 20 equal monthly instalments beginning in November. Interest is to be paid monthly at a rate of 8.4% per annum on the principal amount starting in October.

Required (round to the nearest whole \$):

- | | |
|--|-------------------|
| (a) Calculate the cash receipts for December | (3 marks) |
| (b) Calculate the cash payments for December | (2 marks) |
| (c) Calculate the cash payments for other expenses for December | (3 marks) |
| (d) Calculate the cash repayments for the loan for December | (2 marks) |
| | (10 marks) |

- 2 Wellyboot Manufacturing has two main products 'Blue boot' and 'Red boot'. Both products use the same common material and labour but in differing proportions. The annual budget is broken down into four separate 13 week periods. The following information relates to the 13 week period ended 31 March 20X3.

Marketing and production data

	'BB'	'RB'
Budgeted sales (volume in units)	850	1,250
Material content per unit (litres)	7	8
Direct labour (standard hours per unit)	10	6

Production labour

The 30 production workers work a 37 hour, five day week and are paid \$8 per hour. Any hours in excess of this are paid by the company at a premium of 25%.

Purchasing and inventory

It is estimated that the raw material cost will be \$12 per litre over the budget period.

Inventory levels at the start of the budget period are planned as:

Raw materials	Finished goods	
	'BB'	'RB'
2,400 litres	165	365

At the end of the period, inventory levels are planned as:

- Raw materials to cover 14 days production.
- Finished goods of 'BB' should be 7 days sales volume.
- Finished goods of 'RB' should be 14 days sales volume.
- Assume a five day week for both sales and production.

Required

Calculate (round your workings and answers to the nearest whole number):

- (a) Production budgets in units for 'Blue boot' and 'Red boot' products (3 marks)
 - (b) Raw materials purchases budget in litres (3 marks)
 - (c) Raw materials purchases budget (cost in \$) (1 marks)
 - (d) Production labour budget in hours (2 marks)
 - (e) Production labour budget (cost in \$) (1 marks)
- (10 marks)**

- 3 Bay Cleaning Ltd produce a standard industrial cleaning material which is sold in 5 litre drums. Bay's managing director has provided the operating statement for the last 12 months together with the original budget.

Bay Cleaning Ltd operating statement – year ended 31 December 20X3

	<i>Budget</i>	<i>Actual</i>
Production and sales volume (drums)	100,000	120,000
	\$	\$
Sales	500,000	630,000
Variable costs:		
Materials	210,000	264,000
Labour	75,000	94,000
Semi-variable costs:		
Power	70,000	83,500
Water	15,000	17,500
Other overheads	12,000	12,500
Fixed costs:		
Production	35,000	40,000
Administration	27,500	30,000
Selling and distribution	30,000	31,000
Operating profit	25,500	57,500

Additional information:

- The budgeted fixed element of power was \$10,000.
- The budgeted fixed element of water was \$5,000.
- The budgeted fixed element of other overheads was \$10,000.
- All other costs are either fixed or vary in direct proportion with the level of activity.
- There was no opening or closing inventory of finished goods.

Complete the table to show Bay's actual results for the period compared with the flexible budgetary allowance for the actual level of activity and detail all the relevant variances.

(½ mark for each correct cell)

	<i>Actual</i>	<i>Flexed budget</i>	<i>Variance F/A</i>
Production and sales volume (drums)	120,000	120,000	
	\$	\$	\$
Sales	630,000		
Variable costs			
Materials	264,000		
Labour	94,000		
Semi-variable costs			
Power	83,500		
Water	17,500		
Other overheads	12,500		
Fixed costs			
Production	40,000		
Administration	30,000		
Selling and distribution	31,000		
	_____	_____	_____
Operating profit	57,500		

(10 marks)

