DO NOT OPEN THIS QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO

CIMA

Performance Pillar

P1 – Performance Operations

23 May 2012 – Wednesday Morning Session

Instructions to candidates

You are allowed three hours to answer this question paper.
You are allowed 20 minutes reading time **before the examination begins** during which you should read the question paper and, if you wish, highlight and/or make notes on the question paper. However, you will **not** be allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
You are strongly advised to carefully read ALL the question requirements before attempting the question concerned (that is all parts and/or sub-questions).
ALL answers must be written in the answer book. Answers written on the question paper will **not** be submitted for marking.
You should show all workings as marks are available for the method you use.
ALL QUESTIONS ARE COMPULSORY.
Section A comprises 8 sub-questions and is on pages 2 to 5.
Section B comprises 6 sub-questions and is on pages 6 to 8.
Section C comprises 2 questions and is on pages 10 to 13.
Maths tables and formulae are provided on pages 15 to 18.
The list of verbs as published in the syllabus is given for reference on page 19.
Write your candidate number, the paper number and examination subject title in the spaces provided on the front of the answer book. Also write your contact ID and name in the space provided in the right hand margin and seal to close.
Tick the appropriate boxes on the front of the answer book to indicate which questions you have answered.

P1 – Performance Operations

TURN OVER

 The Chartered Institute of Management Accountants 2012

[You are advised to spend no longer than 36 minutes on this question.]

ANSWER *ALL* EIGHT SUB-QUESTIONS IN THIS SECTION

Instructions for answering Section A:

The answers to the eight sub-questions in Section A should ALL be written in your answer book.

Your answers should be clearly numbered with the sub-question number then ruled off, so that the markers know which sub-question you are answering. **For multiple choice questions, you need only write the sub-question number and the letter of the answer option you have chosen**. You do not need to start a new page for each sub-question.

For sub-questions **1.6** to **1.8** you should show your workings as marks are available for the method you use to answer these sub-questions.

Question One

1.1 The term 'budgetary slack' refers to the:

A Lead time between the preparation of the functional budgets and the approval of the master budget by senior management

B Difference between the budgeted output and the actual output

C Difference between budgeted capacity utilisation and full capacity

D Intentional over estimation of costs and/or under estimation of revenue in a budget

(2 marks)

1.2 Which of the following would NOT be associated with a company that is overtrading?

A A dramatic reduction in sales revenue

B A rapid increase in the outstanding overdraft amount

C A rapid increase in the volume of inventory

D A rapid increase in sales revenue

(2 marks)

1.3 A company has recorded the following activity levels and distribution costs for the previous three quarters:

Quarter	Volume Units	Total cost $
1	64,000	200,000
2	80,000	240,000
3	100,000	290,000

What will be the distribution costs in quarter 4 if the expected level of activity is 85,000 units? You should assume that the cost behaviour pattern in the previous three quarters will continue in quarter 4.

A $252,500

B $255,000

C $254,303

D $253,963

(2 marks)

1.4 A company has annual sales revenues of $48 million. The company earns a constant gross margin of 40% on sales. All sales and purchases are on credit and are evenly distributed over the year.

The following are maintained at a constant level throughout the year:

Inventory	$8 million
Trade receivables	$10 million
Trade payables	$5 million

The company's cash operating cycle to the nearest day is:

A 99 days

B 114 days

C 89 days

D 73 days

(2 marks)

Section A continues on the next page

1.5 A company is considering factoring as a way of managing its trade receivables. It currently has a balance outstanding on trade receivables of $250,000. It has annual sales revenue of $1,500,000 which occurs evenly throughout the year. Trade receivables are expected to continue at the same level for the next year.

The factor will advance 80% of invoiced sales and will charge interest at a rate of 10% per annum.

The interest charge for next year payable to the factor will be:

A $25,000

B $150,000

C $20,000

D $120,000

(2 marks)

1.6 A supplier has offered CB an early settlement discount of 3% if payment is made within 20 days of the invoice date. CB currently takes 58 days to pay this supplier.

Required:

Calculate, to the nearest 0.1%, the effective annual interest rate to CB of the early settlement discount. You should assume a 365 day year and use a compound interest methodology.

(3 marks)

1.7 A company has recently carried out a post-completion audit at the end of Year 2 of a project that had an original investment of $100,000. It is concerned that the estimated cash flows are not going to be achieved.

The cash flows that were forecast when the investment decision was originally taken were as follows:

	$
Year 1	60,000
Year 2	80,000
Year 3	(70,000)
Year 4	80,000
Year 5	60,000

The data from the post-completion audit show that the net cash outflow in Year 3 will be $90,000 and the cash inflows in Years 4 and 5 will be $60,000 and $40,000 respectively. You should assume that all cash flows with the exception of the original investment will arise at the end of the year.

The company's cost of capital is 12% per annum.

Required:

Demonstrate, using calculations, whether or not the project should be abandoned immediately. You should assume that there will be no additional costs associated with abandoning the project.

(3 marks)

1.8 RT is preparing the production budget for Product R and the material purchases budget for Material T for next year. Each unit of Product R requires 6 kg of Material T.

The estimated inventory at the beginning of next year for Product R is 6,000 units and the company wants to decrease the inventory held by 10% by the end of next year.

The estimated inventory at the beginning of next year for Material T is 60,000 kg and due to problems with the material supplier the closing inventory at the end of next year is to be increased to 75,000 kg.

The budgeted sales of Product R for next year are 80,000 units.

Required:

(i)   **Calculate** the production budget for Product R for next year.

(ii)   **Calculate** the material purchases budget for Material T for next year.

(4 marks)

(Total for Section A = 20 marks)

Reminder

All answers to Section A must be written in your answer book.
Answers to Section A written on the question paper will **not** be submitted for marking.

End of Section A. Section B begins on page 6

TURN OVER

SECTION B – 30 MARKS

[You are advised to spend no longer than 9 minutes on each sub-question in this section.]

ANSWER ALL SIX SUB-QUESTIONS. YOU SHOULD SHOW YOUR WORKINGS AS MARKS ARE AVAILABLE FOR THE METHOD YOU USE.

Question Two

(a) FG, an ink manufacturer, produces black ink by mixing three chemicals.

The standard material costs per litre of black ink are as follows:

			$
0.50 litres of Chemical A	@	$0.60 per litre	0.30
0.30 litres of Chemical B	@	$1.40 per litre	0.42
0.25 litres of Chemical C	@	$1.00 per litre	0.25
1.05			0.97

Actual data for April were as follows:

Output of black ink (000s litres)   3,300

Raw materials used	Quantity (000s litres)	Cost ($000)
Chemical A	2,144	1,120
Chemical B	824	1,040
Chemical C	792	620

Required:

Calculate the following variances for April:

(i)   The total material mix variance

(3 marks)

(ii)   The total material yield variance

(2 marks)

(Total for sub-question (a) = 5 marks)

(b)   A capital investment project has the following estimated cash flows and present values:

Year		Cash flow $	Discount factor @ 12%	Present value $
0	Initial investment	(100,000)	1.0	(100,000)
1-5	Contribution per annum	52,000	3.605	187,460
1-5	Fixed costs per annum	(25,000)	3.605	(90,125)
5	Residual value	20,000	0.567	11,340

Required:

(i)   **Calculate** the sensitivity of the investment decision to a change in the annual fixed costs.

(3 marks)

(ii) **State** TWO benefits to a company of using sensitivity analysis in investment appraisal.

(2 marks)

(Total for sub-question (b) = 5 marks)

(c)   A company currently operates from a number of different locations which have their own purchasing departments. Senior management are now considering whether to change to a system where all purchasing is carried out by a centralised purchasing department.

Required:

Explain the benefits that should result from the company using a centralised purchasing system.

(5 marks)

(d)   A company currently operates a 'top-down' budgeting system where senior managers impose budgets on departmental managers. It is now considering allowing departmental managers to participate in the setting of their own budgets.

Required:

Explain the arguments for and against the participation of departmental managers in the preparation of their budgets.

(5 marks)

TURN OVER

(e) A clothing retailer is considering which of three mutually exclusive advertising packages to use when it launches its new range of autumn fashion. The sales revenue from the range will depend on customer reaction to the chosen advertising package. There is a 25% chance that customer reaction will be good; a 40% chance that customer reaction will be moderate and a 35% chance that customer reaction will be poor.

The contribution, net of advertising costs, for each of the possible outcomes is as follows:

Customer reaction	Package A $000s	Package B $000s	Package C $000s
Good	700	900	800
Moderate	600	500	400
Poor	400	300	500

A market research company believes it can provide perfect information on potential customer reaction to the range.

Required:

Calculate, on the basis of expected value, the maximum amount that should be paid for the information from the market research company.

(5 marks)

(f) **Explain** THREE factors that a company should consider before deciding how to invest short term cash surpluses.

(5 marks)

(Total for Section B = 30 marks)

End of Section B. Section C begins on page 10

This page is blank

[You are advised to spend no longer than 45 minutes on each question in this section.]

ANSWER *BOTH* QUESTIONS IN THIS SECTION. EACH QUESTION IS WORTH 25 MARKS. YOU SHOULD SHOW YOUR WORKINGS AS MARKS ARE AVAILABLE FOR THE METHOD YOU USE.

Question Three

HB makes and sells a single product. The company operates a standard marginal costing system and a just-in-time purchasing and production system. No inventory of raw materials or finished goods is held.

Details of the budget and actual data for the previous period are given below.

Budget data

Standard production costs per unit:

		$
Direct material	8kg @ $10.80 per kg	86.40
Direct labour	1.25 hours @ $18.00 per hour	22.50
Variable overheads	1.25 hours @ $6.00 per direct labour hour	7.50

Standard selling price: $180 per unit
Budgeted fixed production overheads: $170,000
Budgeted production and sales: 10,000 units

Actual data

Direct material: 74,000 kg @ $11.20 per kg
Direct labour: 10,800 hours @ $19.00 per hour
Variable overheads: $70,000

Actual selling price: $184 per unit
Actual fixed production overheads: $168,000
Actual production and sales: 9,000 units

Required:

(a)   **Prepare** a statement using marginal costing principles that reconciles the budgeted profit and the actual profit. Your statement should show the variances in as much detail as possible.

(11 marks)

(b)

(i)   **Explain** why the variances used to reconcile profit in a standard marginal costing system are different from those used in a standard absorption costing system.

(4 marks)

(ii)   **Calculate** the variances that would be different and any additional variances that would be required if the reconciliation statement was prepared using standard absorption costing.

Note: Preparation of a revised statement is not required.

(4 marks)

(c)   **Explain** the arguments for the use of traditional absorption costing rather than marginal costing for profit reporting and inventory valuation.

(6 marks)

(Total for Question Three = 25 marks)

Section C continues on the next page

Question Four

DP is considering whether to purchase a piece of land close to a major city airport. The land will be used to provide 600 car parking spaces. The cost of the land is $6,000,000 but further expenditure of $2,000,000 will be required immediately to develop the land to provide access roads and suitable surfacing for car parking. DP is planning to operate the car park for five years after which the land will be sold for $10,000,000 at Year 5 prices. A consultant has prepared a report detailing projected revenues and costs.

Revenues
It is estimated that the car park will operate at 75% capacity during each year of the project.

Car parking charges will depend on the prices being charged by competitors. There is a 40% chance that the price will be $60 per week, a 25% chance the price will be $50 per week and a 35% chance the price will be $70 per week.

DP expects that it will earn a contribution to sales ratio of 80%.

Fixed Operating Costs
DP will lease a number of vehicles to be used to transport passengers to and from the airport. It is expected that the lease costs will be $50,000 per annum.

Staff costs are estimated to be $350,000 per annum.

The company will hire a security system at a cost of $100,000 per annum.

Inflation
All of the values above, other than the amount for the sale of the land at the end of the five year period, have been expressed in terms of current prices. The vehicle leasing costs of $50,000 per annum will apply throughout the five years and is not subject to inflation.

Car parking charges and variable costs are expected to increase at a rate of 5% per annum starting in Year 1.

All fixed operating costs **excluding** the vehicle leasing costs are expected to increase at a rate of 4% per annum starting in Year 1.

Other Information
The company uses net present value based on the expected values of cash flow when evaluating projects of this type.

DP has a money cost of capital of 8% per annum.

DP's Financial Director has provided the following taxation information:

- Tax depreciation is not available on either the initial cost of the land or the development costs.
- Taxation rate: 30% of taxable profits. Half of the tax is payable in the year in which it arises, the balance is payable in the following year.

All cash flows apart from the initial investment of $8,000,000 should be assumed to occur at the end of the year.

Required:

(a) **Evaluate** the project from a financial perspective. You should use net present value as the basis of your evaluation and show your workings in $000.

(14 marks)

(b) **Calculate** the internal rate of return (IRR) of the project.

(5 marks)

The main reason why discounted cash flow methods of investment appraisal are considered theoretically superior is that they take account of the time value of money.

Required:

(c) **Explain** the THREE elements that determine the 'time value of money' and why it is important to take it into consideration when appraising investment projects.

(6 marks)

(Total for Question Four = 25 marks)

(Total for Section C = 50 marks)

End of question paper
Maths tables and formulae are on pages 15 to 18

This page is blank

PRESENT VALUE TABLE

Present value of $1, that is $(1+r)^{-n}$ where r = interest rate; n = number of periods until payment or receipt.

Periods	Interest rates (r)									
(n)	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
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149

Periods	Interest rates (r)									
(n)	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	0.079	0.065
16	0.188	0.163	0.141	0.123	0.107	0.093	0.081	0.071	0.062	0.054
17	0.170	0.146	0.125	0.108	0.093	0.080	0.069	0.060	0.052	0.045
18	0.153	0.130	0.111	0.095	0.081	0.069	0.059	0.051	0.044	0.038
19	0.138	0.116	0.098	0.083	0.070	0.060	0.051	0.043	0.037	0.031
20	0.124	0.104	0.087	0.073	0.061	0.051	0.043	0.037	0.031	0.026

Cumulative present value of $1 per annum, Receivable or Payable at the end of each year for *n* years $\frac{1-(1+r)^{-n}}{r}$

Periods	Interest rates (*r*)									
(*n*)	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
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.679	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.878	13.590	12.462	11.470	10.594	9.818	9.129	8.514

Periods	Interest rates (*r*)									
(*n*)	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	7.793	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
16	7.379	6.974	6.604	6.265	5.954	5.668	5.405	5.162	4.938	4.730
17	7.549	7.120	6.729	6.373	6.047	5.749	5.475	5.222	4.990	4.775
18	7.702	7.250	6.840	6.467	6.128	5.818	5.534	5.273	5.033	4.812
19	7.839	7.366	6.938	6.550	6.198	5.877	5.584	5.316	5.070	4.843
20	7.963	7.469	7.025	6.623	6.259	5.929	5.628	5.353	5.101	4.870

FORMULAE

PROBABILITY

$A \cup B$ = **A or B**. $A \cap B$ = **A and B** (overlap).

$P(B \mid A)$ = probability of *B*, **given** *A*.

Rules of Addition

If *A* and *B* are mutually exclusive: $P(A \cup B) = P(A) + P(B)$

If *A* and *B* are not mutually exclusive: $P(A \cup B) = P(A) + P(B) - P(A \cap B)$

Rules of Multiplication

If *A* and *B* are *independent*:: $P(A \cap B) = P(A) * P(B)$

If *A* and *B* are **not** *independent*: $P(A \cap B) = P(A) * P(B \mid A)$

$E(X) = \sum$ (probability * payoff)

DESCRIPTIVE STATISTICS

Arithmetic Mean

$$\overline{x} = \frac{\sum x}{n} \quad\quad \overline{x} = \frac{\sum fx}{\sum f} \quad \text{(frequency distribution)}$$

Standard Deviation

$$SD = \sqrt{\frac{\sum(x - \overline{x})^2}{n}} \quad\quad SD = \sqrt{\frac{\sum fx^2}{\sum f} - \overline{x^2}} \quad \text{(frequency distribution)}$$

INDEX NUMBERS

Price relative = 100 * P_1/P_0 Quantity relative = 100 * Q_1/Q_0

Price:
$$\frac{\sum w * \left(\dfrac{P_1}{P_o}\right)}{\sum w} \times 100$$

Quantity:
$$\frac{\sum w * \left(\dfrac{Q_1}{Q_o}\right)}{\sum w} \times 100$$

TIME SERIES

Additive Model

Series = Trend + Seasonal + Random

Multiplicative Model

Series = Trend * Seasonal * Random

FINANCIAL MATHEMATICS

Compound Interest (Values and Sums)
Future Value S, of a sum of X, invested for n periods, compounded at $r\%$ interest

$$S = X[1 + r]^n$$

Annuity
Present value of an annuity of $1 per annum receivable or payable for n years, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r}\left[1 - \frac{1}{[1+r]^n}\right]$$

Perpetuity
Present value of $1 per annum, payable or receivable in perpetuity, commencing in one year, discounted at $r\%$ per annum:

$$PV = \frac{1}{r}$$

LEARNING CURVE

$$Y_x = aX^b$$

where:
Y_x = the cumulative average time per unit to produce X units;
a = the time required to produce the first unit of output;
X = the cumulative number of units;
b = the index of learning.

The exponent b is defined as the log of the learning curve improvement rate divided by log 2.

INVENTORY MANAGEMENT

Economic Order Quantity

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

where: C_o =   cost of placing an order
          C_h =   cost of holding one unit in inventory for one year
          D   =   annual demand

LIST OF VERBS USED IN THE QUESTION REQUIREMENTS

A list of the learning objectives and verbs that appear in the syllabus and in the question requirements for each question in this paper.

It is important that you answer the question according to the definition of the verb.

LEARNING OBJECTIVE	VERBS USED	DEFINITION
Level 1 - KNOWLEDGE		
What you are expected to know.	List	Make a list of
	State	Express, fully or clearly, the details/facts of
	Define	Give the exact meaning of
Level 2 - COMPREHENSION		
What you are expected to understand.	Describe	Communicate the key features
	Distinguish	Highlight the differences between
	Explain	Make clear or intelligible/State the meaning or purpose of
	Identify	Recognise, establish or select after consideration
	Illustrate	Use an example to describe or explain something
Level 3 - APPLICATION		
How you are expected to apply your knowledge.	Apply	Put to practical use
	Calculate	Ascertain or reckon mathematically
	Demonstrate	Prove with certainty or to exhibit by practical means
	Prepare	Make or get ready for use
	Reconcile	Make or prove consistent/compatible
	Solve	Find an answer to
	Tabulate	Arrange in a table
Level 4 - ANALYSIS		
How are you expected to analyse the detail of what you have learned.	Analyse	Examine in detail the structure of
	Categorise	Place into a defined class or division
	Compare and contrast	Show the similarities and/or differences between
	Construct	Build up or compile
	Discuss	Examine in detail by argument
	Interpret	Translate into intelligible or familiar terms
	Prioritise	Place in order of priority or sequence for action
	Produce	Create or bring into existence
Level 5 - EVALUATION		
How are you expected to use your learning to evaluate, make decisions or recommendations.	Advise	Counsel, inform or notify
	Evaluate	Appraise or assess the value of
	Recommend	Advise on a course of action

Performance Pillar

Operational Level Paper

P1 – Performance Operations

May 2012

Wednesday Morning Session