Answers

SECTION A

1 D
2 A
3 A
4 B
5 D
6 C
7 C
8 B
9 C
10 D
11 A
12 A
13 C
14 B
15 B
16 D
17 C
18 B
19 D
20 B

Workings for calculation MCQs:

10 (£17,600 + 450 + 760 + 2,780 + 1,100)

14 {£22/unit – 11·6 – [(£7,200 + 16,400) ÷ 4,000 units]} x 100 ÷ 22

15 [200 units x (£7·5 – 4·8)/unit]

16 [(630 ÷ 0·9 hours) x £12/hour)]

17 {[£216,720 – (1,200 units x £2/unit)] ÷ (24,000 – 1,200 units)}

18 {£194,860 ÷ [11,400 + (1,200 x 0·6) units]}

20 [£65,124 ÷ (30 x 9 x 15 x 4 x 0·6 customers)]

SECTION B

1 **(a)** Discounting cash flows

The principle of discounting cash flows in capital investment project appraisal is on the basis that an amount of cash received sometime in the future is worth less than the same amount of cash received now. This is because of its earning capacity over time and is referred to as the time value of money.

(b) Net present value

Cash flows expected at different times over the life of a capital investment project are first estimated. The net present value method of capital investment project appraisal then requires the estimated cash flows to be discounted.

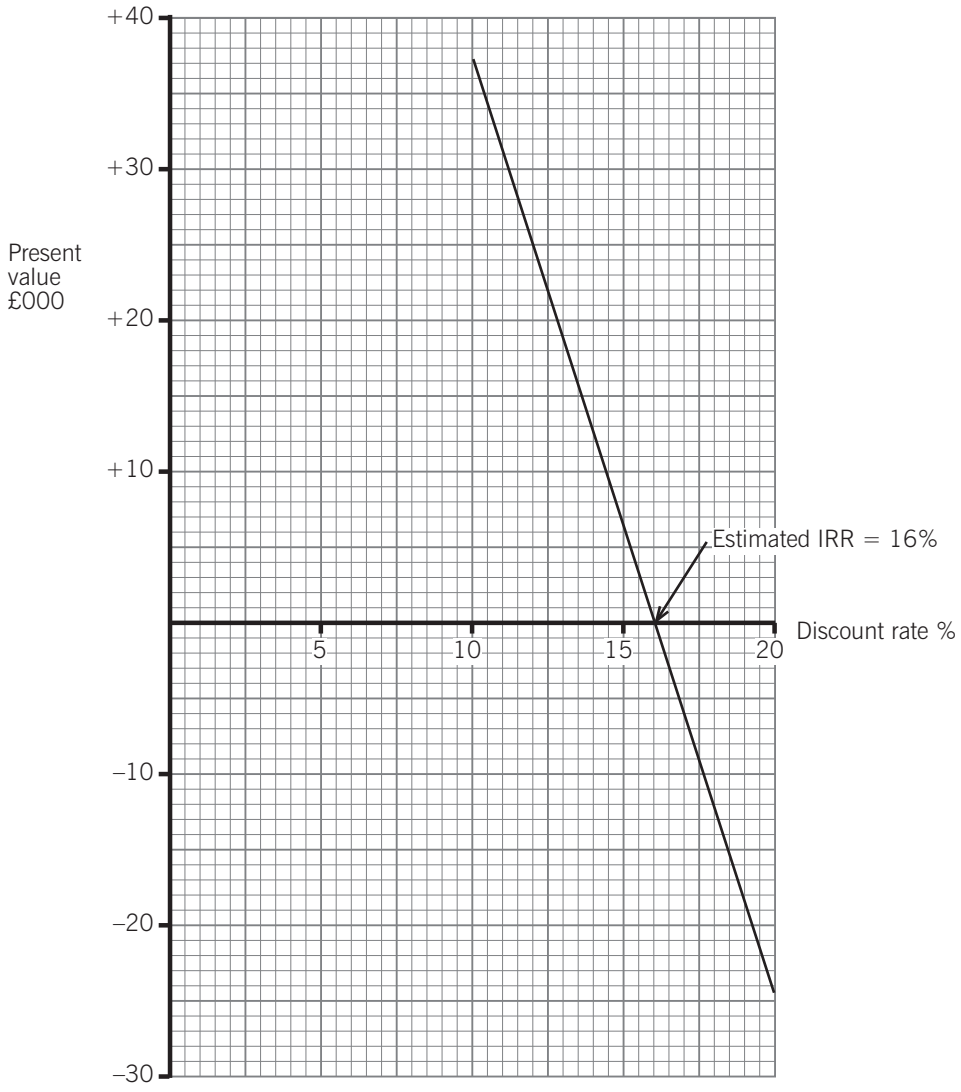
Discounting applies a factor to a future expected cash flow to reduce it to an equivalent value now. The factor applied will depend both upon the interest rate per time period and the number of time periods into the future when the cash flow is expected to occur. The higher the interest rate, and the greater the number of periods ahead, the lower will be the equivalent cash value now and vice versa.

The net present value method discounts all the cash flows (both inflows and outflows), expected to arise during the lifetime of the investment, using the required rate of return (cost of capital %) as the discount rate. A different factor will be applied to each period's net cash flow.

If the net total of the discounted cash flows (referred to as the net present value) is positive (i.e. if the present value of the cash inflows exceeds the present value of the cash outflows), the investment is acceptable. If it is negative, the investment is unacceptable.

(c) Workings:
NPV at 10% = 261·3 – 224 = 37·3
NPV at 20% = 199·6 – 224 = (24·4)

Graph of investment project NPVs:



2 (a) Purchase quantity of Material X

Usage = (0·72 ÷ 0·9) x 26,000
= 20,800 kilograms

Purchase = 20,800 – 1,000
= 19,800 kilograms

(b) (i) Economic order quantity of Material Y

= √[(2 x 45 x 120,000) ÷ 0.3]
= 6,000 litres

(ii) Reorder level of Material Y

= [(120,000 ÷ 50) x 1·5] + 2,500
= 6,100 litres

(iii) Annual ordering cost of Material Y

= (120,000 ÷ 6,000) x 45
= £900

(iv) Annual holding cost of Material Y

[(6,000 ÷ 2) + 2,500] x 0·3
= £1,650

3 (a) (i) Contribution/sales ratio

Contribution per unit = 200 – (120 + 16)
= £64

Contribution sales ratio = (64 ÷ 200) x 100%
= 32%

(ii) Total fixed costs

Fixed costs = contribution at break-even point

Therefore £120,000 x 0·32
= £38,400

(b) Contribution per unit = fixed costs ÷ break-even sales units
= £39,000 ÷ 500 units
= £78 per unit

4 (a) Reapportionment of service cost centre overheads

	Cost centre				
	P1	P2	P3	S1	S2
	£	£	£	£	£
Allocated & apportioned	176,860	96,250	134,770	42,150	37,400
Reapportionment:					
S2	7,262	9,078	18,155	2,905	(37,400)
S1	15,769	11,264	18,022	(45,055)	
	199,891	116,592	170,947		

Example workings:
Reapportionment of S2: P1 = £37,400 x 20 employees in P1 ÷ 103 total employees (excl S2 itself)
Reapportionment of S1: P1 = £45,055 x 4,970 MRNs ÷ 14,200 total MRNs

(b) (i) Production overhead absorption

	Cost centre		
	P1	P2	P3
Absorbed	8,250 m/c hrs at £24·60 = £202,950	8,440 lab hrs at £13·40 = £113,096	15,990 lab hrs at £10·80 = £172,692

(ii) Production overhead over/under absorption

	Cost centre		
	P1	**P2**	**P3**
Absorbed	£202,950	£113,096	£172,692
Actual	£199,891	£116,592	£170,947
	£3,059 over absorbed	£3,496 under absorbed	£1,745 over absorbed

ACCA Certified Accounting Technician Examination – Paper T4
Accounting for Costs **June 2007 Marking Scheme**

						Marks
Section A 2 marks each question						40
Section B						
1	**(a)**	why			2	
	(b)	cash flow & discounting		2		
		NPV		2		
		decision		2	6	
	(c)	**(i)** axes & labelling		3		
		plotting		3	6	
		(ii) estimate			2	16
2	**(a)**	wastage		2		
		demand		1		
		stock adjustment		1	4	
	(b)	**(i)** EOQ			4	
		(ii) weekly demand		$1\frac{1}{2}$		
		lead time		1		
		safety stock		$1\frac{1}{2}$	4	
		(iii) orders		2		
		value		1	3	
		(iv) av stock (excl safety)		1		
		safety stock		1		
		value		1	3	18
3	**(a)**	**(i)** contribution per unit		1		
		ratio		2	3	
		(ii) fixed costs			3	
	(b)	formula		1		
		application		3	4	10
4	**(a)**	S2 reapportionment		4		
		S1 reapportionment		3	7	
	(b)	**(i)** 1 for each			3	
		(ii) 1 for each figure		3		
		1 for each 'over'/'under'		3	6	16
						100