

Additional Specimen Questions and Answers – Topic 10

CERTIFICATE IN ACCOUNTING

Level 3

Subject Code: 3012

QUESTION 1

Fleet Amateur Football Club is seeking to raise funds in order to improve facilities. Two suggestions have been made:

- (i) Stage a pop concert at the Club. The group would charge a fee of £8,000 for their performance and advertising would cost a further £4,000. Tickets would be sold for £25 each and variable costs would be £10 for each concert goer.
- (ii) Reduce the admissions price from £8 per game to £6 per game and spend £2,000 per year on advertising the Club. There are 21 home games and existing costs (which would be unaffected) amount to £12,000 per year and £1 per spectator per game. The current average attendance per home game is 450 and it is believed that this would increase substantially.

REQUIRED

- (a) Calculate the number of concert goers required for the concert to break even. (4 marks)
- (b) Calculate the number of concert goers required to produce a profit of £12,000. (3 marks)
- (c) If the group increased their fee to £14,000:
 - (i) calculate the number of concert goers then required for the concert to break even (2 marks)
 - (ii) calculate the number of concert goers then required to produce a profit of £12,000. (1 mark)
- (d) Calculate the annual profit made currently on the Club's 21 home games. (5 marks)
- (e) Calculate the increase in the average attendance per game, after the ticket price has been reduced, necessary for the profit to remain unchanged. (6 marks)

Fleet Amateur Football Club has a social club, which opens on match days as well as during the week.

REQUIRED

- (f) Give **two** reasons why increased attendances might increase profits from the social club. (4 marks)

(Total 25 marks)

QUESTION 2

Pyle Ltd is considering investing in two projects, whose cash flows have been estimated as follows:

	Project D	Project E
	£	£
Initial cash outflow	100,000	150,000
Cash inflows:		
Year 1	20,000	20,000
Year 2	40,000	20,000
Year 3	40,000	20,000
Year 4	40,000	40,000
Year 5	10,000	60,000
Year 6	-	60,000
Year 7	-	60,000

Pyle Ltd's cost of capital is 10% and therefore the applicable discount factors are as follows:

Year 1	0.909
Year 2	0.826
Year 3	0.751
Year 4	0.683
Year 5	0.620
Year 6	0.565
Year 7	0.513

REQUIRED

Calculate:

(a) The total net cash inflow expected from:

- (i) Project D
- (ii) Project E.

(4 marks)

(b) The payback period for:

- (i) Project D
- (ii) Project E.

(7 marks)

(c) The net present value for:

- (i) Project D
- (ii) Project E.

(10 marks)

"If a project does not pay back at all it is not worth calculating its net present value as this is certain to be negative. Therefore the net present value technique is not much use for project appraisal".

REQUIRED

(d) Briefly discuss the above statement.

(4 marks)

(Total 25 marks)

ANSWERS

QUESTION 1

(a) Contribution per concert goer:

$$\text{Ticket Price} - \text{Variable cost} = 25 - 10 = \text{£}15$$

Fixed costs:

	£
Fee	8,000
Advertising	<u>4,000</u>
	<u>12,000</u>

$$\therefore \text{Break even ticket sales} = 12,000/15 = \underline{800}$$

(4 marks)

$$(b) \frac{\text{Fixed Costs} + \text{Profit}}{\text{Contribution}} = \frac{12,000 + 12,000}{15} = \underline{1,600}$$

(3 marks)

$$(c) (i) \text{ Break even ticket sales} = \frac{14,000 + 4,000}{15} = \underline{1,200}$$

(2 marks)

$$(ii) \frac{\text{Fixed Costs} + \text{Profit}}{\text{Contribution}} = \frac{18,000 + 12,000}{15} = \underline{2,000}$$

(1 mark)

(d) Total Contribution	$21(6-1) \times 450$	£ 66,150
Less fixed costs		<u>12,000</u>
\therefore Annual profit	=	<u>54,150</u>

(5 marks)

$$(e) \text{ Necessary attendance} = \frac{54,150 + 14,000}{21(6-1)} = 549$$
$$\therefore \text{Increase} = 549 - 450 = \underline{199}$$

(6 marks)

(f) Bigger attendance should mean increased sales
Lower match fee leaves more to spend.

(4 marks)

(Total 25 marks)

QUESTION 2

	£
(a) (i) Inflows (20,000 + 40,000 + 40,000 + 40,000 + 10,000)	150,000
Outflow	<u>100,000</u>
Total net cash inflow (Project D)	<u>50,000</u>

	£
(ii) Inflows {(20,000 x 3) + 40,000 + (60,000 x 3)}	280,000
Outflow	<u>150,000</u>
Total net cash inflow (Project E)	<u>130,000</u>

(4 marks)

(b) (i) Payback period (Project D): as 20,000 + 40,000 + 40,000 = 100,000
then 3 years

(ii) Payback period (Project E): as 20,000 + 20,000 + 20,000 + 40,000 + ($\frac{5}{6}$ x 6,000) = 150,000
then 4 years 10 months (assuming even cash flows)

NB If year end cash flows, then payback period would be 5 years

(7 marks)

(c) (i)

Year	(Outflow)/Inflow £	Factor	PV £
0	(100,000)	1.000	(100,000)
1	20,000	0.909	18,180
2	40,000	0.826	33,040
3	40,000	0.751	30,040
4	40,000	0.683	27,320
5	10,000	0.620	<u>6,200</u>
NPV (Project D)			<u>14,780</u>

(ii)

Year	(Outflow)/Inflow £	Factor	PV £
0	(150,000)	1.000	(150,000)
1	20,000	0.909	18,180
2	20,000	0.826	16,520
3	20,000	0.751	15,020
4	40,000	0.683	27,320
5	60,000	0.620	37,200
6	60,000	0.565	33,900
7	60,000	0.513	<u>30,780</u>
NPV (Project E)			<u>28,920</u>

(10 marks)

(d) It is correct to state that any project that doesn't pay back must have a negative present value. However, many projects which do pay back will also have a negative present value and would therefore not be worthwhile. It is therefore useful to employ the net present value technique where the payback period is less than the life of the project.

(4 marks)

(Total 25 marks)