**Question 4**

**Investment appraisal**

The Pumping Iron Fitness Club is planning to invest in additional facilities. The Club is considering two projects, only one of which will be selected.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Project A** | | **Project B** | |
|  | Net Cash Inflow | Profit | Net Cash Inflow | Profit |
|  | £ | £ | £ | £ |
| Year 1 | 9,300 | 9,150 | 9,750 | 9,500 |
| Year 2 | 12,600 | 12,500 | 12,825 | 12,600 |
| Year 3 | 19,275 | 19,100 | 19,650 | 19,400 |
| Year 4 | 12,300 | 12,220 | 12,600 | 12,550 |
| Year 5 | 6,075 | 6,000 | 5,375 | 5,150 |

The initial cost of Project A would be £43,500, while Project B would be £54,000.

The Club asks you to advise them on whether they should select Project A or Project B.

In order to advise them, you decide to carry out an investment appraisal of both projects.

1. For **each** of the investment appraisal methods below, state which project you recommend that the Club should select:
2. Payback
3. Accounting rate of return **12**
4. Explain why it is important that the Club gets the investment decision correct. **2**
5. List two advantages and two disadvantages of using the payback method of   
   investment appraisal. **4**

**Total marks (18)**

**Question 4 — solution**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| (a) | (i) | **Year** | **Cumulative**  **Cash Flow (A)**  **£** |  | **Cumulative**  **Cash Flow (B)**  **£** |  |
|  |  | **1** | 9,300 |  | 9,750 |  |
|  |  | **2** | 21,900 |  | 22,575 |  |
|  |  | **3** | 41,175 |  | 42,225 |  |
|  |  | **4** | 53,475 | **(1)** | 54,825 | **(1)** |

|  |  |  |
| --- | --- | --- |
|  |  | Payback (A) 3 years and (2,325/12,300 x 12) months  3 years and 2 months **(1)** |
|  |  | Payback (B) 3 years and (11,775/12,600 x 12) months  3 years and 11 months **(1)** |
|  |  | Choose Project A **(1)** |

|  |  |  |
| --- | --- | --- |
| (ii) | **Method 1** |  |
|  |  | £ |
|  | Average Profit (A) | 9,150 |
|  |  | 12,500 |
|  |  | 19,100 |
|  |  | 12,220 |
|  |  | 6,000 |
|  |  | 58,970/5 = £11,794 **(1)** |
|  |  |  |
|  | Rate of Return | 11,794/43,500 x 100 = 27·1% **(2)** |
|  |  | £ |
|  | Average Profit (B) | 9,500 |
|  |  | 12,600 |
|  |  | 19,400 |
|  |  | 12,550 |
|  |  | 5,150 |
|  |  | 59,200/5 = £11,840 **(1)** |
|  |  |  |
|  | Rate of Return | 11,840/54,000 x 100 = 21·9% **(2)** |
|  |  | **12** |
|  | Choose Project A **(1)** |  |

(b) High capital outlay; hard to reverse decision once you have started; no immediate gain;   
demand for funds will always exceed funds available. **(any two for 1 mark each)**

**2**

(c) Advantages — easy to understand; simple to compute; biases projects away from

longer-term projects where the risk is greater; uses cash flow as main factor.  
**(any two for 1 mark each)** **(2)**

Disadvantages — ignores income after the payback period; ignores the time value of money; ignores the timing of cash flows. **(any two for 1 mark each)** **(2)**

**4**

**Total marks (18)**