**Question 2**

**Business analysis — Investment ratios**

Orion plc, Mercury plc and Saturn plc have the following equity structures.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Orion plc** | **Mercury plc** | **Saturn plc** |
|  | £000 | £000 | £000 |
| **Authorised Share Equity** |  |  |  |
| Ordinary Shares of £0·50 each | 1,000 | 1,000 | 1,000 |
| 10% Preference Shares of £1 each | 500 | 300 | 300 |
| 8% Debentures | 500 | 300 | 200 |
| **Issued Share Equity** |  |  |  |
| Ordinary Shares of £0·50 each | 500 | 800 | 400 |
| 10% Preference Shares of £1 each | 500 | 200 | 200 |
| 8% Debentures | 500 | 300 | 200 |

1. From the information above you are required to:
2. **calculate** the gearing ratio for each company
3. **state** which company has the lowest gearing ratio
4. **state** the company which would give the best return to the ordinary shareholders in periods of high profit (justify your choice)
5. **discuss** the effect on the return to the ordinary shareholders of Orion plc if the remainder of the ordinary shares were issued **10**
6. At 31 December Year 5 **each** company had:
7. earned a Profit for the Year of £150,000
8. estimated corporation tax at the rate of 25%
9. retained 20% of their profit within the company

You are required to calculate for each company:

1. total profit available for distribution to the ordinary shareholders
2. total dividend to be paid to the ordinary shareholders
3. total percentage dividend to be paid to the ordinary shareholders
4. ordinary dividend per share
5. earnings per share **24**
6. The market price of each ordinary share at 31 December Year 5 was as follows:

|  |  |
| --- | --- |
| Orion plc | £0·70 |
| Mercury plc | £0·60 |
| Saturn plc | £0·80 |

You are required to **calculate** for **each** company:

1. price/earnings ratio
2. dividend yield **6**

**Total marks (40)**

**Question 2 — solution**

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| (a) | (i) | **Current Gearing Ratio for issued Equity** |  | | |  | |  | |  |  | |  |  |
|  |  |  | £000 | | |  | | £000 | |  | £000 | |  |  |
|  |  |  | Orion plc | | |  | | Mercury plc | |  | Saturn plc | |  |  |
|  |  | Preference Shares + Debentures | 500 + 500 | | |  | | 200 + 300 | |  | 200 + 200 | |  |  |
|  |  | Ordinary Shares | 500 | | |  | | 800 | |  | 400 | |  |  |
|  |  |  |  | | |  | |  | |  |  | |  |  |
|  |  |  | 2:1 | | | **(1)** | | 0·625:1 | | **(1)** | 1:1 | | **(1)** |  |
|  |  |  |  | | |  | |  | |  |  | |  |  |
|  | (ii) | Mercury plc has the lowest gearing ratio. | |  | |  | |  | |  |  | | **(1)** |  |
|  |  |  | |  | |  | |  | |  |  | |  |  |
|  | (iii) | In periods of high profits, the ordinary shareholders in: | | | | | |  | |  |  | |  |  |
|  |  |  | | | | | | | | | | |  |  |
|  |  | Orion plc shareholders would receive the best return in periods of high profits **(1)** because a small percentage of profits would be taken up paying Debenture Interest and  Preference Dividends leaving more profit available to the ordinary shareholders. **(1)**  Orion plc has the highest gearing ratio. **(1)** | | | | | | | | | | |  |  |
|  |  |  | | |  | |  | |  | |  |  |  |  |
|  |  |  | | | Orion plc | |  | |  | |  |  |  |  |
|  | (iv) | Preference Shares + Debentures | | | 500 + 500 | |  | |  | |  |  |  |  |
|  |  | Ordinary Shares | | | 1,000 | |  | |  | |  |  |  |  |
|  |  |  | | |  | |  | |  | |  |  |  |  |
|  |  |  | | | 1:1 | |  | | **(1)** | |  |  |  |  |
|  |  |  | | |  | |  | |  | |  |  |  |  |
|  |  | The gearing ratio in Orion plc would change from 2:1 to 1:1;  this results in the gearing ratio changing to lower gearing.  Ordinary shareholder will receive lower dividends, as there are more shareholders to receive a share of the profits. | | | | | | | **(1)**  **(1)** | |  |  |  |  |
|  |  |  | | |  | |  | |  | |  |  |  |  |  |
|  |  |  | | |  | |  | |  | |  |  |  | **10** | |
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| (b) | (i) | **Profit Available for Distribution to Ordinary Shareholders**: | | | | | | | | | |  |
|  |  |  |  |  | | | | | | |  |  |
|  |  |  | **Orion plc** |  | | **Mercury plc** | |  | | **Saturn plc** | | |
|  |  | Operating Profit | £150,000 |  | £150,000 | |  | | £150,000 | |  |  |
|  |  | Less Debenture Interest | £40,000 | **(1)** | £24,000 | | **(1)** | | £16,000 | | **(1)** |  |
|  |  |  | £110,000 |  | £126,000 | |  | | £134,000 | |  |  |
|  |  | Less Corporation Tax (25%) | £27,500 | **(1)** | £31,500 | | **(1)** | | £33,500 | | **(1)** |  |
|  |  | Profit for the Year after Tax | £82,500 |  | £94,500 | |  | | £100,500 | |  |  |
|  |  | Less Preference Dividends (10%) | £50,000 | **(1)** | £20,000 | | **(1)** | | £20,000 | | **(1)** |  |
|  |  | Profit available to Ord. Shareholders | £32,500 |  | £74,500 | |  | | £80,500 | |  |  |
|  |  | Retained Profit (20%) | £6,500 |  | £14,900 | |  | | £16,100 | |  |  |
|  |  |  |  |  |  | |  | |  | |  |  |
|  | (ii) | **Total Dividend Paid to Ordinary**  **Shareholders:** | £26,000 | **(1)** | £59,600 | | **(1)** | | £64,400 | | **(1)** |  |

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|  | (iii) | **Total percentage Dividend to be paid to Shareholders** |  |  |  | | |  |
|  |  | Total Dividend Paid × 100 | £26,000 | x 100 | £59,600 | x 100 | 64,400 | x 100 |
|  |  | Ordinary Share Equity | 500,000 |  | 800,000 |  | 400,000 |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  | 5·20% | **(1)** | 7·45% | **(1)** | 16·10% | **(1)** |

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|  | (iv) | **Ordinary Dividend per Share = Total Dividend/Number of Ordinary Shares** | | | | | | |  | | |  | | | |  | | | | | |
|  |  |  | | | | | | | | | | | | | | | | | | | |
|  |  | Total Dividend | | £26,000 |  | | £59,600 |  | | £64,400 |  | |  |  |  |  |  |  |  |  |  |
|  |  | No of Ordinary Shares | 1,000,000 | |  | 1,600,000 | |  | | 800,000 |  | |  |  |  |  |  |  |  |  |  |
|  |  |  | |  |  | |  |  | |  |  | |  |  |  |  |  |  |  |  |  |
|  |  | Ordinary Dividend per share | | 2·60p | **(1)** | | 3·73p | **(1)** | | 8·05p | **(1)** | |  |  |  |  |  |  |  |  |  |

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|  | (v) | **Earnings per Share** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Profit for the Year after Tax − Preference Dividends Number of Ordinary Shares | | = £82,500 − |  | £94,500 − |  | £100,500 − |  |  |  |  |  |  |  |  |  |
| £50,000 | **(1)** | £20,000 | **(1)** | £20,000 | **(1)** |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  | £32,500 |  | £74,500 |  | £80,500 |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 1,000,000 |  | 1,600,000 |  | 800,000 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Earnings per Share |  | 3·25p per share | **(1)** | 4·66p per share | **(1)** | 10·06p per share | **(1)** |  |  |  |  |  |  |  |

**24**

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| (c) | (i) | **Price Earnings Ratio** |  |  |  |  |  |  |
|  |  | Market Price per Share | £0·70 |  | £0·60 |  | £0·80 |  |
|  |  | Earnings per Share | 3·25p |  | 4·66p |  | 10·06p |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  | 21·54 times | **(1)** | 12·88 times | **(1)** | 7·95 times | **(1)** |

**6**

|  |  |  |  |  |  |  |  |  |  |
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|  | (ii) | **Dividend Yield** |  |  | | |  | | |
|  |  |  |  |  | | |  | | |
|  |  | Ordinary Dividend per Share × 100 | 2·6 × 100 |  | 3·73 × 100 |  | 8·05 × 100 |  | |
|  |  | Market Price per Share | 70 |  | 60 |  | 80 |  | |
|  |  |  |  |  |  |  |  | |  |
|  |  |  | 3·71% | **(1)** | 6·22% | **(1)** | 10·06% | | **(1)** |

**Total marks (40)**