

**MARK SCHEME for the May/June 2011 question paper
for the guidance of teachers**

9771 BUSINESS AND MANAGEMENT

9771/02

Paper 2 (Strategic Decisions), maximum raw mark 100

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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- 1 'RR is currently considering whether to invest in the development of a modified engine for trainer aircraft.' (lines 74–75)

Table 2: Estimated net annual cash flows for the modified engine in trainer aircraft

| End of year | Net annual cash flow (£ million) | Discount table/factor 5% |
|--------------------|---|-------------------------------------|
| 0 | (21) | 1.00 |
| 1 | 2 | 0.95 |
| 2 | 4 | 0.91 |
| 3 | 9 | 0.86 |
| 4 | 18 | 0.82 |

- (a) (i) Using the data in Table 2, calculate the Accounting/Average Rate of Return (ARR). [3]

Total addition to net cash inflow = £33m – 21m = £12m [1]
Average addition to net cash inflow = £12m/4 = £3m [1]
ARR = £3m/£21m × 100 = 14.29% (accept 14.3%) [3]
Correct answer with no working out = full marks
Correct calculation excluding the cost of the project [2]
Correct formula [1]

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- (ii) Using the data in Table 2, calculate the Net Present Value (NPV) at a discount rate of 5%. Discount factor: Year 0 = 1.00; Year 1 = 0.95; Year 2 = 0.91; Year 3 = 0.86; Year 4 = 0.82

| Year | Net cash flow (£ million) | Present value (£ million) |
|--|--------------------------------------|--------------------------------------|
| 0 | (21) | (21) |
| 1 | 2 | 1.9 |
| 2 | 4 | 3.64 |
| 3 | 9 | 7.74 |
| 4 | 18 | 14.76 |
| Total net cash flow before discounting | 12 | |
| Present values years 1–4 | | 28.04 |
| Net present value | | 7.04 |

Total discounted cash inflows: £28.04m [2]

All present values calculated [1]

Original investment: £21m

Net present value: £28.04 – £21 = £7.04m [3]

(Correct answer with no working out = full marks)

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(b) With reference to part (a), comment on the usefulness of these investment appraisal results for Rolls-Royce. [6]

| | Knowledge AO1 2 marks | Application AO2 4 marks |
|----------------|---|---|
| Level 2 | 2 marks Candidate shows good knowledge of the ARR and NPV concepts and/or values. | 3–4 marks Candidate explains the usefulness of these ARR/NPV results to RR using case context. |
| Level 1 | 1 mark Candidate shows some knowledge of the ARR and/or NPV concepts. | 1–2 marks Candidate uses limited case context and makes some reference to the usefulness of the results obtained to RR. |

Own Figure Rule (OFR) applies to comments made.

ARR

- Definition/formula.
- ARR is 14.29% and this is the annual profit expressed as a return on initial capital invested.
- Well above the level of return for savings (base rate comparison).
- The value suggests this is a worthwhile project for RR.

NPV

- Definition/formula.
- The project earns £7.04m in today's money terms.
- If the finance needed can be borrowed for 5% or less, then the investment will be profitable.
- The NPV suggests that RR should proceed with the investment.

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(c) Apart from investment appraisal results, analyse two factors Rolls-Royce should consider before making a decision to develop a modified engine for trainer aircraft.

[13]

| | Knowledge AO1 2 marks | Application AO2 5 marks | Analysis AO3 6 marks |
|----------------|--|---|--|
| Level 3 | | 5 marks Candidate fully engages with the case context. | 5–6 marks Candidate develops analytical arguments. |
| Level 2 | 2 marks Candidate identifies 2 relevant factors. | 3–4 marks Candidate links case material to their answer. | 3–4 marks Developed analysis of points. |
| Level 1 | 1 mark Candidate identifies 1 relevant factor. | 1–2 marks Candidate makes a limited attempt to apply knowledge to the case study. | 1–2 marks Weak analysis of ideas; failure to develop points. |

- Likely demand.
- Market Research.
- How much of an improvement is it compared with the current engine?
- What are competitors doing (General Electric and/or Pratt & Whitney)?
- Do the development costs need to be borrowed or come from retained profit?
- Is this a priority project (corporate strategy)?
- Consideration of external and internal factors.
- Business and consumer confidence.
- Availability of engineers.
- ARA.
- If more than 2 factors are reviewed, only award marks for the first two factors analysed.
- If only 1 factor is considered then the maximum mark is 9.

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Section 2

| | Knowledge AO1 3 marks | Application AO2 6 marks | Analysis AO3 8 marks |
|----------------|---|---|--|
| Level 3 | | 5–6 marks Arguments are consistently based upon precise case context. | 6–8 marks Candidate fully develops analytical arguments. |
| Level 2 | 2–3 marks Candidate shows detailed knowledge. | 3–4 marks Candidate makes a good attempt to apply knowledge to the specific case scenario. | 3–5 marks Developed analysis of points. |
| Level 1 | 1 mark Candidate shows some knowledge. | 1–2 marks Candidate makes very limited attempt to apply knowledge to the specific case study. | 1–2 marks Weak analysis of the ideas; failure to develop points. |

| | Evaluation Descriptor AO4 | Marks |
|-------------|---|--------------|
| High | Extensive reasoned judgement in answer and conclusion. | 6–8 |
| Mid | Good judgement shown in the answer and conclusion or extensive judgement in answer or conclusion. | 3–5 |
| Low | Weak judgement shown in answer or conclusion. | 1–2 |

2 Discuss whether Rolls-Royce is meeting the objectives of its shareholders. [25]

- Depends on the objectives of the shareholders.
- Shareholders tend to want an increasing share price and/or a dividend yield for income.
- Time period (speculators v long-term shareholders).
- Definition of shareholders.
- Shareholders are not a homogeneous group (pension funds, individual investors).
- Comparison with shareholders in similar businesses such as General Electric.
- Figure 1: share price graph (good performance v FT100).
- Dividend per share: 15p 2009 v 14.30p in 2008.
- Dividend yield (base rate comparison).
- Shareholders want a positive business outlook and the strong order book supports this (see Table 1).
- Shareholders want evidence of good management (diversification into service contracts and strong R&D spend).
- Shareholders like to see strong profit performance (use of the accounts and/or ratios).
- May be prepared to accept high R&D spending and lower dividends in short-term if it leads to higher long-term profits/dividends.
- Maximum level 1 if no reference to shareholders.
- ARA.

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3 Evaluate how volatile foreign currency exchange rates could impact upon Rolls-Royce's future operations management strategies. [25]

- Definition of foreign exchange rates (forex).
- Depends on the interpretation of 'volatile'.
- Which currencies are volatile? It is the currencies of the major trading countries for RR.
- RR sells its products around the world but also produces components globally.
- RR may switch to importing components from countries with exchange rates that have fallen against the £. Quality issues? Currency benefit may be short-term.
- Volatile suggests unpredictable and swings in both directions (appreciation/depreciation).
- RR could insure itself against currency fluctuations.
- RR could agree fixed exchange rates with its suppliers/buyers.
- Volatile exchange rates imply a turbulent macroeconomic environment.
- How long are forex markets expected to be volatile?
- RR should carefully review its contracts.
- RR may outsource more of its production to benefit from potentially favourable exchange rates.
- RR may face increased competition from countries such as China, which are viewed as keeping their currencies below fair market value.
- RR operates production and services in five continents.
- Perhaps volatile exchange rates will have limited impact on the operations management strategy.
- The move to Singapore was not made with currency volatility as a key concern.
- ARA.

4 Recommend and justify a strategy which Rolls-Royce might adopt if there is a significant decline in demand from their existing military customers. [25]

- This answer must be a strategy. Candidates are expected to construct a coherent plan of action.
- RR would need to identify why this trend was occurring – this will influence the likely future strategy.
- Is the fall in demand affecting the competitors?
- RR could consider reducing prices for its military items and pursue a cost control agenda.
- RR could look to pursue other military customers/countries. This will pose potential ethical and legal challenges.
- RR could accept this decline and concentrate on its core areas (see Table 1). Analysis of the advantages and disadvantages of this?
- Is the fall in demand for military aircraft and navies?
- RR could consider elements of its strategic approach and possibly increase marketing spending in the military market.
- Is the decline likely to be temporary (Table 1)? Order book suggests it may be a trend.
- Relevant use of strategic models to be rewarded.
- ARA.