A large organisation, with a well-developed cost centre system, is considering the introduction of profit centres and/or investment centres throughout the organisation, where appropriate. As management accountant, you will be providing technical advice and assistance for the proposed scheme.

You are required:
(a) to describe the main characteristics and objectives of profit centres and investment centres; (4 marks)
(b) to explain what conditions are necessary for the successful introduction of such centres; (5 marks)
(c) to describe the main behavioural and control consequences which may arise if such centres are introduced; (4 marks)
(d) to compare two performance appraisal measures that might be used if investment centres are introduced. (4 marks)

From an accounting perspective an organizational unit of an accounting entity may be a cost centre or a profit centre or an investment centre. Explain these categories, describe the strengths and weaknesses of each and conditions in which each would be most appropriate if the aim is to develop efficient planning and control procedures. (7 marks)

Divisionalization is a common form of organizational arrangement but there is some diversity of opinion as to the best measure of divisional performance. Discuss this topic and describe and compare the main performance measures that have been suggested. (17 marks)

Critically discuss the methods of evaluating the performance of managers of divisionalized companies. What factors should be considered in designing control systems for evaluating divisional profit performances?

‘In the control of divisional operations within a large company, conflicts often arise between the aims of the organization as a whole and the aspirations of the individual divisions.’

What forms may these conflicts take, and how would you expect the finance function to assist in the resolution of such conflicts?
Divisionalised structures are normal in large firms, and occur even when centralised structures would be feasible.

Requirements:
(a) Explain and discuss the arguments for divisionalised structures in large firms. (6 marks)
(b) Explain the costs and potential inefficiencies of a divisionalised structure. (6 marks)
(c) Explain how adoption of a divisionalised structure changes the role of top management and their control of subordinates. (8 marks)

Total 20 marks

CIMA Stage 4 Management Accounting Control Systems

(a) Briefly explain how the measurement of divisional performance differs when assessing the achievement of strategic targets as distinct from operational targets. (5 marks)

(b) J is a hospital which supplies a wide range of healthcare services. The government has created a competitive internal market for healthcare by separating the function of service delivery from purchasing. The government provides funds for local health organisations to identify healthcare needs and to purchase services from different organisations which actually supply the service. The service suppliers are mainly hospitals.

J is service supplier and has established contracts with some purchasing organisations. The healthcare purchasing organisations are free to contract with any supplier for the provision of their healthcare requirements.

Previously, J was organised and controlled on the basis of functional responsibility. This meant that each specialist patient function, such as medical, nursing and pharmacy services, was led by a manager who held operational and financial responsibility for its activities throughout the hospital. J now operates a system of control based on devolved financial accountability. Divisions comprising different functions have been established and are responsible for particular categories of patient care such as general medical or general surgical services. Each division is managed by a senior medical officer.

J’s Board recognises that it exists in a competitive environment. It believes there is a need to introduce a system of divisional appraisal. This measures performance against strategic as well as operational targets, using both financial and non-financial criteria. The Board is concerned to develop a system which improves the motivation of divisional managers. This will encourage them to accept responsibility for achieving strategic as well as operational organisational targets. In particular, the Board wishes to encourage more contractual work to supply services to healthcare purchasing organisations from both within and outside its local geographical area. It is a clear aim of the Board that a cultural change in the management of the organisation will result from the implementation of such a system.

Requirement:
Discuss the issues which the Board of J should take into consideration in establishing a system of performance measurement for divisional managers in order to ensure the attainment of its strategic targets. (15 marks)

Total 20 marks

CIMA Stage 4 Strategic Management Accounting and Marketing
XYZ plc operates a divisional organisation structure. The performance of each division is assessed on the basis of the Return on Capital Employed (ROCE) that it generates.

For this purpose the ROCE of a division is calculated by dividing its ‘trading profit for the year by the ‘book value of net assets that it is using at the end of the year. Trading profit is the profit earned excluding extraordinary items. Book value of net assets excludes any cash, bank account balance or overdraft because XYZ plc uses a common bank account (under the control of its head office) for all divisions.

At the start of every year each division is given a target ROCE. If the target is achieved or exceeded then the divisional executives are given a large salary bonus at the end of the year.

In 2000, XYZ plc’s division A was given a target ROCE of 15%. On 15 December 2000 A’s divisional manager receives a forecast that trading profit for 2000 would be £120 000 and net assets employed at the end of 2000 would be £820 000. This would give an ROCE of 14.6% which is slightly below A’s target.

The divisional manager immediately circulates a memorandum to his fellow executives inviting proposals to deal with the problem. By the end of the day he has received the following proposals from those executives (all of whom will lose their salary bonus if the ROCE target is not achieved):

(i) from the Works Manager: that £100 000 should be invested in new equipment resulting in cost savings of £18 000 per year over the next fifteen years;

(ii) from the Chief Accountant: that payment of a £42 000 trade debt owed to a supplier due on 16 December 2000 be deferred until 1 January 2001. This would result in a £1000 default penalty becoming immediately due;

(iii) from the Sales Manager: that £1500 additional production expenses be incurred and paid in order to bring completion of an order forward to 29 December 2000 from its previous scheduled date of 3 January 2001. This would allow the customer to be invoiced in December, thereby boosting 2000 profits by £6000, but would not accelerate customer payment due on 1 February 2001;

(iv) from the Head of Internal Audit: that a regional plant producing a particular product be closed allowing immediate sale for £120 000 of premises having a book value of £90 000. This would result in £50 000 immediate redundancy payments and a reduction in profit of £12 600 per year over the next fifteen years;

(a) You are required to assess each of the above four proposals having regard to

– their effect on divisional performance in 2000 and 2001 as measured by XYZ plc’s existing criteria;

– their intrinsic commercial merits;

– any ethical matters that you consider relevant.

You should ignore taxation and inflation. (20 marks)

(b) You are required to discuss what action XYZ plc’s Finance Director should take when the situation at division A and the above four proposals are brought to his attention. (5 marks)

(Total 25 marks)

CIMA Stage 4 Management Accounting Decision Making
J plc's business is organized into divisions. For operating purposes, each division is regarded as an investment centre, with divisional managers enjoying substantial autonomy in their selection of investment projects. Divisional managers are rewarded via a remuneration package which is linked to a Return on Investment (ROI) performance measure. The ROI calculation is based on the net book value of assets at the beginning of the year. Although there is a high degree of autonomy in investment selection, approval to go ahead has to be obtained from group management at the head office in order to release the finance.

Division X is currently investigating three independent investment proposals. If they appear acceptable, it wishes to assign each a priority in the event that funds may not be available to cover all three. Group finance staff assess the cost of capital to the company at 15%.

The details of the three proposals are:

<table>
<thead>
<tr>
<th></th>
<th>Project A (£000)</th>
<th>Project B (£000)</th>
<th>Project C (£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial cash outlay on fixed assets</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Net cash inflow in year 1</td>
<td>21</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Net cash inflow in year 2</td>
<td>21</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Net cash inflow in year 3</td>
<td>21</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Net cash inflow in year 4</td>
<td>21</td>
<td>15</td>
<td>40</td>
</tr>
</tbody>
</table>

Ignore tax and residual values.

Depreciation is straight-line over asset life, which is four years in each case.

You are required
(a) to give an appraisal of the three investment proposals from a divisional and from a company point of view; (13 marks)
(b) to explain any divergence between these two points of view and to demonstrate techniques by which the views of both the division and the company can be brought into line. (12 marks)
(Total 25 marks)

Sliced Bread plc is a divisionalized company. Among its divisions are Grain and Bakery. Grain’s operations include granaries, milling and dealings in the grain markets; Bakery operates a number of bakeries.

The following data relate to the year ended 30 November:

<table>
<thead>
<tr>
<th></th>
<th>Grain (£000)</th>
<th>Bakery (£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>44 000</td>
<td>25 900</td>
</tr>
<tr>
<td>Gain on sale of plant</td>
<td>__</td>
<td>__ 900</td>
</tr>
<tr>
<td>Direct labour</td>
<td>8 700</td>
<td>7 950</td>
</tr>
<tr>
<td>Direct materials</td>
<td>25 600</td>
<td>10 200</td>
</tr>
<tr>
<td>Depreciation</td>
<td>700</td>
<td>1 100</td>
</tr>
<tr>
<td>Divisional overheads</td>
<td>5 300</td>
<td>4 550</td>
</tr>
<tr>
<td>Head office costs (allocated)</td>
<td>440</td>
<td>268</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40 740</strong></td>
<td><strong>24 068</strong></td>
</tr>
</tbody>
</table>
### Grain Bakery

<table>
<thead>
<tr>
<th></th>
<th>(£000)</th>
<th>(£000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed assets (at cost less accumulated depreciation)</td>
<td>7000</td>
<td>9000</td>
</tr>
<tr>
<td>Stocks</td>
<td>6350</td>
<td>1800</td>
</tr>
<tr>
<td>Trade debtors</td>
<td>4000</td>
<td>2100</td>
</tr>
<tr>
<td>Cash at bank</td>
<td>1500</td>
<td>—</td>
</tr>
<tr>
<td>Bank overdraft</td>
<td>—</td>
<td>750</td>
</tr>
<tr>
<td>Trade creditors</td>
<td>3000</td>
<td>2150</td>
</tr>
</tbody>
</table>

Divisional managements (DMs) are given authority to spend up to £20 000 on capital items as long as total spending remains within an amount provided for small projects in the annual budget. Larger projects, as well as sales of assets with book values in excess of £20 000, must be submitted to central management (CM). All day-to-day operations are delegated to DMs, whose performance is monitored with the aid of budgets and reports.

The basis for appraising DM performance is currently under review. At present divisions are treated as investment centres for DM performance appraisal, but there is disagreement as to whether return on capital employed or residual income is the better measure. An alternative suggestion has been made that DM performance should be appraised on the basis of controllable profit; this measure would exclude depreciation and gains or losses on sale of assets, treating investment in fixed assets as a CM responsibility.

The cost of capital of Sliced Bread plc is 15% per annum.

#### Requirements

(a) Calculate for both divisions the three measures (return on capital employed, residual income and controllable profit) which are being considered by Sliced Bread plc, and state any assumptions or reservations about the data you have used in your calculations. (5 marks)

(b) Examine the merits and problems of Sliced Bread plc’s three contemplated approaches to DM performance appraisal, and briefly suggest how CM could determine the required level of performance in each case. (15 marks)

(c) Discuss briefly whether further measures are needed for the effective appraisal of DM performance. (5 marks)

(Total 25 marks)

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**Indico Ltd** is a well established company which has operated in a sound but static market for many years where it has been the dominant supplier. Over the past three years it has diversified into three new product areas which are unrelated to each other and to the original business.

Indico Ltd has organised the operation of its four activities on a divisional basis with four divisional general managers having overall responsibility for all aspects of running each business except for finance. All finance is provided centrally with routine accounting and cash management, including invoicing, debt collection and bill payments, being handled by the Head Office. Head Office operating costs were £1 million in 2000. The total capital employed at mid-2000 amounted to £50 million, of which £20 million was debt capital financed at an average annual interest rate of 10%. Head Office assets comprise 50% fixed assets and 50% working capital. To date, the company has financed its expansion without raising additional equity capital, but it may soon require to do so if further expansion is undertaken. It has estimated that the cost of new equity capital would be 20% per annum. No new investment was undertaken in 2000 pending a review of the performance of each division.
The results for the divisions for the year to 31 December 2000 are as follows:

<table>
<thead>
<tr>
<th>Division</th>
<th>A (£m)</th>
<th>B (£m)</th>
<th>C (£m)</th>
<th>D (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>110.0</td>
<td>31.0</td>
<td>18.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Trading profit</td>
<td>2.0</td>
<td>1.1</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Exchange gain (1)</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Profit after currency movement</td>
<td>4.0</td>
<td>1.1</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Exceptional charge (2)</td>
<td></td>
<td></td>
<td>(1.8)</td>
<td></td>
</tr>
<tr>
<td>Profit(loss) after exceptional charges</td>
<td>4.0</td>
<td>1.1</td>
<td>(0.6)</td>
<td>0.5</td>
</tr>
<tr>
<td>Group interest charge (3)</td>
<td>(1.1)</td>
<td>(0.3)</td>
<td>(0.2)</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Net divisional profit(loss)</td>
<td>2.9</td>
<td>0.8</td>
<td>(0.8)</td>
<td>0.4</td>
</tr>
<tr>
<td>Depreciation charged above</td>
<td>3.0</td>
<td>1.0</td>
<td>2.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Net assets (at year end)</td>
<td>23.5</td>
<td>9.5</td>
<td>4.0</td>
<td>1.8</td>
</tr>
</tbody>
</table>

(1) The exchange gain represents the difference between the original sterling value of an overseas contract and the eventual receipts in sterling.
(2) The exceptional charge relates to the closure of a factory in January 2000.
(3) Group interest is purely a notional charge from Head Office based on a percentage of sales.

Requirements
(a) Calculate the return on investment and residual income for each division, ignoring the Head Office costs and stating any assumptions you consider appropriate. Explain how this information is useful in evaluating divisional performance, and outline the main standards of comparison you would use.

(b) Explain how you would deal with the Head Office costs in measuring divisional performance within Indico Ltd.

(c) Discuss the problems arising from using return on investment and residual income to evaluate a speculative new division operating in a high technology industry. State how you could improve these measures to enable better divisional comparisons to be made.

Question IM 20.12
Advanced: Performance reporting and a discussion of key measurement issues for a divisionalized company

A recently incorporated power company, set up after the privatisation of the electricity and coal industries, owns the following assets:

An electricity generating station, capable of being fuelled either by coal or by oil. Three coal mines, located some ten to twenty miles from the generating station, connected to a coal preparation plant.

A coal preparation plant, which takes the coal from the three mines and cleans it into a form suitable for use in the generating plant. As a by-product, a quantity of high quality coal is produced which can be sold on the industrial market. The plant has a rail link to the generating station.

The electricity generated is distributed via power lines owned by a separate company, which has an obligation to provide the distribution service on pre-set terms. The market for electricity is highly competitive with demand varying both by the time of day (in the short-term) and by season of the year (in the medium-term).

The power company is in the process of developing a management accounting system which will be used to provide information to assist in setting electricity tariffs for customers and to hold managers within the company accountable for their performance. Initially there are five main operating units, with a manager responsible for each, namely the generating station, the three coal mines and the coal preparation plant.
Requirements
(a) Outline, using pro-forma (i.e. without figures) reports where necessary, the accounting statements you would recommend as a basis for the evaluation of the performance of each of the unit managers. (10 marks)
(b) Discuss the key measurement issues that need to be resolved in designing such a responsibility accounting system. (8 marks)
(c) Explain how the information required for tariff-setting purposes might differ from that used for performance evaluation. (7 marks)

ICAEW P2 Management Accounting

A group of companies has hitherto used historical costing in the performance evaluation of its investment centres.

Whilst a few of those investment centres (class A) have replaced their fixed assets fairly regularly, the majority (class B) have, amongst their fixed assets, plant and equipment bought at a fairly even rate over the past 25 years. During that time their manufacturing technologies have changed very little, but these technologies are expected to change much more rapidly in the near future.

The group now wishes to evaluate its investment centres on a current cost basis. You are required to prepare notes for a paper for the executive management committee to show
(a) the impact for performance evaluation of the difference between class A and class B investment centres that are likely to result from the change to a current cost basis in respect of
   (i) their depreciation charges, (7 marks)
   (ii) their relative standing as measured by their return on capital employed; (7 marks)
(b) what steps would be needed to revalue the plant and equipment. (6 marks)

CIMA Stage 4 Management Accounting Decision Making

(a) Meldo Division is part of a vertically integrated group where all divisions sell externally and transfer goods to other divisions within the group. Meldo Division management performance is measured using controllable profit before tax as the performance measurement criterion.
   (i) Show the cost and revenue elements which should be included in the calculation of controllable divisional profit before tax. (3 marks)
   (ii) Discuss ways in which the degree of autonomy allowed to Meldo Division may affect the absolute value of controllable profit reported. (9 marks)
(b) Kitbul Division management performance is measured using controllable residual income as the performance criterion.
   Explain why the management of Kitbul Division may make a different decision about an additional investment opportunity where residual income is measured using:
   (i) straight-line depreciation or
   (ii) annuity depreciation based on the cost of capital rate of the division.

   Use the following investment information to illustrate your answer:

   Investment of £900 000 with a three year life and nil residual value.
   Net cash inflow each year of £380 000.
   Cost of capital is 10%. Imputed interest is calculated on the written-down value of the investment at the start of each year.
   Present value of an annuity of £1 for three years at 10% interest is £2.487. (8 marks)

ACCA Level 2 Cost Accounting II

Divisional Financial Performance Measures

Question IM 20.13 Advanced: Discussion relating to historical and current cost asset valuations for performance evaluation

Question IM 20.14 Advanced: Calculations of residual income using straight line and annuity depreciation
(a) When a previously centralized organization decides to decentralize a major part of its planning and control functions to a series of independent divisional operating units, the nature of and flow of accounting and other information will require redefinition.

You are required to
(i) identify the main problems faced at the level of both central and divisional management in carrying out their planning and control functions which arise from the changes in the flow of information resulting from decentralization; (5 marks)
(ii) explain the purposes which performance measures serve in the context of the problems identified in (i). (5 marks)

(b) The new managing director of the ABC Hotels group intends to conduct a survey of financial performance in each region of the country in which the group operates. Initially, a pilot study is to be carried out in the Midshires region.

He discovers that the available accounting information is based on historical cost, with management performance in each hotel measured as a return on investment (ROI). However, the practice has been that the group finance director requires requests for additional investment funds to be evaluated using the discounted cash flow (DCF) criterion.

The managing director has asked you, as the group’s financial advisor, to see whether the existing information provides an adequate basis for the evaluation of the group’s investments and its divisional performance. As part of the investigation, you have produced the following information, using the company’s existing accounting information and your own estimates, relating to the year ended June 2000:

<table>
<thead>
<tr>
<th>Hotel X</th>
<th>Midshire region</th>
<th>Hotel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of investment: (£m)</td>
<td>(£m)</td>
<td>(£m)</td>
</tr>
<tr>
<td>Historical cost</td>
<td>2.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Current cost</td>
<td>4.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Disposal value</td>
<td>7.2</td>
<td>3.8</td>
</tr>
<tr>
<td>Operating income</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Year in which hotel opened</td>
<td>1987</td>
<td>1995</td>
</tr>
</tbody>
</table>

The ‘investment’ includes land, buildings and the hotel fixtures and fittings.

The historical cost valuation is net of accumulated depreciation.

The current cost valuation is the current cost of replacing the buildings and facilities to their present standard at current prices. It includes an indexation of the cost of land for the general increase in prices.

You are also informed that the group recently asked hotel managers to put forward proposals to improve and modernise their facilities.

A minimum 12% DCF rate of return was to be used to evaluate each proposal, a rate which the company’s brokers affirm would be seen as a satisfactory return.

Details of the proposals from the Midshire region hotels were:

<table>
<thead>
<tr>
<th>Hotel X</th>
<th>Hotel Y</th>
<th>Hotel Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>(£000)</td>
<td>(£000)</td>
<td>(£000)</td>
</tr>
<tr>
<td>Investment cost</td>
<td>500</td>
<td>730</td>
</tr>
<tr>
<td>Annual cash operating income</td>
<td>67</td>
<td>90</td>
</tr>
</tbody>
</table>

You are required to advise on:
(i) the current and prospective future financial position of the Midshire region hotels; (10 marks)
CIMA Stage 4 Management Accounting – Control and Audit

Scenario

Frantisek Precision Engineering plc (FPE) is an engineering company which makes tools and equipment for a wide range of applications. FPE has twelve operating divisions, each of which is responsible for a particular product group. In the past, divisional performance has been assessed on the basis of Residual Income (RI). RI is calculated by making a finance charge (at bank base rate + 2%) on net assets (excluding cash) as at the end of the year to each division.

Rapier Management Consultants have recently been engaged to review the management accounting systems of FPE. In regard to the performance evaluation system, Rapier have reported as follows:

RI is a very partial and imperfect performance indicator. What you need is a more comprehensive system which reflects the mission, strategy and technology of each individual division. Further, executives should each be paid a performance bonus linked to an indicator which relates to their own personal effectiveness.

FPE’s Directors provisionally accepted the Rapier recommendation and have carried out a pilot scheme in the diving equipment (DE) division. DE division manufactures assorted equipment used by sport and industrial divers. Safety is a critical factor in this sector. Customers will not readily accept new products, design features and technologies, and therefore many remain unexploited.

At the start of 2000, Rapier designed a performance evaluation system for DE division as follows:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on Capital Employed (ROCE)</td>
<td>Operating profit for the year divided by book value of net assets (excluding cash) at the end of the year.</td>
</tr>
<tr>
<td>Cash conversion period (CCP)</td>
<td>Number of days’ debtors plus days’ stock minus days’ creditors outstanding at the end of the year.</td>
</tr>
<tr>
<td>Strategy</td>
<td>Number of new products and major design features (innovations) successfully brought to market.</td>
</tr>
</tbody>
</table>

Under the terms of DEs new performance evaluation system, the bases of bonuses for individual divisional managers are:

- ROCE over 10%: Chief Executive, Production Manager, Sales Manager
- CCP less than 40 days: Accountant, Office Manager
- More than 4 innovations: Chief Executive, Design Manager

DE divisions accounting office currently consists of four employees. The division does not have its own bank account. All main accounting systems are operated by FPE’s Head Office. DE’s accounting staff draw information from the main accounting system in order to prepare weekly budgetary control reports which are submitted to Head Office. The reports prompt regular visits by Head Office accountants to investigate reported cost variances.
Part One

In November 2000, DE’s Accountant predicts that DE’s results for 2000 will be as follows:

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>End 2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>£6,900,000</td>
<td>£530,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>£2,920,000</td>
<td>£1,035,000</td>
</tr>
<tr>
<td>Operating profit</td>
<td>£450,000</td>
<td>£220,000</td>
</tr>
<tr>
<td>Number of innovations</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Stock</td>
<td></td>
<td>£4,800,000</td>
</tr>
<tr>
<td>Debtors</td>
<td></td>
<td>£4,800,000</td>
</tr>
<tr>
<td>Creditors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Accountant further forecasts that in the absence of some change in policy or new investment, the corresponding figures for 2001 and end-2001 will be similar to those shown above for 2000. Upon receiving this forecast, DE division’s Chief Executive convenes a meeting of his managers to discuss strategy for the rest of 2000 and for 2001. Several proposals are made, including:

From the Office Manager:

I propose that we immediately dispose of £160,000 of stock at cost and defer a creditor payment of £180,000 due 16 December 2000 until 2 January 2001. The first measure will reduce profit by £16,500 a year from 2001 onwards. The second measure will incur an immediate £2,000 penalty.

From the Production Manager:

I recommend we invest £400,000 in new equipment, either immediately or in early 2001. This will increase operation profit by £25,000 per year for eight years and the equipment will have a residual value of £40,000 at the end of its life.

From the Design Manager:

I propose we introduce a new electronic digital depth gauge to the market. This will involve an initial investment of £100,000 in new equipment, either immediately or in early 2001, which will have a life of at least ten years. Sales will have to be on 6 months ‘buy or return’ credit in order to overcome market resistance. I forecast that the new depth gauge will generate £20,000 extra operating profit per year with purchases, sales, stock and creditors all increasing in proportion.

Requirements:

(a) Explain the impact of each proposal on the reported performance of DE division in 2000 and 2001, having regard to the new performance evaluation criteria stated in the Scenario. State whether or not each proposal is likely to be acceptable to members of DE management. (15 marks)

(b) State your views (supported by financial evaluation) on the inherent merits of each proposal, having regard to factors you consider relevant. (10 marks)

Note: Where relevant, you may assume that depreciation is on a straight-line basis and DCF evaluation is carried out using an 8% discount rate and 10-year time horizon.

Part Two

A great deal of management accounting practice (including divisional performance evaluation) can be carried out with varying degrees of sophistication. Many new techniques have been developed in recent years. The degree of sophistication adopted in any case is partly influenced by the imagination and knowledge of the management accountant, and partly by the availability of management information technology.

Requirements:

(a) In the light of this quotation, state your views on the advantages and disadvantages to FPE of using a firm of consultants to advise on the design of management accounting systems.
Explain your opinion on the merits of the statement quoted above. (10 marks)
(b) Explain the main purpose of divisional organisation and the main features of the management accounting systems that are used to support it. (5 marks)
(c) Explain the changes that might be required in the management accounting operation of DE division if that division became an independent business. (10 marks)

Part Three

There is nothing inherently wrong with the factors used in DE’s new performance evaluation system. The problem is what those factors are used for – in particular, their use as a basis for management remuneration. For one thing, almost any factor is highly vulnerable to manipulation: for another thing, they can seriously distort business decision making.

Requirements:
Having regard to this statement,
(a) explain the strengths and weaknesses of RI and ROCE as divisional business performance indicators as far as FPE is concerned; (5 marks)
(b) comment critically on the statement made by Rapier (quoted in the Scenario). In particular, explain the problems connected with linking management pay to performance, and the measures that management accountants might take to deal with these problems; (7 marks)
(c) explain what JIT philosophy is, in the light of a proposal to adopt just-in-time (JIT) practices in the DE division. Write a report for FPE management on whether or not DE division’s Production Manager should be paid a bonus linked to CCP instead of one linked to ROCE (see Scenario), in the light of the proposal to adopt JIT practices in the DE division. (13 marks)