SECTION A

QUESTION 1

The following exhibits provide information relevant to the question

EXHIBIT 1: Company information – the background, overall aim, competitive environment and new strategic approach of the company: Belivat Manufacturing (Belivat).

Belivat Manufacturing (Belivat) is a world leader in the manufacture of temperature sensors used in many industrial processes. It aims to deliver growing returns to its shareholders in the long-term.

It operates in an increasingly competitive environment where profit margins are under pressure. In order to address these forces, the board of Belivat has decided that they need to change their strategic approach. They intend to increase revenue and drive down costs by becoming more innovative in the two keys aspects of the business: the development of new products; and the production process.

Currently, the business uses standard costing and incremental budgets in order to control costs. The same methods of production and accounting have been used for many years at Belivat. The board recognises the need for a cultural change to fit the new strategic approach. The board also believes that they have an excellent workforce which is under-utilised. It has been decided that this can be capitalised upon by two changes (one to product development and the other to the general production process). Product development should be addressed by a more project-based approach, where products are developed by teams of workers. In addition, the organisation of production of all products will also now be handled by teams whose aim is to reduce costs as far as possible while maintaining competitive levels of quality.

The board has begun discussing these changes and the chief executive officer (CEO) has asked you, as a performance management expert, for your assistance on a number of proposals relating to changes to costing and budgeting at Belivat. There is also a plan to improve the operation of the warehouse by introducing new technology in inventory management.

EXHIBIT 2: Product development budgeting – details of work required by the CEO on a proposal to change the budgeting method to zero-based budgeting (ZBB) for new product development.

It is proposed that a new budgeting method be used for new product development and it has been suggested that zero-based budgeting (ZBB) may be a more useful approach.

The CEO wants a critical comparison of ZBB with the existing method of budgeting. This should include a description of the ZBB approach and how this fits with Belivat's plans and aims.

EXHIBIT 3: Kaizen costing – instructions from the CEO on the possibility of introducing Kaizen costing at Belivat.

The board has been investigating new methods of production and cost control in order to achieve the cost reductions needed to remain competitive. The board has been considering various Japanese production control techniques and has shown particular interest in the possibility of introducing Kaizen costing to replace the existing standard costing system.

As none of the board are experts, the CEO has requested an explanation of the process of Kaizen costing, the implications of the change in costing method for production management and a recommendation as to whether this change is appropriate for Belivat.

EXHIBIT 4: Interaction of ZBB and Kaizen – details of board discussion on the new budgeting and costing systems proposed and the subsequent request for work from the CEO.

In the discussion of the budgeting and costing changes at a recent board meeting, one director suggested that ZBB should become the method of budgeting for the whole business (beyond just product development). Another director expressed concern that Kaizen costing did not fit with ZBB, neither on practical nor cultural terms. The board meeting then dissolved into a confused discussion of the new costing and budgeting methods.

The CEO would like you to provide the board with an evaluation of whether Kaizen costing would fit with ZBB in controlling production costs at Belivat.

EXHIBIT 5: Inventory management – information related to current inventory management practices at Belivat and the CEO's request for advice on a potential project to improve matters in this area.

Belivat has large warehouses containing a large inventory of many different types of sensors so that they can offer quick solutions to customer orders. However, as the business has grown, the scale of the warehouse operation has outgrown its ability to efficiently pick products for orders and identify obsolete items. The CEO believes that by tagging all items with radio-frequency identification devices (RFIDs) picking would be made more efficient, inventory control would be simpler and obsolescence reduced. She is aware that this has cost implications beyond merely buying and placing tags on each item in inventory and she wants your advice on the costs and benefits of introducing such a new system. As part of this advice, she has asked that you quantify your conclusions where possible using the illustrative data for one warehouse in Appendix 1.

EXHIBIT 6 : Appendix 1 – an extract from the project specification report for improving inventory management.

	A	B	J
1	**Title: Introduction of RFIDs at the warehouse**		
2			
3	Aim: The aim of this project is to reduce costs and improve efficiency in the warehouse.		
4	The system will apply to finished orders only and not components purchased.		
5			
6	The following are further details provided in relation to the project:		
7			
8	**Costs:**		**$**
9	1	Average wage in the warehouse per annum	25,000
10	2	Average cost of each tag	0.75
11	3	New software needed to collate data from the tags	60,000
12	4	RFID sensors for the warehouse	50,000
13	5	On-going annual service cost for the new system	15,000
14	6	Updating current inventory management software to make it	
15		compatible with the collated RFID data	35,000
16	7	Other hardware required for the warehouse	25,000
17			
18	**Other inventory and warehouse information:**		
19	It is expected that 120,000 finished sensors will come into the warehouse in the year.		
20			
21	It is expected that the same number of items will be picked in the year as there is no		
22	inventory building planned in the period.		
23			
24	It is expected that the new system will last for eight years.		
25			
26	Currently, there is an average loss each year due obsolete inventory write-downs of		
27	$120,000. It is expected that obsolescence will fall by 65% with the new system.		
28			
29	It is expected that picking efficiency will improve, saving 35% of staff time. There are		
30	currently seven staff involved in picking orders.		

REQUIREMENT

It is now 1 September 20X5.

Write a report to the CEO of Belivat to respond to her instructions for work on the following areas:

(i) product development budgeting;

(12 marks)

(ii) Kaizen costing;

(9 marks)

(iii) the interaction of ZBB and Kaizen;

(6 marks)

(iv) the inventory management project.

(13 marks)

Professional marks will be awarded for the demonstration of communication, analysis and evaluation, scepticism and commercial acumen in your answer.

(10 marks)

SECTION B

QUESTION 2

The following exhibits provide information relevant to the question

EXHIBIT 1: Company information – the background, overall objective and plans of the company: Eck.

Eck is a privately owned, capital-intensive manufacturing business. It has several similarly sized divisions which operate as profit centres. These divisions operate in different regions of Eck's home country, where the average tax rate is 40% and where the average rate of interest for commercial lending is 6%. Eck is financed by equal amounts of equity and debt.

Eck's overall objective is to maximise shareholder wealth. The company's board of directors, who are also the shareholders, make all investment and financing decisions.

The board is considering expanding Eck's product range, which will require the company to purchase a large amount of new plant and machinery. The shareholders are unable to provide any more capital and are unwilling to issue any form of equity finance. Eck is already close to breaching borrowing conditions and limits set by its lenders and is unable to raise any more debt finance.

Eck has recently revised the estimated useful economic life of existing large items of manufacturing plant, which is permitted under local accounting regulations.

EXHIBIT 2: Measuring divisional manager performance – details of the possible introduction of EBITDA (earnings before interest, tax, depreciation and amortisation) and EVATM (economic value added) at Eck.

The board has recently been told that if the plans to expand its product range are to be successful, Eck needs better systems for measuring the performance of divisional managers and rewarding them. None of the divisional managers have any financial qualifications or experience. The board is, therefore, considering two possible measures of divisional manager performance: EBITDA (earnings before interest, tax, depreciation and amortisation) and EVA™ (economic value added) and would like you, as a performance management expert, to undertake two pieces of work:

– The board is unfamiliar with EBITDA and want an assessment of its usefulness to measure a divisional manager's performance. The board does not require any calculations of EBITDA.

– The board has already been advised on the benefits and drawbacks of using EVA™ as a suitable performance measure, but has not yet seen how EVA™ is calculated for a particular division. As an example of this, the board would like to know whether the Blue division has created value using the information given in Appendix 1.

EXHIBIT 3: Proposed reward scheme – a new reward scheme for divisional managers.

Based on the review of the two possible performance measures, the board has proposed a new reward scheme for divisional managers. Each manager will receive a reward equivalent to 45% of their annual salary if their division achieves a target EVA™ for the coming year.

Divisional managers have participated in the setting of the scheme. Market conditions in which each division operates will be considered when setting the target EVA™, which for Blue division is $25m. Eck has effective internal procedures to ensure the reliability of performance data and to prevent managers from focusing too much on a particular target while ignoring other important factors.

The board would like advice on whether this proposed new reward scheme will help improve the performance of the Blue division.

EXHIBIT 4: Appendix 1 – performance data for Blue division.

	A	B	C	D	E	F	G
1	**Performance data for Blue division:**						
2							
3	Net profit after tax ($m)				50		
4	Opening net assets ($m)				496		
5							
6	Cost of equity				15%		
7	Cost of debt (pre-tax)				12%		
8							
9	Tax rate				40%		
10							
11	**Notes:**						
12	Net profit after tax for the year is after charging:						
13	1	Interest of $20m					
14	2	Development expenditure of $5m was incurred duri					
15		The development expenditure is to be amortised ov					

REQUIREMENT

It is now 1 September 20X5.

Respond to the board of Eck's request for work on the following areas:

(a) measuring divisional manager performance;

(13 marks)

Note: there are eight marks available for the first piece of work on this area and there are five marks available for the second piece of work on this area.

(b) proposed reward scheme.

(7 marks)

Professional marks will be awarded for the demonstration of skill in analysis and evaluation, scepticism and commercial acumen in your answer.

(5 marks)

QUESTION 3

The following exhibits provide information relevant to the question

EXHIBIT 1: Company information – the background and existing performance management system of the company: Scye.

Scye is a listed company of architects who imagine concepts for new buildings and then prepare detailed plans for their production. The business' performance has fluctuated over years and recently seen a reduction in profits.

The shareholders have demanded greater focus on their long-term returns rather than the quarterly dividend and a new chief executive officer (CEO) has been put in office, along with several new directors, in order to achieve this aim.

The new CEO has identified that the system of performance measurement and management is at fault in the business losing focus. It is based on a dashboard containing a wide mix of more than 15 financial performance indicators drawn from the financial reporting records from across the activities of the organisation. The report then benchmarks these indicators against competitors. Regular reports on these indicators are used at board meetings to guide the management of the business.

EXHIBIT 2 : Value-based management – information about the introduction of value-based management (VBM) at Scye.

The CEO was at a recent meeting of business leaders where he heard that a move to value-based management (VBM) might help achieve the shareholders' goal. However, he was warned then that the use of economic value-added (EVA^{TM}) as a primary measure would not be ideal for VBM. Also, one of the new, non-executive directors at Scye commented that he had found EVA^{TM} to be complex to understand and so Scye's board has agreed to avoid its use.

The CEO requires you to provide an understanding of the basic principles of VBM and then evaluate VBM compared to the existing performance dashboard, which is based around traditional profit-based measures of performance. He wants your evaluation to include both how VBM would affect the different management levels (strategic, tactical and operational) in Scye and how its implementation would affect the organisation.

EXHIBIT 3: New project appraisal – details of a new graphic visualisation system being developed.

The next work the CEO requires is an example calculation of shareholder value (using the net present value (NPV) method) and he has given you information in Appendix 1 in order to allow you to do this for a new project at Scye. The project is the purchase and use of a new graphic visualisation system which will give a virtual tour of any new building design.

A non-executive director had also mentioned modified internal rate of return (MIRR) as another indicator that he had seen used to assess projects and so the CEO also wants a calculation of this for this same project and a final recommendation.

EXHIBIT 4: Appendix 1 – information gathered on the new graphic visualisation system.

Information gathered on the new graphic visualisation system:

1. The system is expected to earn an additional \$6·4m each year after operating costs.
2. Operating costs include \$8m of depreciation per year.
3. Additional costs beyond those in operating costs for marketing and training staff are estimated at \$0·7m in year 1.
4. Tax will be charged at 20% paid in the year profits occur and all costs including depreciation are deemed allowable.
5. There will be an initial spend of \$25m to purchase the system, which will be totally replaced as new systems become available.
6. The project will last for 3 years.
7. It is reasonable for this exercise to assume that all revenue and costs will be paid or received in the year incurred.
8. Working capital of 10% of the revenue after operating costs will be put in place at the start of year 1 and then working capital will be recovered at the end of the project.
9. Scye's discount rate for such projects is 10% based on its cost of capital.
10. Formula for MIRR = $\left[\frac{PV_R}{PV_I}\right]^{\frac{1}{n}}(1 + r_e) - 1$

REQUIREMENT

It is now 1 September 20X5.

Respond to the CEO of Scye's request for work on the following areas:

(a) value-based management (VBM);

(12 marks)

(b) new project appraisal.

(8 marks)

Professional marks will be awarded for the demonstration of skill in analysis and evaluation, scepticism and commercial acumen in your answer.

(5 marks)