Note: for every calculation please justify why you are using the specific calculus.   
  
**ASSIGNMENT**  
Jasmine is a large company which manufactures children’s toys. It is a private UK limited company with a diversified shareholder base. The company has its headquarters in London, and as part of a group structure, wholly owns subsidiary companies in the UK, China and the US.

A new chief executive (CEO), Mr. Harold Jordan, was recently appointed by the Board to replace the retiring CEO, Mr. James Hannah, who led the company for the past twenty-five years. During this time, Jasmine has produced an extensive range of products within the children’s toy industry. Many of the toys manufactured are protected through patents and trademarks held by the company and the manufacturing business has a small innovation team which is tasked with improving or developing products for markets. Over the last few years, however, the company’s profitability has declined through a combination of factors including increasing competition and rising costs. Mr. Jordan has been tasked with reinvigorating the company, and providing growth in the business lines, ultimately impacting on profitability and the overall value of the company.

After undertaking a full review of the company’s operations, Mr. Jordan has announced a five-year strategic plan which he calls ‘Vision 2027’. Mr. Jordan has suggested that the company needs to restructure, reduce staffing, and crucially, focus on entering new markets in Europe. As part of Vision 2027, Mr. Jordan plans to introduce new environmentally friendly technology to provide drones and robots for the toy market; to develop a series of family orientated toys to encourage family bonding; and produce a new range of educational toys. Vision 2027 will require new manufacturing plants to be opened up, and because of Brexit, Mr. Jordan is thinking of moving the company’s headquarters to Paris. He has yet to discuss these plans with the Board, and although he knows he has been hired to provide a new direction for the company, he recognises that Vision 2027 will raise several concerns with his senior colleagues. He has assembled financial information and other documents for the Board, which appear as Appendices.

**Question 1**

Word count: up to 1000 words

In the context of ‘Vision 2027’, the new management is considering purchase of environmentally friendly equipment. Based on the information given in Appendix Q1.1, answer the following questions.

* a.Using the information in Table 1, and your knowledge of relevant costs, calculate the increase/decrease in operating profit for the company if the fixed-wing drones were discontinued.
* b.For each of the four fixed overheads, give a reason why you decided in (a) that the overhead is relevant or irrelevant.
* c.Based on your analysis of relevant and non-relevant costs:
  + i.Amend the operating statement in Table 1 to provide the total profitability of the drones as well as the profitability of each drone.
  + ii.Explain the main reason for the change you propose in (c) (i) above.
* d.Using the information in Table 2, and your knowledge of relevant costs, calculate the difference in profit over the next five years between keeping and replacing the old machine.
* e.Evaluate the response of the managing director to the proposed new machine.

# **Question 2**

Evaluate another proposal to move the manufacturing facility from China to Vietnam (Appendix Q2.1 and Q2.2), using NPV analysis. The evaluation should include a review of the assumptions made that need to be factored into the decision-making process. Note: round the values to the nearest million dollars.

# **Question 3**

Word count: up to 1000 words

* a.The new management is also considering an entirely new investment project, which involves building a new factory in South Korea. The Korean subsidiary will require an initial investment of 157,474m South Korean Won (KRW). Jasmine can borrow money to finance this investment in the UK market, in France, or in South Korea. Appendix Q3.1 offers information about the borrowing costs in different currencies and an estimation of the future value of foreign exchange. Discuss the foreign exchange risk associated with this expansion plan and advise which is the best way to finance the Korean factory.
* b.What are the risks related to a potential relocation of the Chinese factory to South Korea?
* c.The research department of a large financial institution provided inflation expectations for the next five years. According to the forecasts, the UK will have 1.5% more inflation than France and 3% higher inflation than South Korea. On the basis of this new evidence, would you reconsider your proposal with regard to financing the Korean factory? Explain your answer.

# **Question 4**

Word count: up to 1000 words

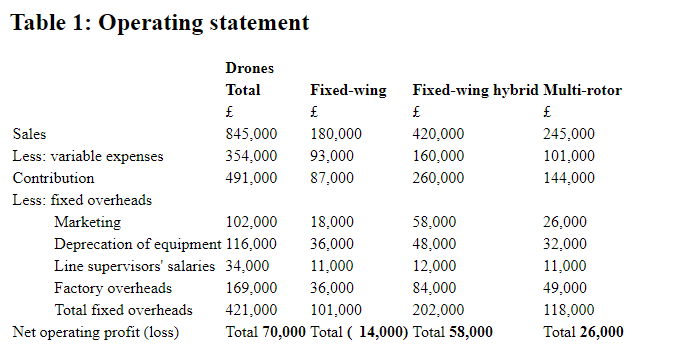
Jasmine has well established export markets but if the board approves Vision 2027, it will begin to enter new markets abroad.

* a.If Jasmine wants to borrow long-term funds to support its new foreign operations, what options does it have available to it?
* b.What finance methods might Jasmine adopt to satisfy itself that it will be paid for shipping goods to new importers?

**Appendix Q1.1: Proposal to replace equipment**

Mr. Jordan plans to introduce new environmentally friendly technology to manufacture drones for the toy market. The current product ranges consist of three types of drones manufactured from two specialist machines in a UK factory that produces no other toys.

The following information on sales and expenses for the past month has now become available.



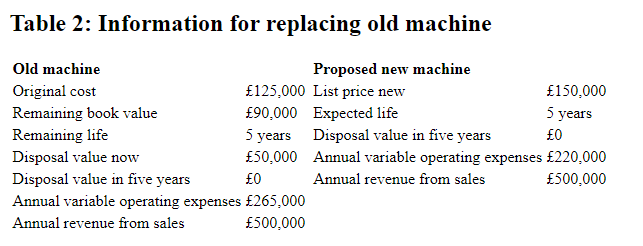
Mr Jordan is concerned about the losses shown by the fixed-wing drones and wants a recommendation as to whether the line should be discontinued.

The following information is relevant to the fixed overhead figures above.

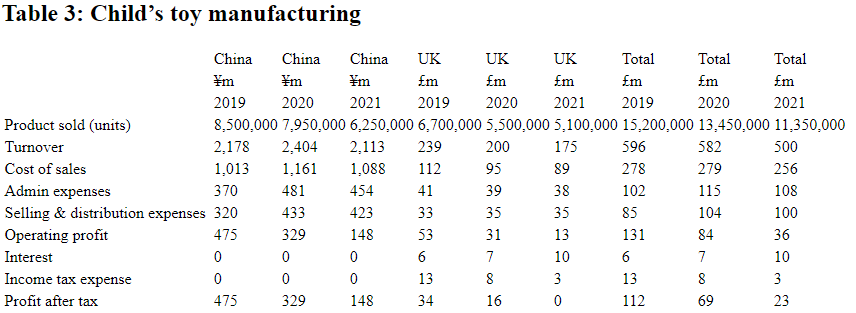
1. The two specialist machines used to produce each of the three drones currently have no resale value.
2. The company has no other use for the capacity now being used to produce fixed-wing drones.
3. If the fixed-wing drones were discontinued, both line supervisors responsible for its manufacture would no longer need to be employed by the company.
4. The marketing expense for each line of drones is exclusively for those drones.
5. Factory overheads are general and fixed common costs that are allocated based on sales.

Proposal of new machine and other new information

After consultation with the production manager, Mr Jordan is considering the purchase of a new machine. The new machine will comply with new environmentally friendly technology and will cut scrap and rework rates (the cost of remedying manufacturing problems), resulting in substantial savings in materials and labour costs. A production manager has gathered the following information concerning the old machine and the proposed new one.

  
During the initial discussion about the proposal to replace the machine, the first response, from the Board of Directors was that the company had already made an investment in the old machine, so the business had no choice until their investment has been fully recovered as it is now just a ‘sunk cost’. Mr Jordan went on to say that a further reason for not purchasing the new machine was that the disposal of the old machine would result in a ‘loss’ of £40,000.

# **Appendix Q2.1: Analysis of the child’s toy manufacturing (multi-currency)**

******

# **Appendix Q2.2: Manufacturing unit’s business proposal to move production from China to Vietnam**

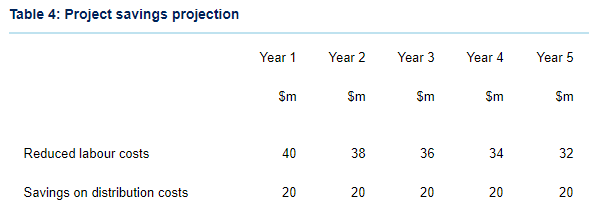
The establishment of a production facility on the outskirts of Hanoi would cost US$480m. An initial 10% is payable immediately with the remaining 90% payable at the end of year 1. The Vietnamese government incentivises foreign direct investment, with incentives including capital grant funding of up to 50% of the initial capital investment, payable in equal instalments over 5 years, starting in year 1. No writing down allowance is available on any element of the capital expenditure as a result of the capital grant provision. The grant funding is repayable if the company leaves Vietnam within 5 years.

In addition, a working capital investment of US$96m would be required at the outset of the investment. A subsidiary company (Jasmine Vietnam) would be the corporate vehicle through which the company would operate in Vietnam. US$30,000 has already been incurred to date exploring the legal structure of a company in Vietnam.

A loan facility of US$480m would be established with Bank Vietnam to finance the construction of the production facility, with the interest rate cost expected to be 12%. In addition, an overdraft facility of US$100m would be established with an interest rate cost of 15%.

Use the overall Group cost of capital benchmark for investments of this nature of 10% to appraise this capital proposal.

The following plant projections have been provided and are expressed in current terms.

******

The corporate tax rate for investors in Vietnam is 5% based on sales value for the relevant year and is paid one year in arrears.

By relocating to Vietnam, it is expected that sales demand will increase 20% compound per annum over the 2021 sales units achieved from the China plant. The reduced cost base on relocating to Vietnam is expected to enable a reduced pricing point of US$35 per unit of product (on average), thus generating the additional sales demand. A net margin of 15% is assumed on the additional sales.

An estimate of US$30m per annum (in current terms) has been computed for the allocation of central fixed costs of the parent entity to this activity.

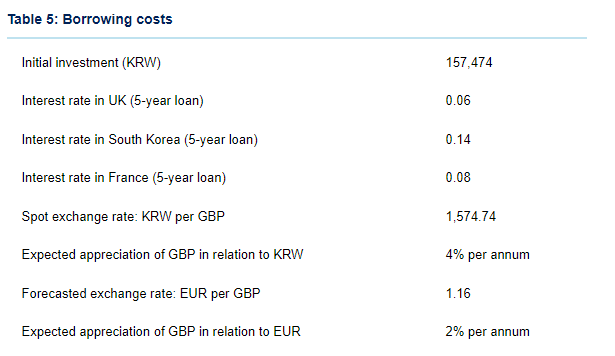
Plant closure and wind down costs of the China facility are expected to be equivalent of US$80m, with 30% payable now, and the balance payable at the end of year 1. As part of the conditions for the original investment in China (and any incentives received by Jasmine), the sale of the plant and associated lands in China cannot be realised until year 3 post cessation of activities. The expected net sales value in year 3 is US$260m. The land in China had an original cost of US$45m.

Ignore inflation.

All transactions have been reflected in US$ as part of the capital generation proposal.

There is no tax impact on transactions included in the NPV analysis associated with the China facility. The capital grant received from the Vietnamese government is not subject to tax in Vietnam.

# **Appendix Q3.1: Borrowing costs in different currencies and an estimation of the future value of foreign currency exchange**

******