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FINAL EXAMINATION
MARCH 2024

COURSE TITLE	**MANAGEMENT ACCOUNTING 2**
COURSE CODE	**AACT3233**
DATE/DAY	**24 JUNE 2024 / MONDAY**
TIME/DURATION	**09:00 AM - 12:00 PM / 03 Hour(s) 00 Minute(s)**

INSTRUCTIONS TO CANDIDATES :

1. Please read the instruction under each section carefully.
2. Candidates are reminded not to bring into examination hall/room any form of written materials or electronic gadget except for stationery that is permitted by the Invigilator.
3. Students who are caught breaching the Examination Rules and Regulation will be charged with an academic dishonesty and if found guilty of the offence, the maximum penalty is expulsion from the University.

(This Question Paper consists of 5 Printed Pages including front page)

DO NOT OPEN THE QUESTION PAPER UNTIL YOU ARE TOLD TO DO SO

There are FOUR (4) questions in this question paper. Answer ALL questions in the answer booklet provided. [92 MARKS]

QUESTION 1 **(27 Marks)**

Breccon Bhd introduced a new product, DV, to its range last year. The machine used to mould each item is a bottleneck in the production process meaning that a maximum of 5,000 units per annum can be manufactured.

The DV product has been a huge success in the marketplace and as a result, all items manufactured are sold. The marketing department has prepared the following demand forecast for future years as a result of feedback from customers.

Year	1	2	3	4
Demand(units)	7,000	9,000	11,000	4,000

The directors are now considering investing in a second machine that will allow the company to satisfy the excess demand. The following information relating to this investment proposal has now been prepared:

Initial investment	RM20,000
Maximum additional output	5,000 units
Current selling price	RM50 per unit
Variable operating costs	RM28 per unit
Fixed operating costs	RM15,000 per year

If production remained at 5,000 units, the current selling price would be expected to continue throughout the remainder of the life of the product. However, if production is increased, it is expected that the selling price will fall to RM45 per unit for all units sold. Again, this will last for the remainder of the life of the product.

No terminal value or machinery scrap value is expected at the end of four years, when production of DV is planned to end. For investment appraisal purposes, Breccon uses a nominal (money) discount rate of 10%per year and a target return on capital employed of 20% per year.

Required:

(a) Calculate the following values for the investment proposal:
   (i) net present value; (8 marks)
   (ii) internal rate of return; (5 marks)
   (iii) return on capital employed (accounting rate of return) (3 marks)

(b) Discuss your findings in each section of (a) above and advise whether the investment proposal is financially acceptable. (5 marks)

(c) Briefly explain the key steps that should be included in a company's capital budgeting process. (6 marks)

QUESTION 2 **(25 Marks)**

A manufacturing company, Man Co, has two divisions: Division L and Division M. Both divisions make a single standardised product. Division L makes component L, which is supplied to both Division M and external customers.

Division M makes product M using one unit of component L and other materials. It then sells the completed product M to external customers. To date, Division M has always bought component L from Division L.

The following information is available:

	Component L	Product M
	RM	RM
Selling price	40	96
Direct materials:		
Component L		(40)
Other	(12)	(17)
Direct labour	(6)	(9)
Variable overheads	(2)	(3)
Selling and distribution costs	(4)	(1)
Contribution per unit before fixed costs	16	26
Annual fixed costs	RM500,000	RM200,000
Annual external demand (units)	160,000	120,000
Capacity of plant	300,000	130,000

Division L charges the same price for component L to both Division M and external customers. However, it does not incur the selling and distribution costs when transferring internally.

Division M has just been approached by a new supplier who has offered to supply it with component L for RM37 per unit. Prior to this offer, the cheapest price which Division M could have bought component L for from outside the group was RM42 per unit.

It is head office policy to let the divisions operate autonomously without interference at all.

Required:

(a) Calculate the incremental profit/(loss) per component for the group if Division M accepts the new supplier's offer and recommend how many components Division L should sell to Division M if group profits are to be maximised. (5 marks)

(b) Using the quantities calculated in (a) and the current transfer price, calculate the total annual profits of each division and the group as a whole. (10 marks)

(c) Discuss the problems which will arise if the transfer price remains unchanged and advise the divisions on a suitable alternative transfer price for component L. (10 marks)

QUESTION 3 **(20 Marks)**

Sports Co is a large manufacturing company specialising in the manufacture of a wide range of sports clothing and equipment. The company has two divisions: Clothing (Division C) and Equipment (Division E). Each division operates with little intervention from Head Office and divisional managers have autonomy to make decisions about long-term investments.

Sports Co measures the performance of its divisions using return on investment (ROI), calculated using controllable profit and average divisional net assets. The target ROI for each of the divisions is 18%. If the divisions meet or exceed this target the divisional managers receive a bonus.

Last year, an investment which was expected to meet the target ROI was rejected by one of the divisional managers because it would have reduced the division's overall ROI. Consequently, Sports Co is considering the introduction of a new performance measure, residual income (RI), in order to discourage this dysfunctional behaviour in the future. Like ROI, this would be calculated using controllable profit and average divisional net assets.

The draft operating statement for the year, prepared by the company's trainee accountant, is shown below:

	Division C RM'000	Division E RM'000
Sales revenue	3,800	8,400
Less variable costs	(1,400)	(3,030)
Contribution	2,400	5,370
Less fixed costs	(945)	(1,420)
Net profit	1,455	3,950
Opening divisional controllable net assets	13,000	24,000
Closing divisional controllable net assets	9,000	30,000

Notes:

(1) Included in the fixed costs are depreciation costs of RM165,000 and RM460,000 for Divisions C and E respectively. 30% of the depreciation costs in each division relates to assets controlled but not owned by Head Office.
Division E invested RM2m in plant and machinery at the beginning of the year, which is included in the net assets figures above, and uses the reducing balance method to depreciate assets. Division C, which uses the straight-line method, made no significant additions to non-current assets. It is the policy of both divisions to charge a full year's depreciation in the year of acquisition.

(2) Head Office recharges all of its costs to the two divisions. These have been included in the fixed costs and amount to RM620,000 for Division C and RM700,000 for Division E.

(3) Sports Co has a cost of capital of 12%.

Required:

(a) Calculate the return on investment (ROI) for each of the two divisions of Sports Co. (6 marks)

(b) Discuss the performance of the two divisions for the year, including the main reasons why their ROI results differ from each other. Explain the impact the difference in ROI could have on the behaviour of the manager of the worst performing division. (6 marks)

(c) Calculate the residual income (RI) for each of the two divisions of Sports Co and briefly comment on the results of this performance measure. (4 marks)

(d) Explain the advantages and disadvantages of using residual income (RI) to measure divisional performance. (4 marks)

QUESTION 4 **(20 Marks)**

Chair Co has developed a new type of luxury car seat. The estimated labour time for the first unit is 12 hours but a learning curve of 75% is expected to apply for the first eight units produced. The cost of labour is RM15 per hour. The cost of materials and other variable overheads is expected to total RM230 per unit.

Chair Co plans on pricing the seat by adding a 50% mark-up to the total variable cost per seat, with the labour cost being based on the incremental time taken to produce the 8th unit.

Required:

(a) Calculate the price which Chair Co expects to charge for the new seat
  (i) Based on the 1st unit produced (5 marks)
  (ii) Based on the 8th unit produced (5 marks)

Note: The learning index for a 75% learning curve is –0·415.

(b) The first phase of production has now been completed for the new car seat. The first unit actually took 12·5 hours to make and the total time for the first eight units was 34·3 hours, at which point the learning effect came to an end. Chair Co are planning on adjusting the price to reflect the actual time it took to complete the 8th unit.

Required:

(i) Calculate the actual rate of learning and state whether this means that the labour force actually learnt more quickly or less quickly than expected. (6 marks)

(ii) Briefly explain whether the adjusted price charged by Chair Co will be higher or lower than the price you calculated in part (a) above. You are NOT required to calculate the adjusted price. (4 marks)

***** END OF QUESTION PAPER *****