

University of Eswatini  
Department of Accounting and Finance  
Supplementary/Re-sit Exam Paper - Semester - II

Programme of Study : Bachelor of Commerce  
Year of Study : Year Four / Level Six  
Title of Paper : Advanced Management Accounting II  
Course Code : ACF414/AC425/AC505  
Time Allowed : **3 Hours.**

- Instructions:
1. Total number of questions on this paper is four (4).
  2. Answer all the questions.
  3. The marks awarded for a question / part is indicated at the end of each question / part of question.
  4. Where applicable, submit all workings and calculations on the answer sheet alongside the case.
  5. Calculations are to be made to two decimal places of accuracy unless otherwise instructed.

**Note:** You are reminded that in assessing your work, account will be taken of accuracy of the language and the general quality of expression, together with the layout and presentation of your final answer.

**Special requirement** : **Calculator**

**This paper is not to be opened until permission has been granted by the invigilator.**

**QUESTION 1:**

Nkambule Manufacturers has the following total operating results for the current year:

|                     |             |
|---------------------|-------------|
| Sales revenue       | E 5,600,000 |
| Less Variable costs | 3,720,000   |
| Contribution        | 1,880,000   |
| Less Fixed costs    | 1,000,000   |
| Net income          | E 880,000   |

The following additional information concerning the performance of each of the firm's three operating divisions has been provided:

|                                 | Divisions   |             |             |
|---------------------------------|-------------|-------------|-------------|
|                                 | A           | B           | C           |
| Sales revenue                   | E 2,400,000 | E 2,000,000 | E 1,200,000 |
| Controllable variable costs     | 1,680,000   | 1,200,000   | 840,000     |
| Controllable/Direct fixed costs | 320,000     | 280,000     | 200,000     |

**Required:**

- i) Rank the three divisions on the basis of their segment profit contribution as a percentage of sales **(10 marks)**
  
- ii) A proposal to increase advertising expenses by E 123,200 is expected to generate a 10% increase in sales in all three divisions. Analyse the effect of this proposal on the firm as a whole and on each division. Assume that the cost of advertising will be allocated to divisions according to each division's percentage to sales and is to be considered as an attributable fixed cost of each division.

**(15 marks)**

**Total (25 marks)**

**QUESTION 2:**

Krishna Ltd is a highly geared company that wishes to expand its operations. Six possible capital investments have been identified, but, the company only has access to a total of E 720,000. The projects are un-divisible and may not be postponed until a future period.

| Year    | Expected net cash inflows |        |        |        |        | Initial outlay |
|---------|---------------------------|--------|--------|--------|--------|----------------|
|         | 1                         | 2      | 3      | 4      | 5      |                |
| Project | E                         | E      | E      | E      | E      | E              |
| A       | 80,000                    | 80,000 | 80,000 | 80,000 | 80,000 | 284,000        |
| B       | 85,000                    | 97,000 | 74,000 |        |        | 205,000        |
| C       | 58,000                    | 58,000 | 73,000 | 83,000 |        | 185,000        |
| D       | 72,000                    | 72,000 | 72,000 | 72,000 |        | 190,000        |
| E       | 50,000                    | 60,000 | 70,000 | 80,000 | 50,000 | 200,000        |
| F       | 45,000                    | 92,000 | 92,000 |        |        | 170,000        |

Project A & E are mutually exclusive. All projects are believed to be of similar risk to the company's existing capital investments.

Any surplus funds may be invested in the money market to earn a return of 9 per cent per year.

Krishna's cost of capital is 12 per cent per year.

**Required:**

- i) Calculate the expected Net Present Value of each project. **(8 marks)**
- ii) Calculate the expected Profitability Index associated with each of the six projects and rank the projects according to both of these investment appraisal methods. **(10 marks)**
- iii) Give reasoned advice to Krishna Ltd recommending which projects should be selected. **(7 marks)**

**Total (25 marks)**

**QUESTION 3:**

A project consisting of six independent activities is to be analysed by using PERT. The following information is given (time estimates are in days):

| Activity | Predecessor activity | a | m | b  |
|----------|----------------------|---|---|----|
| A        | --                   | 3 | 4 | 5  |
| B        | --                   | 2 | 2 | 2  |
| C        | A                    | 1 | 3 | 5  |
| D        | B,C                  | 0 | 4 | 14 |
| E        | D                    | 1 | 2 | 3  |
| F        | A                    | 2 | 9 | 10 |

**Required:**

- i) Determine the expected time and variance for each activity **(8 marks)**
  - ii) Draw the network diagram.  
Determine the critical path for the entire project as well as the expected completion time for the total project **(8 marks)**
  - iii) In addition, determine the earliest and latest start times for each activity and also slack for each activity. **(5 marks)**
  - iv) What is the probability that the project will be completed in 13 weeks? **(4 marks)**
- Total (25 marks)**

**QUESTION 4:**

Write **short notes** on the following:

- i) Return on investment , Residual Income and EVA<sup>(TM)</sup>
- ii) Two approaches for adjusting for inflation when appraising capital projects
- iii) Methods of Transfer Pricing that have been advocated to resolve the conflicts between the decision making and performance evaluation objectives
- iv) Main features of a JIT philosophy
- v) Target costing approach to cost management.

**Total (5 \* 5 = 25 marks)**

**End of exam question paper**

## APPENDIX A: AREAS UNDER THE STANDARD NORMAL CURVE

*Example:* To find the area under the normal curve, you must know how many standard deviations that point is to the right of the mean. Then the area under the normal curve can be read directly from the normal table. For example, the total area under the normal curve for a point that is 1.55 standard deviations to the right of the mean is .93943.

|     | .00    | .01    | .02    | .03    | .04    | .05    | .06    | .07    | .08    | .09    |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.0 | .50000 | .50399 | .50798 | .51197 | .51595 | .51994 | .52392 | .52790 | .53188 | .53586 |
| 0.1 | .53983 | .54380 | .54776 | .55172 | .55567 | .55962 | .56356 | .56749 | .57142 | .57535 |
| 0.2 | .57926 | .58317 | .58706 | .59095 | .59483 | .59871 | .60257 | .60642 | .61026 | .61409 |
| 0.3 | .61791 | .62172 | .62552 | .62930 | .63307 | .63683 | .64058 | .64431 | .64803 | .65173 |
| 0.4 | .65542 | .65910 | .66276 | .66640 | .67003 | .67364 | .67724 | .68082 | .68439 | .68793 |
| 0.5 | .69146 | .69497 | .69847 | .70194 | .70540 | .70884 | .71226 | .71566 | .71904 | .72240 |
| 0.6 | .72575 | .72907 | .73237 | .73563 | .73891 | .74215 | .74537 | .74857 | .75175 | .75490 |
| 0.7 | .75804 | .76115 | .76424 | .76730 | .77035 | .77337 | .77637 | .77935 | .78230 | .78524 |
| 0.8 | .78814 | .79103 | .79389 | .79673 | .79955 | .80234 | .80511 | .80785 | .81057 | .81327 |
| 0.9 | .81594 | .81859 | .82121 | .82381 | .82639 | .82894 | .83147 | .83398 | .83646 | .83891 |
| 1.0 | .84134 | .84375 | .84614 | .84849 | .85083 | .85314 | .85543 | .85769 | .85993 | .86214 |
| 1.1 | .86433 | .86650 | .86864 | .87076 | .87286 | .87493 | .87698 | .87900 | .88100 | .88298 |
| 1.2 | .88493 | .88686 | .88877 | .89065 | .89251 | .89435 | .89617 | .89796 | .89973 | .90147 |
| 1.3 | .90320 | .90490 | .90658 | .90824 | .90988 | .91149 | .91309 | .91466 | .91621 | .91774 |
| 1.4 | .91924 | .92073 | .92220 | .92364 | .92507 | .92647 | .92785 | .92922 | .93056 | .93189 |
| 1.5 | .93319 | .93448 | .93574 | .93699 | .93822 | .93943 | .94062 | .94179 | .94295 | .94408 |
| 1.6 | .94520 | .94630 | .94738 | .94845 | .94950 | .95053 | .95154 | .95254 | .95352 | .95449 |
| 1.7 | .95543 | .95637 | .95728 | .95818 | .95907 | .95994 | .96080 | .96164 | .96246 | .96327 |
| 1.8 | .96407 | .96485 | .96562 | .96638 | .96712 | .96784 | .96856 | .96926 | .96995 | .97062 |
| 1.9 | .97128 | .97193 | .97257 | .97320 | .97381 | .97441 | .97500 | .97558 | .97615 | .97670 |
| 2.0 | .97725 | .97784 | .97831 | .97882 | .97932 | .97982 | .98030 | .98077 | .98124 | .98169 |
| 2.1 | .98214 | .98257 | .98300 | .98341 | .98382 | .98422 | .98461 | .98500 | .98537 | .98574 |
| 2.2 | .98610 | .98645 | .98679 | .98713 | .98745 | .98778 | .98809 | .98840 | .98870 | .98899 |
| 2.3 | .98928 | .98956 | .98983 | .99010 | .99036 | .99061 | .99086 | .99111 | .99134 | .99158 |
| 2.4 | .99180 | .99202 | .99224 | .99245 | .99266 | .99286 | .99305 | .99324 | .99343 | .99361 |
| 2.5 | .99379 | .99396 | .99413 | .99430 | .99446 | .99461 | .99477 | .99492 | .99506 | .99520 |
| 2.6 | .99534 | .99547 | .99560 | .99573 | .99585 | .99598 | .99609 | .99621 | .99632 | .99643 |
| 2.7 | .99653 | .99664 | .99674 | .99683 | .99693 | .99702 | .99711 | .99720 | .99728 | .99736 |
| 2.8 | .99744 | .99752 | .99760 | .99767 | .99774 | .99781 | .99788 | .99795 | .99801 | .99807 |
| 2.9 | .99813 | .99819 | .99825 | .99831 | .99836 | .99841 | .99846 | .99851 | .99856 | .99861 |
| 3.0 | .99865 | .99869 | .99874 | .99878 | .99882 | .99886 | .99890 | .99893 | .99896 | .99900 |
| 3.1 | .99903 | .99906 | .99910 | .99913 | .99916 | .99918 | .99921 | .99924 | .99926 | .99929 |
| 3.2 | .99931 | .99934 | .99936 | .99938 | .99940 | .99942 | .99944 | .99946 | .99948 | .99950 |
| 3.3 | .99952 | .99953 | .99955 | .99957 | .99958 | .99960 | .99961 | .99962 | .99964 | .99965 |
| 3.4 | .99966 | .99968 | .99969 | .99970 | .99971 | .99972 | .99973 | .99974 | .99975 | .99976 |
| 3.5 | .99977 | .99978 | .99978 | .99979 | .99980 | .99981 | .99981 | .99982 | .99983 | .99983 |
| 3.6 | .99984 | .99985 | .99985 | .99986 | .99986 | .99987 | .99987 | .99988 | .99988 | .99989 |
| 3.7 | .99989 | .99990 | .99990 | .99990 | .99991 | .99991 | .99992 | .99992 | .99992 | .99992 |
| 3.8 | .99993 | .99993 | .99993 | .99994 | .99994 | .99994 | .99994 | .99995 | .99995 | .99995 |
| 3.9 | .99995 | .99995 | .99996 | .99996 | .99996 | .99996 | .99996 | .99996 | .99997 | .99997 |

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