

University of Eswatini
Department of Accounting and Finance
Main 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 & Area under the Normal Distribution Curve**

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

QUESTION 1:

Swazi Wires is a company that installs wiring and electrical fixtures in residential construction. Mr David Dlamini has laid out the major steps and seven activities involved in this Project. These activities have been labelled A through G in the following table, which also shows their estimated completion times and immediate predecessors.

Activity	Estimated duration (in weeks)			Immediate predecessor
	Optimistic (a)	Most likely (m)	Pessimistic (b)	
A	1	2	3	--
B	2	3	4	--
C	4	5	6	A
D	8	9	10	B
E	2	5	8	C,D
F	4	5	6	B
G	1	2	3	E

Required:

- i) Determine the expected time and variance for each activity **(8 marks)**
- ii) Draw the network diagram. **(5 marks)**
- iii) Determine the critical path for the entire project as well as the expected completion time for the total project **(3 marks)**
- iv) Determine the earliest and latest start times for each activity and also slack for each activity. **(5 marks)**
- v) What is the probability that the project will be completed in 20 weeks? **(4 marks)**
- vi) Define slack and explain its importance in PERT. **(5 marks)**

Total (6*5 = 30 marks)

QUESTION 2:

Khumalo Manufacturers has two divisions, X and Y. One of the parts produced by division X is used in the manufacture of a product that is assembled at division Y. This part is not unique and there is a readily defined market such that X can sell outside the firm and Y can buy from outside.

The following information is descriptive of the normal expectations of division X:

Capacity to produce the part	125,000 Units
External sales at E 100 per unit	100,000 Units
Transfer to division Y	25,000 Units

Costs:

Variable manufacturing cost per unit	E 84
Variable selling costs (on external sales only but not incurred on internal transfers)	2
Fixed manufacturing cost (based on 125,000 units)	6
Fixed selling cost (based on 100,000 units)	1

The division Y presents the following data on the assumption of a volume of 25,000 units (one part is needed for each unit of its own production):

Variable manufacturing cost per unit (Exclusive of transfer price or outside purchase price)	E 100
Variable selling expenses per unit	6
Fixed manufacturing cost	10
Fixed selling expenses	4
Selling price of finished product	240

Required:

- If division X could sell 125,000 units at E 100 each in the outside market, what transfer price would the central management prefer in order to provide proper motivation to division Y? **(5 marks)**
- As management accountant, would you advise division Y to buy at the transfer price determined in part (a) ? **(4 marks)**
- Assume the situation and the transfer price determined in part a) If the selling price dropped to E 200, should Y buy at that price? Would this be desirable from the point of the firm? Give reasons. **(5 marks)**
- Assume that the product of Division X did not have an outside demand in excess of 100,000 units and its total fixed manufacturing cost could be reduced by 10%, If the volume of production were reduced to 100,000 units, what would be the appropriate transfer price? **(8 marks)**
- Suppose the unit selling price of Y's product is E 180; one of its customers is also a customer of division X; division Y refuses to buy the part from the outside market at E 100 since the selling price of E180 would not be high enough to even cover the variable costs. If division X does not lower the transfer price, division Y will not sell to this customer who, in turn, will probably cancel the usual order of 50,000 units to division X. There is no other demand for the product and no other usage of X's capacity. Fixed costs would not change at either division. What is the lowest transfer price that division X would be well advised to accept? Support your recommendation with computations. **(8 marks)**

Total (30 marks)

QUESTION 3:

- a) The manager of Hlane Game Park is considering whether to open on 1st January, a day when the Game Park was closed in the previous years. The Game Park has a daily capacity of 2,000 visitors. If the Park opens for business on that day it will incur additional specific fixed costs of E 65,000. The contribution from the sale of tickets would be E20 per visitor. The number of visitors is uncertain, but based on past experience it is expected to be as follows:

	Probability
1,600 Visitors	50%
1,800 visitors	30%
2,000 visitors	20%

It is expected that visitors would also purchase souvenirs and refreshments. The contribution which would be made from these sales has been estimated as follows:

	Probability
E16 per visitor	35%
E 20 per visitor	40%
E24 per visitor	25%

Required:

- i) Calculate whether it is worthwhile opening the Game Park on 1st January. You should use expected value as the basis of your analysis. **(7 marks)**
 - ii) Prepare a two-way data table to show the contribution to general fixed overhead for each of the nine possible outcomes. **(3 marks)**
 - iii) Calculate the probability of making a positive contribution to general Fixed overheads by opening on 1st January. **(5 marks)**
- Total (15 marks)**
- b) A hospital records show that the cost of carrying out health checks in the last five accounting periods has been as follows:

Period	Number of patients seen	Total cost E
1	600	16,125
2	967	16,500
3	1,237	19,450
4	990	16,980
5	1,200	19,100

Required:

- i) Using High-low method and ignoring inflation, estimate fixed and variable elements of total cost of health checks from the above data. **(3 marks)**
- ii) Estimate the cost of carrying out health checks on 1,000 patients in period 6. **(2 marks)**

Grand Total (20 marks)

QUESTION 4:

Write short note on the following:

- i) Activity -based Management (ABM)
- ii) Nominal Cash-flows and Real Cash-flows.
- iii) Target Costing approach to cost management
- iv) Profit Centres and Investment Centres

(4*5 = 20 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	.73566	.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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