# Basic concepts decision making process 

Business, Accounting

## ASSIGN BUSTER

MODULE 9 CAPITAL BUDGETING THEORIES: Basic Concepts Decision Making Process 2. The first step in the decision-making process is to A. determine and evaluate possible courses of action. B. identify the problem and assignresponsibility. C. make a decision. D. review results of the decision. Strategic planning 39. Strategic planning is the process of deciding on an organization' A. minor programs and the approximate resources to be devoted to them B. major programs and the approximate resources to be devoted to them C. minor programs prior to consideration of resources that might be needed $D$. ajor programs prior to consideration of resources that might be needed Capital budgeting defined 1 . The long-term planning process for making and financing investments that affect a company's financial results over a number of years is referred to as A. capital budgetingC. master budgeting B. strategic planningD. long-range planning 3. Capital budgeting is the process A. used in sell or process further decisions. B. of determining how much capital stock to issue C. of making capital expenditure decisions D. of eliminating unprofitable product line 5. A capital investment decision is essentially a decision to: A. xchange current assets for current liabilities. B. exchange current cash outflows for the promise of receiving future cash inflows. C. exchange current cash flow from operating activities for future cash inflows from investing activities. D. exchange current cash inflows for future cash outflows. Risk \& return 6. The higher the risk element in a project, the A. more attractive the investment is. B. higher the net present value is. C. higher the cost of capital is. D. higher the discount rate is. 9. Cost of capital is the A. amount the company must pay for its plant assets. B. ividends a company must pay on its equity securities. C. cost the company must incur to obtain its capital resources. D. cost the company is charged by investment bankers who handle the issuance of equity or long-term debt securities. 14. How should the following projects be listed in order of increasing risk? A. New venture, replacement, expansion. B. Replacement, new venture, expansion. C. Replacement, expansion, new venture. D. Expansion, replacement, new venture. 41. Problems associated with justifying investments in high-tech projects often include discount rates that are too A. Iow and time horizons that are too long
B. high and time horizons that are too long C. high and time horizons that are too short D. low and time horizons that are too short 60. In evaluating high-tech projects, A. only tangible benefits should be considered. B. only intangible benefits should be considered. C. both tangible and intangible benefits should be considered. D. neither tangible nor intangible benefits should be considered. Types of capital projects 4. A project that when accepted or rejected will not affect the cash flows of another project. A. Independent projectsC. Mutually exclusive projects $B$. Dependent projectsD. Both b and c

Capital budgeting process 7. The normal methods of analyzing investments A. cannot be used by not-for-profit entities. B. do not apply if the project will not produce revenues. C. cannot be used if the company plans tofinancethe project with funds already available internally. D. require forecasts of cash flows expected from the project. Investments Sale of old asset 38. When disposing of an old asset and replacing it with a new one, tax effect on A. gain on sale of the old asset reduces the basis of the new asset B. gain on sale of the old asset increases the basis of the new asset $C$. oss on sale of
the old asset reduces the basis of the new asset D. b and c Working capital 18. A major difference between an investment in working capital and one in depreciable assets is that $A$. an investment in working capital is never returned, while most depreciable assets have some residual value. B. an investment in working capital is returned in full at the end of a project's life, while an investment in depreciable assets has no residual value. C. an investment in working capital is not tax-deductible when made, nor taxable when returned, while an investment in depreciable assets does allow tax deductions.
D. because an investment in working capital is usually returned in full at the end of the project's life, it is ignored in computing the amount of the investment required for the project. 30. The proper treatment of an investment in receivables and inventory is to $A$. ignore it $B$. add it to the required investment in fixed assets $C$. add it to the required investment in fixed assets and subtract it from the annual cash flows $D$. add it to the investment in fixed assets and add the present value of the recovery to the present value of the annual cash flows 31.

In connection with a capital budgeting project, an investment in working capital is normally recovered A. at the end of the project's life B. in the first year of the project's life C. evenly through the project's life D. when the company goes out of businessA 32. XYZ Co. is adopting just-in-time principles. When evaluating an investment project that would reduce inventory, how should XYZ treat the reduction? A. Ignore it. B. Decrease the cost of the investment and decrease cash flows at the end of the project's life. C. Decrease the cost of the investment. D.

Decrease the cost of the investment and increase the cash flow at the end of the project's life. Relevant cash flows 72. Which of the following represents the biggest challenge in the decision to purchase new equipment? A . Estimating employee training for the new project. B. Estimating cash flows for the future. C. Estimating transportation costs of the new equipment. D. Estimating maintenance costs for the new equipment. 51. When a firm has the opportunity to add a project that will utilize factory capacity that is currently not being used, which costs should be used to determine if the added project should be undertaken?
A. Opportunity costsC. Net present costs B. Historical costsD. Incremental costs 11. The only future costs that are relevant to deciding whether to accept an investment are those that will $A$. be different if the project is accepted rather than rejected. B. be saved if the project is accepted rather than rejected. C. be deductible for tax purposes. D. affect net income in the period that they are incurred. Cash inflow 66. Which of the following is not a typical cash inflow in capital investment decisions? A. Incremental revenuesC. Salvage value B. Cost reductionsD. Additional working capital

Out-of-pocket costs 45 . Which of the following is a cost that requires a future outlay of cash that is which relevant for future decision-making? A. Opportunity costC. Sunk costs B. Out-of-pocket costD. Relevant benefits Depreciation \& Tax 22. If there were no income taxes, A. depreciation would be ignored in capital budgeting. B. the NPV method would not work. C. income would be discounted instead of cash flow. D. all potential investments would be desirable. 21. Relevant cash flows for net present value (NPV) models include all of the following except A. outflows to
purchase new equipment B. epreciation expense on the newly acquired piece of equipment C . reductions in operating cash flows as a result of using the new equipment. D. cash outflows related to purchasing additional inventories for another retail store. 55. When evaluating depreciation methods, managers who are concerned about capital investment decisions will: A. choose straight line depreciation so there is minimum impact on the decision. B. use units of production so more depreciation expense will be allocated to the later years. C. use accelerated methods to have as much depreciation in the early years of an asset's life.
D. choice of depreciation method has no impact on the capital investment decision. 70. The tax consequences should be considered under which circumstances when making capital investment decisions? A. Positive net incomeC. Depreciation B. Disposal of an assetD. All of the above Irrelevant cash flows Loan financing 43. In addition to incremental revenues, cash inflows from capital investments can be generated from all of the following sources except: A. debt financing B. cost savings C. salvage value D. reduction in the amount of working capital 10.

If Helena Company expects to get a one-year bank loan to help cover the initial financing of one of its capital projects, the analysis of the project should A. offset the loan against any investment in inventory or receivables required by the project. B. show the loan as an increase in the investment. C. show the loan as a cash outflow in the second year of the project's life. D. ignore the loan Sunk cost 29. In deciding whether to replace a machine, which of the following is NOT a sunk cost? A. The expected resale price of the existing machine. $B$. The book value of the existing machine.
C. The original cost of the existing machine. D. The depreciated cost of the existing machine. Accounting rate of return 54. The primary advantages of the average rate of return method are its ease of computation and the fact that: A. It is especially useful to managers whose primary concern is liquidity B. There is less possibility of loss from changes in economic conditions and obsolescence when the commitment is short-term C. It emphasizes the amount of income earned over the life of the proposal D. Rankings of proposals are necessary Nondiscounted cash flow method

Payback method 36. There are several capital budgeting decision models that do not use discounted cash flows. What is the name of the simple technique that calculates the total time it will take to recover, using cash inflows from operations, the amount of cash invested in a project? A. Recovery periodC. External rate of return B. Payback modelD. Accounting rate of return 34. The technique most concerned with liquidity is A. Payback method. B. Net present value technique. C. Internal rate of return. D. book rate of return. 73. Which of the following is a potential use of the payback method? A.

Help managers control the risks of estimating cash flows B. Help minimize the impact of the investment on liquidity $C$. Help control the risk of obsolescence D. All of the answers are correct 47. The cash payback technique: A. should be used as a final screening tool. B. can be the only basis for the capital budgeting decision. C. is relatively easy to compute and understand. D. considers the expected profitability of a project. 33. Which of the following is NOT a defect of the payback method? A. It ignores cash flows
because it uses net income. B. It ignores profitability. C. It ignores the present values of cash flows.
D. It ignores the pattern of cash flows beyond the payback period. 48. The payback method, as a capital budgeting technique, assumes that all intermediate cash inflows are reinvested to yield a return equal to: A. ZeroC. The Discount Rate B. The Time-Adjusted-Rate-of-ReturnD. The Cost-ofCapital 52. Which of the following capital budgeting methods is the least theoretically correct? A. payback methodC. internal rate of return B. net present valueD. none of the above Discounted cash flow method 49. Which of the following methods of evaluating capital investment projects incorporates the time value ofmoney?
A. Payback period, accounting rate of return, and internal rate of return B. Accounting rate of return, net present value, and internal rate of return C . Payback period and accounting rate of return D. Net present value and internal rate of return Net present value 69. Discounted cash flow analysis is used in which of the following techniques? A. Net present valueC. Cost of capital B. Payback periodD. All of the above 8. The primary capital budgeting method that uses discounted cash flow techniques is the $A$. net present value method. B. cash payback technique. C. annual rate of return method.
D. profitability index method. 20. The net present value (NPV) model can be used to evaluate and rank two or more proposed projects. The approach that computes the total impact on cash flows for each option and then converts these total cash flows to their present values is called the A. differential approachC. contribution approach B. incremental approach. D. total project approach. 40. The discount rate commonly used in present value
calculations is the $A$. treasury bill rate $B$. weighted average return on assets adjusted for risk $C$. risk free rate plus inflation rate $D$. hareholders' expected return on equity 44 . Which is true of the net present value method of determining the acceptability of an investment? A. The initial cost of the investment is subtracted from the present value of net cash flows $B$. The net cash flows are not adjusted to present value $C$. A negative net present value indicates the investment should be undertaken D. The net present value method requires no subjective judgments Profitability index 35. The profitability index $A$. does not take into account the discounted cash flows. B. Is calculated by dividing total cash flows by the initial investment. C. Ilows comparison of the relative desirability of projects that require differing initial investments. D. will never be greater than 1. 0. Internal rate of return 56. According to the reinvestment rate assumption, which method of capital budgeting assumes cash flows are reinvested at the project's rate of return? A. payback periodC. internal rate of return B. net present valueD. none of the above 62. The rate of interest that produces a zero net present value when a project's discounted cash operating advantage is netted against its discounted net investment is the: A. Cost of capitalC. Cutoff rate B. Discount rateD.

Internal rate of return 57. A weakness of the internal rate of return method for screening investment projects is that it: A. Does not consider the time value of money $B$. Implicitly assumes that the company is able to reinvest cash flows from the project at the company's discount rate C. Implicitly assumes that the company is able to reinvest cash flows from the project at the internal rate of return D. Fails to consider the timing of cash flows

Comprehensive 50. Which of the following methods of evaluating capital investment projects do not use a percentage as a measurement unit? A. Payback period and net present value
B. Accounting rate of return and payback period C. Net present value and internal rate of return D. Internal rate of return and payback period Relationships among NPV, PI \& IRR 24. If a company's required rate of return is 12 percent and in using the profitability index method, a project's index is greater than 1. 0, this indicates that the project's rate of return is A. equal to 12 percent. C. less than 12 percent. B. greater than 12 percent. D. dependent on the size of the investment. 25 . If the present value of the future cash flows for an investment equals the required investment, the IRR is A. qual to the cutoff rate. B. equal to the cost of borrowed capital. C. equal to zero. D. lower than the company's cutoff rate return. 27 . The relationship between payback period and IRR is that A. a payback period of less than one-half the life of a project will yield an IRR lower than the target rate. B. the payback period is the present value factor for the IRR. C. a project whose payback period does not meet the company's cutoff rate for payback will not meet the company's criterion for IRR. D. none of the above. 67. When comparingNPV and IRR, which is not true? A.

With NPV, the discount rate can be adjusted to take into account increased risk and the uncertainty of cash flows $B$. With IRR, cash flows can be adjusted to account for risk C. NPV can be used to compare investments of various size or magnitude D. Both NPV and IRR can be used for screening decisions Sensitivity analysis 13. In capital budgeting, sensitivity analysis is used A. to determine whether an investment is profitable. B. to see how a decision
would be affected by changes in variables. C. to test the relationship of the IRR and NPV. D. to evaluate mutually exclusive investments. 15.

An approach that uses a number of outcome estimates to get a sense of the variability among potential returns is $A$. the discounted cash flow technique. B. the net present value method. C. risk analysis. D. sensitivity analysis. 42. Sensitivity analysis is the study of how the outcome of a decision making process $A$. changes as one or more of the assumptions change $B$. remains the same even though one or more of the assumptions change $C$. changes even though one or more of the assumptions do not change D. does not change as the assumptions do not change either 64. Sensitivity analysis is: A.

An appropriate response to uncertainty in cash flow projections B. Useful in measuring the variance of the Fisher rate $C$. Typically conducted in the post investment audit D. Useful to compare projects requiring vastly different levels of initial investment $\operatorname{IRR}=058$. if the internal rate of return on an investment is zero: A. its NPV is positive. B. its annual cash flows equal its required investment. C. it is generally a wise investment. D. its cash flows decrease over its life. Change in NPV 59. Which of the following would decrease the net present value of a project? A. A decrease in the income tax rate B.

A decrease in the initial investment $C$. An increase in the useful life of the project D. An increase in the discount rate Effect of change in cost of capital 26. All other things being equal, as cost of capital increases A. more capital projects will probably be acceptable. B. fewer capital projects will probably be acceptable. C. the number of capital projects that are acceptable will
change, but the direction of the change is not determinable just by knowing the direction of the change in cost of capital. D. the company will probably want to borrow money rather than issue stock. Effect of change in residual value 23.

Assuming that a project has already been evaluated using the following techniques, the evaluation under which technique is least likely to be affected by an increase in the estimated residual value of the project? A. Payback Period. C. Net Present Value. B. Internal Rate of Return. D. Profitability Index. Decision rules - independent projects 68. What type of decision involves deciding if an investment meets a predetermined standard? A. Investment decisionsC. Management decisions B. Screening decisionsD. Preference decisions Payback period 46. If a payback period for a project is greater than its expected useful life, the A. roject will always be profitable. B. entire initial investment will not be recovered. C. project would only be acceptable if the company's cost of capital was low. D. project's return will always exceed the company's cost of capital. Net present value 61. An analysis of a proposal by the net present value method indicated that the present value of future cash inflows exceeded the amount to be invested. Which of the following statements best describes the results of this analysis? A. The proposal is desirable and the rate of return expected from the proposal exceeds the minimum rate used for the analysis B.

The proposal is desirable and the rate of return expected from the proposal is less than the minimum rate used for the analysis $C$. The proposal is undesirable and the rate of return expected from the proposal is less than the minimum rate used for the analysis $D$. The proposal is undesirable and
the rate of return expected from the proposal exceeds the minimum rate used for the analysis 63. NPV indicates a project is deemed desirable (acceptable) when the NPV is A. greater than or equal to zero B. less than zero C. greater than or equal to the risk-adjusted cost of capital D. ess than or equal to the risk-adjusted cost of capital Internal rate of return 12. If Arbitrary Company wants to use IRR to evaluate long-term decisions and to establish a cutoff rate of return, it must be sure that the cutoff rate is A. at least equal to its cost of capital. B. at least equal to the rate used by similar companies. C. greater than the IRR on projects accepted in the past. D. greater than the current book rate of return. NPV \& IRR 19. The NPV and IRR methods give $A$. the same decision (accept or reject) for any single investment. B. the same choice from among mutually exclusive investments. C. ifferent rankings of projects with unequal lives. D. the same rankings of projects with different required investments. Decision rule - mutually exclusive projects 71. Mutually exclusive projects are those that: A. if accepted, preclude the acceptance of competing projects. B. if accepted, can have a negative effect on the company's profit. C. if accepted, can also lead to the acceptance of a competing project. D. require all managers to consider. 28. In choosing from among mutually exclusive investments the manager should normally select the one with the highest A. Net present value. C. Profitability index. B.

Internal rate return. D. Book rate of return. 53. Why do the NPV method and the IRR method sometimes produce different rankings of mutually exclusive investment projects? A. The NPV method does not assume reinvestment of cash flows while the IRR method assumes the cash flows will be reinvested
at the internal rate of return. B. The NPV method assumes a reinvestment rate equal to the discount rate while the IRR method assumes a reinvestment rate equal to the internal rate of return. C. The IRR method does not assume reinvestment of the cash flows while the NPV assumes the reinvestment rate is equal to the discount rate. D .

The NPV method assumes a reinvestment rate equal to the bank loan interest rate while the IRR method assumes a reinvestment rate equal to the discount rate. Post-audit 16. Post-audit of capital projects A. is usually conclusive. B . is done using different evaluation techniques than were used in making the original capital budgeting decision. C. provides a formal mechanism by which the company can determine whether existing projects should be supported or terminated. D. all of the above. 17. A thorough evaluation of how well a project's actual performance matches the projections made when the project was proposed is called a A. re-audit. C. sensitivity analysis. B. post-audit. D. risk analysis. 37. A follow-up evaluation of a capital project is performed to see that investment expenditures are proceeding on time and on budget, to compare actual cash flows with those originally predicted, and to evaluate continuation of the project. This followup is called a A. postaudit. C. management audit B. performance evaluationD. project review 65. Companies use post audits to: A. chastise managers whose project does not exceed projections. B. prove to managers that they should have accepted projects they previously rejected.
C. have the managers revise poorly performing projects so the projects will have larger return in the future. D. provide feedback that enables managers to improve the accuracy of the projections of future cash flows, thereby
maximizing the quality of the firm's capital investments. PROBLEMS: Net Investment [i]. Bruell Company is considering to replace its old equipment with a new one. The old equipment had a net book value of P100, 000, 4 remaining useful life with $\mathrm{P} 25,000$ depreciation each year. The old equipment can be sold at P80, 000. The new equipment costs P160, 000, have a 4-year life.

Cash savings on operating expenses before 40\% taxes amount to P50, 000 per year. What is the amount of investment in the new equipment? A. P160, 000C. P 80, 000 B. P 72, 000D. P 68, 000 Operating Cash Flow Cash Flow Before tax [ii]. Taal Company is considering the purchase of a machine that promises to reduce operating costs by equal amounts every year of its 6year useful life. The machine will cost P840, 000 and has no salvage value. The machine has a $20 \%$ internal rate of return. Taal Company is subject to $40 \%$ income tax rate. The present value of 1 for 6 periods at $20 \%$ is 3.326 , and at the end of 6 periods is 0.349 . The approximate annual cash savings before tax is closest to: A. P252, 555C. P187, 592 B. P112, 555D. P327, 592 Increase in Annual Income Tax [iii]. Mayon Company is considering replacing its old machine with a new and more efficient one. The old machine has book value of P100, 000, a remaining useful life of 4 years, and annual straightline depreciation of $\mathrm{P} 25,000$. The existing machine has a current market value of P80, 000. The replacement machine would cost P160, 000, have a 4year life, and will save P50, 000 per year in cash operating costs. If the replacement machine would be epreciated using the straight-line method and the tax rate is $40 \%$, what should be the increase in annual income taxes? A. P14, 000C. P40, 000 B. P28, 000D. P 4, 000 Depreciation \& Taxes
[iv]. Prime Consulting, Inc. operates consulting offices in Manila, Olongapo, and Cebu. The firm is presently considering an investment in a new mainframe computer andcommunicationsoftware. The computer would cost P6 million and have an expected life of 8 years. For tax purposes, the computer can be depreciated using either straight-line method or Sum-of-the-Years'-Digits (SYD) method over five years.

No salvage value is recognized in computing depreciation expense and no salvage value is expected at the end of the life of the equipment. The company's cost of capital is 10 percent and its tax rate is 40 percent. The present value of annuity of 1 for 5 periods is 3.791 and for 8 periods is 5 . 335. The present values of 1 end of each period are: 10. 909150. 620920. 826460. 5645 30. 651370.5132 40. 683080. 4665 The present value of the net advantage of using SYD method of depreciation with a five-year life instead of straight-line method of depreciating the equipment is: A.

P 86, 224C. P215, 560 B. P115, 168D. P287, 893 [v]. For P450, 000, Maleen Corporation purchased a new machine with an estimated useful life of five years with no salvage value. The machine is expected to produce cash flow from operations, net of 40 percent income taxes, as follows: First yearP160, 000 Second year 140, 000 Third year 180, 000 Fourth year 120, 000 Fifth year 100, 000 Maleen will use the sum-of-the-years-digits' method to depreciate the new machine as follows: First yearP150, 000 Second year120, 000 Third year90, 000 Fourth year60, 000 Fifth year30, 000

The present value of 1 for 5 periods at 12 percent is 3 . 60478. The present values of 1 at 12 percent at end of each period are: End of: Period 1 0. 89280 Period 2 0. 79719 Period 3 0. 71178 Period 4 0. 63552 Period 5 0. 56743 Had

Maleen used straight-line method of depreciation instead of declining method, what is the difference in net present value provided by the machine at a discount rate of 12 percent? A. Increase of P 9, 750C. Decrease of P24, 376 B. Decrease of P 9, 750D. Increase of P24, 376 Accounting rate of return Based on initial investment [vi].

A piece of labor saving equipment that Marubeni Electronics Company could use to reduce costs in one of its plants in Angeles City has just come onto the market. Relevant data relating to the equipment follow: Purchase cost of the equipmentP432, 000 Annual cost savings that will be provided by the equipment90, 000 Life of the equipment12 years What is the simple rate of return to be provided by the equipment? A. Between $15 \%$ and $18 \%$. C. 20. $83 \%$. B. $25.00 \%$. D. 12. $50 \%$. Based on average investment [vii]. The BIBO Company has made an investment in video and recording equipment that costs P106, 700.

The equipment is expected to generate cash inflows of $\mathrm{P} 20,000$ per year. How many years will the equipment have to be used to provide the company with a 10 percent average accounting rate of return on its investment? A. 7. 28 yearsC. 9.05 years B. 5.55 yearsD. 4.75 years [viii]. Show Company is negotiating to purchase an equipment that would cost P200, 000, with the expectation that P40, 000 per year could be saved in after-tax cash operating costs if the equipment were acquired. The equipment's estimated useful life is 10 years, with no salvage value, and would be depreciated by the straight-line method.

Show Company's minimum desired rate of return is 12 percent. The present value of an annuity of 1 at 12 percent for 10 periods is 5 . 65. The present
value of 1 due in 10 periods, at 12 percent, is 0.322 . The average accrual accounting rate of return (ARR) during the first year of asset's use is: A. 20. 0 percentC. 10. 0 percent B. 10. 5 percentD. 40. 0 percent [ix]. An asset was purchased for P66, 000. The asset is expected to last for 6 years and will have a salvage value of P16, 000. The company expects the income before tax to be P7, 200 and the tax rate applicable to the company is $30 \%$.

What is the average return on investment (accounting rate of return)? A. 17. 6\%C. 10. $9 \%$ B. 7. 6\%D. 12. 3\% Net Investment [x]. The Makabayan Company is planning to purchase a new machine which it will depreciate, for book purposes, on a straight-line basis over a ten-year period with no salvage value and a full year's depreciation taken in the year of acquisition. The new machine is expected to produce cash flows from operations, net of income taxes, of P66, 000 a year in each of the next ten years. The accounting (book value) rate of return on the initial investment is expected to be 12 percent.

How much will the new machine cost? A. P300, 000C. P550, 000 B. P660, 000D. P792, 000 [xi]. The Fields Company is planning to purchase a new machine which it will depreciate, for book purposes, on a straight-line basis over a ten-year period with no salvage value and a full year's depreciation taken in the year of acquisition. The new machine is expected to produce cash flow from operations, net of income taxes, of P66, 000 a year in each of the next ten years. The accounting (book value) rate of return on the initial investment is expected to be $12 \%$.

How much will the new machine cost? A. P300, 000C. P660, 000 B. P550, 000D. P792, 000 CFAT [xii]. The Hills Company, a calendar company,
purchased a new machine for P280, 000 on January 1. Depreciation for tax purposes will be P35, 000 annually for eight years. The accounting (book value) rate of return (ARR) is expected to be $15 \%$ on the initial increase in required investment. On the assumption of a uniform cash inflow, this investment is expected to provide annual cash flow from operations, net of income taxes, of A. P35, 000C. P42, 000 B. P40, 250D. P77, 000 Payback Period [xiii].

If an asset costs P35, 000 and is expected to have a P5, 000 salvage value at the end of its ten-year life, and generates annual net cash inflows of P5, 000 each year, the cash payback period is A. 8 yearsC. 6 years B. 7 yearsD. 5 years [xiv]. Consider a project that requires cash outflow of P50, 000 with a life of eight years and a salvage value of P5, 000. Annual before-tax cash inflow amounts to P10, 000 assuming a tax rate of $30 \%$ and a required rate of return of $8 \%$. Salvage value is ignored in computing depreciation. The project has a payback period of A. 5. 0 yearsC. 6. 0 years
B. 5. 6 yearsD. 6. 6 years [xv]. The following incomplete information is provided for an investment decision. ||| Discount Factor (10\%)| Discounted Cash Flows| Cumulative Cash Flows || Year | Cash Flow ||||| 0 | $P(450,000)$ | 1. $000|P(450,000)| P(450,000)||1| 280,000| .909|254,520|||2|$ 210, $000|.26||||3| 140,000| .751||\mid$ Using break-even time (BET) analysis, when will the investment be recovered? A. In 2. 73 yearsC. At the end of year 2 B. Longer than three yearsD. In 2. 21 years [xvi]. Orlando Corporation is considering an investment in a new cheese-cutting machine to replace its existing cheese cutter. Information on the existing machine and
the replacement machine follow: Cost of the new machineP400, 000 Net annual savings in operating costs90, 000

Salvage value now of the old machine 60, 000 Salvage value of the old machine in 8 years 0 Salvage value of the new machine in 8 years 50, 000 Estimated life of the new machine 8 years What is the expected payback period for the new machine? A. 4. 44 yearsC. 2. 67 years B. 8. 50 yearsD. 3. 78 years [xvii]. For P4, 500, 000, Siniloan Corporation purchased a new machine with an estimated useful life of five years with no salvage value at its retirement. The machine is expected to produce cash flow from operations, net of income taxes, as follows: First yearP 900, 000 Second year 1, 200, 000

Third year 1, 500, 000 Fourth year 900, 000 Fifth year 800, 000 Siniloan will use the sum-of-the-years-digits' method to depreciate the new machine as follows: First yearP1, 500, 000 Second year 1, 200, 000 Third year 900, 000 Fourth year 600, 000 Fifth year 300, 000 What is the payback period for the machine? A. 3 yearsC. 5 years B. 4 yearsD. 2 years [xviii]. Paz Insurance Company's management is considering an advertising program that would require an initial expenditure of P165, 500 and bring in additional sales over the next five years. The cost of advertising is immediately recognized as expense.

The projected additional sales revenue in Year 1 is $\mathrm{P} 75,000$, with associated expenses of P25,000. The additional sales revenue and expenses from the advertising program are projected to increase by 10 percent each year. Paz Insurance Company's tax rate is 40 percent. The payback period for the advertising program is A. 4. 6 yearsC. 3. 0 years B. 1. 9 yearsD. 2. 5 years
[xix]. The Leisure Company is considering the purchase of electronic pinball machines to place in amusement houses. The machines would cost a total of P300, 000, have an eight-year useful life, and have a total salvage value of P20, 000.

Based on experience with other equipment, the company estimates that annual revenues and expenses associated with the machines would be as follows: Revenues form useP200, 000 Less operating expenses Commissions to amusement housesP100, 000 Insurance 7, 000 Depreciation 35, 000 Maintenance 18, 000 160, 000 Net incomeP 40, 000 Ignoring the effect of income taxes, the payback period for the pinball machines would be A. 3. 73 yearsC. 4. 0 years B. 3. 23 yearsD. 7. 5 years Net Present Value [xx]. It is the start of the year and Agudelo Company plans to replace its old grinding equipment.

The following information are made available by the management: || Old | New || Equipment cost | P70, 000 | P120, 000 || Current salvage value | 14, 000 |- | | Salvage value, end of useful life | 5, $000|16,000| \mid$ Annual operating costs | 44, $000|32,000| \mid$ Accumulated depreciation | 55, $300|-|$ | Estimated useful life | 10 years | 10 years | The company is not subject to tax and its cost of capital is $12 \%$. What is the present value of all the relevant cash flows at time zero?
A. (P 54, 000)C. (P106, 000) B. (P120, 000)D. (P124, 700) [xxi]. Consider a project that requires an initial cash outflow of P500, 000 with a life of eight years and a salvage value of P20, 000 upon its retirement. Annual cash inflow before tax amounts to P100, 000 and a tax rate of 30 percent will be applicable. The required minimum rate of return for this type of investment
is 8 percent. The present value of 1 and the annuity of 1 , discounted at 8 percent for 8 periods are 0.54 and 5. 747, respectively. Salvage value is ignored in computing depreciation. The net present value amounts to A. P 7, 560C. P 17, 606 B. P 10, 050D. P 20, 050 [xxii].

Zap Manufacturing has an investment opportunity to embark on a project where yearly revenues for five years are to be P400, 000 and operating costs of P104, 800. The equipment costs P1 million, and straight-line depreciation will be used for book and tax purposes. No salvage value is expected at the end of the project's life. The company has a 40 percent marginal tax rate and a 10 percent cost of capital. The equipment manufacturer has offered a delayed payment plan of P560, 500 per year at the end of the first and second years. There will be no changes in working capital. The present value of annuity of 1 for 5 periods is 3.7908 at 10 percent. The present values of 1 end of each period at 10 percent are: Period 10.9091

Period 2 0. 8264 Period 30.7513 Period 4 0. 6830 Period 5 0. 6209 The net present value if the equipment were purchased is A. P (87, 977)C. P 1, 922 B. $P(25,310) D . P(61,094)$ [xxiii]. Paz Insurance Company's management is considering an advertising program that would require an initial expenditure of P165, 500 and bring in additional sales over the next five years. The cost of advertising is immediately recognized as expense. The projected additional sales revenue in Year 1 is P75, 000, with associated expenses of P25, 000. The additional sales revenue and expenses from the advertising program are projected to increase by 10 percent each year.

Paz Insurance Company's tax rate is 40 percent. The present value of 1 at 10 percent, end of each period: | Period | Present value of 1 || 1. | 0.90909 ||
2. | $0.82645||3 .|0.75131|| 4 .|0.68301|| 5 .|0.62092|$ The net present value of the advertising program would be A. P 37, 064C. P 29, 136 B. $\mathrm{P}(37,064)$ D. $\mathrm{P}(29,136)$ [xxiv]. Mario Hernandez plans to buy a haymaker. It costs P175, 000 and is expected to last for five years. He presently hires 6 workers at P10, 000 per month for each of the three harvesting months each year. The equipment would eliminate the need for two workers. Hernandez uses straight-line depreciation and projects a salvage value of P25, 000. His tax rate is $25 \%$ and opportunity cost of funds is $12.0 \%$. The present value of 1discounted at 12 percent at the end of 5 periods is 0.56743 and the present value of an annuity of 1 for 5 periods is 3 . 60478. Which of the following is true? A. The present value of cash flows in year 5 is P22, 710 B. NPV is P28, 436 C. NPV is P15, 250 D. NPV is P14, 186 [xxv]. Tabucol Aggregates, Inc. lans to replace one of its machines with a new efficient one. The old machine has a net book value of P120, 000 with remaining economic life of 4 years. This old machine can be sold for P80, 000. If the new machine were acquired, the cash operating expenses will be reduced from P240, 000 to P160, 000 for each of the four years, the expected economic life of the new machine. The new machine will cost Tabucol a cash payment to the dealer of P300, 000. The company is subject to 32 percent tax and for this kind of investment, a marginal cost of capital of 9 percent. The present value of annuity of 1 and the present value of 1 for 4 periods using 9 percent are 3 . 23972 and 0. 70843, respectively.

The net present value to be provided by the replacement of the old machine is A. P28, 493C. P46, 794 B. P15, 693D. P59, 594 [xxvi]. Zambales Mines, Inc. is contemplating the purchase of equipment to exploit a mineral deposit that
is located on land to which the company has mineral rights. An engineering and cost analysis has been made, and it is expected that the following cash flows would be associated with opening and operating a mine in the area. Cost of new equipment and timbers2, 750, 000 Working capital required1, 000, 000 Net annual cash receipts*1, 200, 000 Cost to construct new road in three years 400, 000 Salvage value of equipment in 4 years 650, 000 Receipts from sales of ore, less out-of-pocket costs for salaries, utilities, insurance, etc. It is estimated that the mineral deposit would be exhausted after four years of mining. At that point, the working capital would be released for reinvestment elsewhere. The company's discount rate is $20 \%$. The net present value for the project is: A. P 454, 620. C. $\mathrm{P}(561,553) \mathrm{B} . \mathrm{P}$ (79, 303). D. P(204, 688). With inflation [xxvii]. By the end of December 31, 2005, Alay Foundation is considering the purchase of a copying machine for P80, 000. The expected annual cash savings are expected to be P32, 000 in the next four years. At the end of the four years, the machine will be discarded without any salvage value.

All the cash savings are stated in number of pesos at December 31, 2006. The company expected that the inflation rate is constantly 5 percent each year. Hence, the first year's cash inflow was adjusted for 5 percent inflation. For simplicity, all cash inflows are assumed to be at year-end. The present value at $14 \%$ of 1 for 4 periods is 2.91371 . The present value of 1 at end of each period are: Period 1 0. 87719 Period 2 0. 76947 Period 3 0. 67497 Period 4 0. 59208 Using the nominal rate of return of 14 percent, the net present value for this machine is A. P12, 239C. P13, 419 B. P19, 670D. P27, 936 [xxviii]. Perpetual Foundation, Inc. a nonprofit organization, has one of
its activities, the production of cookies for its snackfoodstore. Several years ago, Perpetual Foundation, Inc. purchased a special cookie-cutting machine. As of December 31, 2006, this machine will have been used for three years. Management is considering the purchase of a newer, more efficient machine. If purchased, the new machine would be acquired on December 31, 2006. Management expects to sell 300, 000 dozen cookies in each of the next six years. The selling price of the cookies is expected to average P1. 15 per dozen. Perpetual Foundation, Inc. has two options: continue to operate the old machine, or sell the old machine and purchase the new machine.

No trade-in was offered by the seller of the new machine. The following information has been assembled to help management decide which option is more desirable. || Old Machine | New Machine || Original cost of machine at acquisition | P80, 000 | P120, 000 || Remaining useful life as of $12 / 31 / 06$ | 6 years | 6 years || Expected annual cash operating expenses: |||| Variable cost per dozen | P0. 38 | P0. 9 || Total fixed costs | P21, 000 | P 11, 000 || Estimated cash value of machines: | ||| December 31, 2006 | P40, 000 | P120, 000 || December 31, 2012 | P 7, 000 | P 20, 000 | Assume all operating revenues and expenses occur at the end of the year. The net advantage in present value of the better alternative is: A. Retain Old Machine, P61, 675. B. Buy New Machine, P61, 675. C. Retain Old Machine, P16, 345. D. Buy New Machine, P16, 345. Profitability index [xxix]. The Pambansang Kamao Corporation has to replace its completely damaged boiler machine with a new one. The old machine has a net book value of P100, 000 with zero market value; therefore it will give a tax shield, based on $35 \%$ tax rate if replaced, by P35, 000. The company has a 10 percent cost of capital.

Understandably, the new machine, through a uniform decrease in cash operating costs, will give a positive net present value, because this machine will provide an internal rate of return of 12 percent. The present values at $10 \%$ and $12 \%$, respectively, are: || $10 \%$ | $12 \%$ || Annuity of 1, 6 periods | 4. 35526 | 4. 11141 || 1 end of 6 periods | 0.56447 | 0.50663 | If the machine were to be depreciated using straight-line method for 6 years without any salvage value, the estimated profitability index is: A. 1. 0 B. 1. 06 C. 1. 07 D. Cannot be determined from the information [xxx]. The Mejicano Company is planning to purchase a piece of equipment that will reduce annual cash expenses over its 5 -year useful life by equal amounts. The company will depreciate the equipment using straight-line method of depreciation based on estimated life of 5 years without any salvage value. The company is subject to 40 percent tax. The marginal cost of capital for this acquisition is 11. 055 percent. The management accountant calculated that the internal rate of return based on the estimated after-tax cash flows is 12.386 percent and a net present value of P10, 000 .

The president, however, wants to know the profitability index before he finally decides. What is the profitability index for this investment? A. 1. 011C. 1. 022 B. 1. 034D. 1. 044 Internal Rate of Return [xxxi]. Diamond Company is planning to buy a coin-operated machine costing P400, 000. For book and tax purposes, this machine will be depreciated P80, 000 each year for five years. Diamond estimates that this machine will yield an annual inflow, net of depreciation and income taxes, of P120, 000. Diamond's desired rate of return on its investments is $12 \%$. At the following discount rates, the NPVs of the investment in this machine are: | Discount Rate | NPV | 12\% |+P3, 258 ||
$14 \% \mid+1,197$ || $16 \%|-708||18 \%|-2,474$ | Diamond's expected IRR on its investment in this machine is A. 3. 25\%C. 16.00\% B. 12.00\%D. 15. 30\% Required investment [xxxii]. Kipling Company has invested in a project that has an eight-year life. It is expected that the annual cash inflow from the project will be P20, 000. Assuming that the project has a internal rate of return of $12 \%$, how much was the initial investment in the project if the present value of annuity of 1 for 8 periods is 4.968 and the present value of 1 is 0. 404? A. P160, 000C. P 80, 800 B. P 99, 360D. P 64, 640 [xxxiii].

Katol Company invested in a machine with a useful life of six years and no salvage value. The machine was depreciated using the straight-line method. It was expected to produce annual cash inflow from operations, net of income taxes, of P6, 000. The present value of an ordinary annuity of P1 for six periods at $10 \%$ is 4.355 . The present value of P 1 for six periods at $10 \%$ is 0. 564. Assuming that Katol used a time- adjusted rate of return of $10 \%$, what was the amount of the original investment? A. P10, 640C. P22, 750 B. P29, 510D. P26, 130 [xxxiv]. The ForestCompany is planning to invest in a machine with a useful life of five years and no salvage value.

The machine is expected to produce cash flow from operations, net of income taxes, of P20, 000 in each of the five years. Forest's expected rate of return is $10 \%$. Information on present value and future amount factors is as follows: || P E R I O D ||| 1 | 2 | 3 | 4 | 5 || Present value of P1 at $10 \%$ |. 909 |. 826 |. 751 |. 683 |. 621 || Present value of an annuity of $P 1$ at $10 \%$ |. 909 | 1. 736 | 2.487 | 3.170 | 3.791 || Future amount of $P 1$ at $10 \%|1.100| 1$. $210|1.331| 1.464|1.11| \mid$ Future amount of an annuity of P1 at $10 \%$ | 1. $00|2.100| 3.310|4.641| 6.105 \mid$ How much will the machine cost? A. P

32, 220C. P 75, 820 B. P 62, 100D. P122, 100 Required unit sales [xxxv]. Paper Products Company is considering a new product that will sell for P100 and has a variable cost of P60. Expected volume is 20, 000 units. New equipment costing P1, 500, 000 and having a five-year useful life and no salvage value is needed, and will be depreciated using the straight-line method. The machine has fixed cash operating costs of P200, 000 per year. The firm is in the 40 percent tax bracket and has cost of capital of 12 percent.

The present value of 1 , end of five periods is 0.56743 ; present value of annuity of 1 for 5 periods is 3 . 60478 . How many units per year the firm must sell for the investment to earn 12 percent internal rate of return? A. 17, 338C. 9, 838 B. 28, 897D. 12, 338 Required selling price [xxxvi]. Bughaw Products Company is considering a new product that will sell for P100 and has a variable cost of P60. Expected sales volume is 20, 000 units. New equipment costing P1, 500, 000 with a five-year useful life and no terminal salvage value is needed. The machine will be depreciated using the straightline method. The machine has cash operating costs of P200, 000 per year.

The firm is in the 40 percent tax bracket and has cost of capital of 12 percent. The present value of 1 , end of five periods is 0.56743 ; present value of annuity of 1 for 5 periods is 3 . 60478. Suppose the 20, 000 estimated sales volume is sound, but the price is in doubt, what is the selling price (rounded to nearest peso) needed to earn a 12 percent internal rate of return? A. P81. 00 C. P70. 00 B. P95. 00D. P90. 00 Required CFBT [xxxvii]. Aloha Co. is considering the purchase of a new ocean-going vessel that could potentially reduce labor costs of its operation by a considerable margin. The
new ship would cost P500, 000 and would be fully depreciated by the straight-line method over 10 years.

At the end of 10 years, the ship will have no value and will be sunk in some already polluted harbor. The Aloha Co. 's cost of capital is 12 percent, and its marginal tax rate is 40 percent. If the ship produces equal annual labor cost savings over its 10-year life, how much do the annual savings in labor costs need to be to generate a net present value of PO on the project? Use the following PV: annuity of 1,10 periods at $12 \%-5.6502$; end of 10 th period 0. 32197. A. P 68, 492C. P114, 154 B. P147, 487D. P 88, 492 Required CFAT [xxxviii]. Prudu Company has decided to invest in some new equipment. The equipment will have a three-year life and will produce a uniform series of cash savings.

The net present value of the equipment is $\mathrm{P} 1,750$, using a discount rate of 8 percent. The internal rate of return is 12 percent. Present values at $8 \%$ and $12 \%$ respectively: 8\%: Annuity - 2. 5771; end of 3 periods, 0.7938 12\%: Annuity - 2, 4018; end of 3 periods, 0.7118 What is the amount of annual cash inflow? A. P 9, 980C. P23, 240 B. P21, 342D. P12, 351 [xxxix]. An asset is purchased for $\mathrm{P} 120,000$. It is expected to provide an additional P28, 000 of annual net cash inflows. The asset has a 10-year life and an expected salvage value of $\mathrm{P} 12,000$. The hurdle rate is $10 \%$. The present value of an annuity factor of $10 \%$ for 10 years is 6.1446 , and the present value of P1, discounted for 10 years at $10 \%$ is 0.3855 .

Given the data provided, the minimum amount of annual cash inflows that would provide the $10 \%$ time-adjusted return is approximately A. P18, 776C. P24, 400 B. P26, 600D. P22, 535 Required Increase in CFAT [xI]. The
following data pertain to Julian Corp. whose management is planning to purchase a unit of equipment. 1. Economic life of equipment - 8 years. 2. Disposal value after 8 years - Zero. 3. Estimated net annual cash inflows for each of the 8 years - P81, 000. 4. Time-adjusted internal rate of return - 14\% 5. Cost of capital of Bayan Muna - 16\% 6. The table of present values of P1 received annually for 8 years has these factors: at $14 \%=4.639$, at $16 \%=$ 4. 3447.

Depreciation is approximately P46, 970 annually. Find the required increase in annual cash inflows in order to have the time-adjusted rate of return approximately equal the cost of capital. A. P6, 501C. P4, 344 B. P5, 501D. P5, 871 Required CFAT for a certain year [xli]. A company is considering putting up P50, 000 in a three-year project. The company's expected rate of return is $12 \%$. The present value of P1. 00 at $12 \%$ for one year is 0.893 , for two years is 0.797 , and for three years is 0.712 . The cash flow, net of income taxes will be P18, 000 (present value of P16, 074) for the first year and P22, 000 (present value of P17, 534) for the second year.

Assuming that the rate of return is exactly $12 \%$, the cash flow, net of income taxes, for the third year would be A. P23, 022C. P10, 000 B. P 7, 120D. P16, 392 Required salvage value [xlii]. The Caravan Company is contemplating to purchase a machine that costs P800, 000. The machine is expected to last for 5 years with a salvage value of P50, 000 at the end of the fifth year. If the machine were purchased, before-tax annual cash savings on operating expenses will be realized. Caravan Company will depreciate the machine using straight-line depreciation for 5 years, with the salvage value
considered in the computation. The company has a 12 percent cost of capital and is subject to 40 percent tax rate.

The present values using 12 percent are: Annuity of 1 for 5 periods3. 60478 Present value of 1 , end of 5 periods 0.56743 The initial analysis indicated a net present value of P7, 003. You believe the estimated before-tax cash savings are fairly determined but you are in doubt of the expected salvage value of the machine. How much is the estimated salvage value required if the investment has to yield an IRR of 12 percent? A. P41, 800C. P25, 100 B. P24, 900D. P44, 600 Required value of intangible benefits [xliii]. Solidum Company is investigating the purchase of a piece of automated equipment that will save P100, 000 each year in direct labor and inventory carrying costs.

This equipment costs P750, 000 and is expected to have a 10-year useful life with no salvage value. The company requires a minimum $15 \%$ return on all equipment purchases. Management anticipates that this equipment will provide intangible benefits such as greater flexibility and higher quality output. The PV of annuity of $1,15 \%$ for 10 periods5. 01877 The PV of 1, end 10 period0. 24718 What peso value per year would these intangible benefits have to have in order to make the equipment an acceptable investment? A. P248, 123C. P 61, 331 B. P 49, 440D. P 55, 000 [xliv]. Altas, Inc. , is considering investing in automated equipment with a ten-year useful life.

Managers at Altas have estimated the cash flows associated with the tangible costs and benefits of automation, but have been unable to estimate the cash flows associated with the intangible benefits. Using the company's $10 \%$ discount rate, the net present value of the cash flows associated with
just the tangible costs and benefits is a negative P184, 350. The present value of annuity of 1 at 10 percent for ten years is 6.145 while the present value of 1 is 0.386 . How large would the annual net cash inflows from the intangible benefits have to be to make this a financially acceptable investment? A. P18, 435. C. P35, 000. B. P30, 000. D. P37, 236. Indifference Point [xIv]. Moon Company uses a $10 \%$ discount rate and the total cost approach to capital budgeting analysis.

Both alternatives are Akda Investments which has a marginal cost of capital of 12 percent is evaluating two mutually exclusive projects ( X and Y ), which have the following projections: | | PROJECT X | PROJECT Y | | Investment | P48, 000 | P83, 225 || After-tax cash inflow | 12, 000 | 15, 200 || Asset life | 6 years | 10 years | The indifference point for the two projects is A. 12. 64\%C. 12.00\% B. 16. 01\%D. 19. 33\% [xlvi]. Silky Products is considering two pieces of machinery. The first machine costs P50, 000 more than the second machine. During the two-year life of these two alternatives, the first machine has a P155, 000 more cash flow in year one and a P110, 000 less cash flow in year two than the seconds machine. All cash flows occur at year-end. The present value of 1 at 15 percent end of 1 period and 2 periods are 0.86957 and, 0.75614 , respectively. The present value of 1 at 8 percent end of period 1 is 0.92593 , and Period 2 is 0.85734 .

At what discount rate would Machine 1 be equally acceptable as machine 2's? A. 9\%C. 11\% B. 10\%D. 12\% Decision Rule - Independent Projects [xIvii]. Sylvia Products is considering two types of machinery. The first machine costs P50, 000 more than the second machine. During the two-year life of these two alternatives, the first machine has a P155, 000 more cash flow in
year one and a P110, 000 less cash flow in year two than the seconds machine. All cash flows occur at year-end. The present value of 1 at 15 percent end of 1 period and 2 periods are 0. 86957 and, 0. 75614, respectively. The present value of 1 at 8 percent end of period 1 is 0.92593 , and Period 2 is 0.85734 .

Which machine should be purchased if the relevant discount rates are 15 percent and 8 percent, respectively? | 15\% Discount | $8 \%$ Discount | | A. Machine 1 | Machine $1|\mid$ B. Machine 2$|$ Machine $2|\mid C$. Machine 1$|$ Machine 2 || D. Machine 2 | Machine 1 | | | | Comprehensive Payback, NPV, ARR Question Nos. 71 through 73 are based on the following: Cayco Medical Center is considering purchasing an ultrasound machine for P950, 000.

The machine has a 10 - year life and an estimated salvage value of P55, 000. Installation costs and freight charges will be P24, 200 and P800, respectively. Newman uses straight-line depreciation. The medical center estimates that the machine will be used five times a week with the average charges to the patient for ultrasound of P800. There are P10 in medical supplies and P40 of technician costs for each procedure performed using the machine. The present value of an annuity of 1 for 10 years at $9 \%$ is 6.418 while the present value of 1 for 10 years at $9 \%$ is 0.42241 [xlviii]. The cash payback period is: A. 3.0 yearsC. 5. 0 years B. 4.5 yearsD. 6.0 years [xlix].

The project is expected to generate net present value of: A. P276, 510C. P331, 510 B. P299, 743D. P253, 277 [I]. What is the accounting rate of return provided by the project? A. 20. 0 percentC. 11. 2 percent B. 10. 6 percentD. 38. 0 percent NPV, CFAT, Maximum lost unit sales Question Nos. 75 through 77 are based on the following: Kabalikat Company has the opportunity to
introduce a new product. Kabalikat expects the product to sell for P75 with variable cost per unit of P50. The annual fixed costs, excluding the amount of depreciation is P4,500, 000. The company expects to sell 300,000 units. To produce the new product line, the company needs to purchase a new machine that costs P6, 000, 000.

The new machine is expected to last for four years with a very negligible salvage value. The company has a policy of depreciating its machine for both book and tax purposes for four years. The company has a marginal cost of capital of 13.75 percent and is subject to tax rate of 40 percent. [li]. The amount of annual after-tax cash flows is: A. P2, 400, 000C. P 900, 000 B. P3, 000, 000D. P1, 500, 000 [lii]. The machine's net present value is: A. P2, 786, 100C. P1, 028, 900 B. P 928, 500D. P 150, 270 [liii]. Assuming that some of the 300,000 units that are expected as sales would be to group of customers who currently buy K-Z, another product of Kabalikat Company. This Product K-Z sells for P35 with variable cost of P20.

How many units of K-Z can Kabalikat afford to lose before the purchase of the new machine becomes unattractive? A. 39, 000 unitsC. 16, 714 units B. 23, 400 unitsD. 10, 029 units ARR, NPV, PI, Payback Questions 1 through 4 will be based on the following data: The management of Arleen Corporation is considering the purchase of a new machine costing P400, 000. The company's desired rate of return is $10 \%$. The present value of P1 at compound interest of $10 \%$ for 1 through 5 years are $0.909,0.826,0.751,0$. 683 , and 0.621 , respectively, and the present value of annuity of 1 for 5 periods at 10 percent is 3 . 79. In addition to the foregoing information, use the following data in determining the acceptability in this situation: Year |

Income from Operations | Net Cash Flow || 1 | P100, 000 | P180, 000 || 2 | $40,000|120,000||3| 20,000|100,000||4| 10,000|90,000||5| 10$, 000 | 90, 000 | [liv]. The average rate

