

Question #1 of 62

Which of the following expressions is the *least* accurate calculation for economic income?

- A) Economic income = cash flow + change in market value.
 - B) Economic income = cash flow - (beginning market value - ending market value).
 - C) Economic income = cash flow - dollar weighted average cost of capital.
-

Question #2 of 62

Spencer Charlson, Executive Vice President for PWK Design, is considering purchasing a new computer system for the firm. Charlson believes that PWK would benefit from purchasing the system now, but also is aware that Macroware, a software developer is coming out with a new operating system that will be available in three months. Charlson is unsure whether or not the new operating system would help PWK and decides to wait until the new operating system comes out before making a purchase. The computer system project Charlson is evaluating would be *best* described as having a(n):

- A) flexibility option.
 - B) timing option.
 - C) fundamental option.
-

Question #3 of 62

A firm is unable to raise the necessary funding for all projects that have positive expected net present values. Therefore, to maximize wealth this firm should *most* appropriately:

- A) use IRR only as a secondary criteria for selecting projects.
 - B) determine the optimal set of projects by selecting the projects with the highest IRRs first.
 - C) maximize the amount of capital deployed in positive IRR projects.
-

Question #4 of 62

Which of the following statements about sensitivity analysis is *least* accurate?

- A)** The steeper the slope of the NPV versus the variable, the more sensitive the output variable is to a change in the input variable.
 - B)** Sensitivity analysis alters a single independent variable to determine the impact on the output variable.
 - C)** Sensitivity analysis starts with the best-case scenario.
-

Question #5 of 62

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Charles Waller, a financial analyst for Vandon Pharmaceuticals, is evaluating a potential capital project for the firm. Waller's favorite capital budgeting approach is the residual income method, which he decides to use for this project. In order to help with his analysis, Waller has compiled financial information concerning the project for 2006.

Project Income Statement 2006	
Revenues	\$56,000
Variable Expenses	\$25,800
Fixed expenses	\$6,000
Depreciation	\$8,000
EBIT	\$16,200
Interest expense	\$5,000
EBT	\$11,200
Taxes (40%)	\$4,480
Net Income	\$6,720

Project Balance Sheet 2005	
Cost of Project	\$80,000
Total Assets	\$80,000
<i>Project Financing</i>	
Debt	\$32,000
Equity	\$48,000
Total Liabilities and Equity	\$80,000

Vandon Pharmaceuticals has an after-tax cost of debt of 6.0% and a cost of equity of 12.0%. Vandon's target capital structure is 60% equity and 40% debt. Based on Waller's information, what is the residual income for 2006, and what is the proper discount for Waller to use when finding the NPV of the investment?

Residual
income

Proper
discount
rate

A) \$960 12.0%

- B) \$5,760 9.6%
 - C) \$960 9.6%
-

Question #6 of 62

Which of the following statements about mutually exclusive projects with unequal lives is *least* accurate?

- A) Mutually exclusive projects sometimes have long and different lives, which makes applying the replacement chain method difficult because the lowest common multiple of the lives is often very large.
 - B) In comparing mutually exclusive projects with unequal lives, you should always choose the project which has the highest NPV.
 - C) For comparing mutually exclusive projects with unequal lives, replacement chain analysis leads to the same decision as obtained by calculating the equivalent annual annuity.
-

Question #7 of 62

Define sensitivity analysis and Monte Carlo simulation.

Sensitivity Monte Carlo
analysis is: simulation

- A) when a firm looks at the sensitivity of a specified distribution
 - B) when a firm looks at the sensitivity of historical data
 - C) when a firm looks at the sensitivity of a specified distribution
-

Question #8 of 62

Suppose that a firm cannot invest in all of the projects that have a higher return than the associated required rate of return. The firm must engage in:

- A) top-down investing.
 - B) cannibalization.
 - C) capital rationing.
-

Question #9 of 62

Erwin DeLavall, the Plant Manager of Patch Grove Cabinets, is trying to decide whether or not to replace the old manual lathe machine with a new computerized lathe. He thinks the new machine will add value, but is not sure how to quantify his opinion. He asks his colleague, Terri Wharten, for advice. Wharten's son just happens to be a Level II CFA candidate. DeLavall and Wharten provide the following information to Wharten's son:

Company Assumptions:

- Tax rate: 40%
- Weighted average cost of capital (WACC): 13%

New Machine Assumptions:

- Cost of (includes shipping and installation): \$90,000
- Salvage value at end of year 5: \$15,000
- Depreciation Schedule: MACRS 7-year, with depreciation rates in years 1-5 of 14%, 25%, 17%, 13%, and 9%, respectively
- Purchase will initially increase current assets by \$20,000 and will increase current liabilities by \$25,000
- Impact on Operating Cash Flows Years 1- 5 (includes depreciation and taxes): \$16,800 (assume equal amount each year for simplicity)

Old Machine Assumptions:

- Current Value: \$30,000
- Book value: \$13,000. Book value and market value will be zero at the end of five years.

Which of the following choices is *most* correct? Patch Grove Cabinets should:

- A)** replace the old lathe with the new lathe because the new one will add \$3,760 to the firm's value.
- B)** replace the old lathe with the new lathe because the new one will add \$10,316 to the firm's value.
- C)** not replace the old lathe with the new lathe because the new one will decrease the firm's value by \$5,370.
-

Question #10 of 62

Which of the following simulation techniques computes as many as 1,000 net present values, based on multiple values for each cash flow?

- A)** Monte Carlo simulation.
- B)** Sensitivity analysis.
- C)** Scenario analysis.
-

Zelda Haggerty was recently promoted to project manager at Verban Automation, a maker of industrial machinery. Haggerty's first task as project manager is to analyze capital-spending proposals.

The first project under review is a proposal for a new factory. Verban wants to build the plant on land it already owns in India. Below are details included on a fact sheet regarding the factory project:

- The initial outlay to the builder would be \$85 million for the building. Verban would spend another \$20 million on specialized equipment in the first year.
- The factory would open up new markets for Verban's products. Production should begin July 1 of the second year.
- Verban's tax rate is 34 percent.
- Verban expects the factory to generate \$205 million in annual sales starting in the third year, with half of that amount in the second year.
- At the end of the sixth year, Verban expects the market value and the book value of the building to be worth \$35 million, and the market value and the book value of the equipment to be worth \$3.25 million. The building will be depreciated over 6 years. The

equipment will be depreciated over 5 years. Depreciation expense will be \$8.33 million in Year 1 and \$11.68 in Years 2 through 6.

- Cash fixed operating costs are expected to be \$65 million a year once the factory starts production.
- Variable operating costs should be 40 percent of sales.
- New inventories are likely to boost working capital by \$7.5 million in the first year of production.
- Verban's cost of capital for the factory project is 14.3 percent.

Verban's chief of operations, Max Jenkins, attached a note containing some of his thoughts about the project. His comments are listed below:

- Comment 1: "We spent \$5 million up front on an exclusive, 10-year maintenance contract for all of our equipment in Asia two years ago, before an earlier project was canceled. Your budget should reflect that."
- Comment 2: "Some Asian clients are likely to switch over to the equipment from the new factory. They account for about \$5 million a year in sales for the U.S. division. Your budget should reflect that."
- Comment 3: "I expect variable costs to take a one-time hit in Year 1, as we should plan for about \$1.5 million in installation expense for the manufacturing equipment."
- Comment 4: "We bought the land allocated for this factory for \$30 million in 1998. That money is long spent, so don't worry about including it in the budget analysis."

Haggerty is unimpressed with the advice she received from Jenkins and calculates cash flows and net present values using numbers from the fact sheet without taking any of the advice. She assumes all inflows and outflows take place at the end of the year.

Verban is also considering building two smaller, outdated factories, projects for which the cost of capital is 14.3 percent. Both of the remodeled factories would be replaced at the end of their useful lives and their cash flows are as follows:

Project	Initial outlay	Year 1	Year 2	Year 3	Year 4	Year 5
A	-\$30 million	\$15 million	\$17 million	\$28 million	—	—
B	-50 million	\$12 million	\$15 million	\$19 million	\$22 million	\$32 million

Verban is willing to pursue one of the smaller new factories but not both. Haggerty decides which project makes the most sense and prepares models and recommendations for Verban's

executives. Haggerty is concerned that her budgeting calculations do not accurately reflect inflation, and would like to modify her models to reflect expected inflation over the next five years. She is uncertain, however, how this would affect WACC, IRR, and NPV.

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If Haggerty decides to properly allocate the maintenance, land-purchase, and equipment-installation expenses Jenkins claimed were connected with the new factory project, which of the following numbers on the capital-budgeting model will be *least likely* to change?

- A) The initial outlay.
 - B) Year 4 depreciation.
 - C) Working capital.
-

Question #12 of 62

Ignoring Jenkins's comments, in the last year of the new factory project, cash flows will be *closest* to:

- A) \$90.21 million.
 - B) \$88.00 million.
 - C) \$95.71 million.
-

Question #13 of 62

Which of the following statements about the effect of inflation on the capital-budgeting process is *most* accurate?

- Statement 1: Inflation is reflected in the WACC, but future cash flows should still be adjusted when calculating the NPV.
- Statement 2: Inflation will cause the WACC to decrease.
- Statement 3: Incorporating inflation in the cash flows tends to exert downward pressure on the NPV.
- Statement 4: Because the IRR does not depend on the WACC, inflation has no effect on it.

- A) Statements 3 and 4.
- B) Statements 2 and 3.
- C) Statement 1 only.
-

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Jenkins advice is CORRECT with respect to:

- A) Comment 4 only.
- B) Comment 2 only.
- C) Comments 1 and 2.
-

Question #15 of 62

Ignoring Jenkins's comments, in Year 2 of the new factory project, cash flows will be *closest* to:

- A) \$15.61 million.
- B) \$23.32 million.
- C) \$19.35 million.
-

Question #16 of 62

Haggerty is using the equivalent annual annuity method, depending only on data from the cash-flow estimates for the remodeling projects. Which project should Haggerty recommend, and which of the following is closest to the difference between that project's EAA and that of the other project?

	<u>Project</u>	<u>EAA difference</u>
A)	B	\$1.23 million
B)	A	\$2.34 million
C)	A	\$0.88 million

Jayco, Inc. is considering the purchase of a new machine for \$60,000 that will reduce manufacturing costs by \$5,000 annually.

- Jayco will use the MACRS accelerated method (5 year asset) to depreciate the machine, and expects to sell the machine at the end of its 6-year operating life for \$10,000. (The percentages for the 5-year MACRS class are, beginning with year 1 and ending with year 6, 20%, 32%, 19%, 12%, 11%, and 6%.)
- The firm expects to be able to reduce net working capital by \$15,000 when the machine is installed, but required working capital will return to the original level when the machine is sold after 6 years.
- Jayco's marginal tax rate is 40%, and the firm uses a 12% cost of capital to evaluate projects of this nature.

Question #17 of 62

What is the first year's modified accelerated cost recovery system (MACRS) depreciation?

- A) \$12,000.
 - B) \$10,000.
 - C) \$15,000.
-

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The first year's incremental operating cash flow is *closest* to?

- A) \$7,800.
 - B) \$4,800.
 - C) \$3,000.
-

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The initial cash outlay is *closest* to:

- A) \$45,000.
 - B) \$75,000.
 - C) \$57,000.
-

Question #20 of 62

What is the project's terminal year after-tax non-operating cash flow?

- A) (\$9,000).
 - B) \$21,000.
 - C) (\$4,000).
-

Question #21 of 62

If the NPV using MACRS depreciation rates for this project is negative, changing the depreciation to a straight-line method will result in the sign of the computed NPV being:

- A) the same; as the NPV decreases and is less than the NPV computed under for tthe MACRS method.
- B) different; as the NPV increases and the NPV is now positive.

C) the same; depreciation is non-cash and does not affect the NPV computation.

Question #22 of 62

The *most* appropriate discount rate to be used for capital budgeting would be:

- A) the firm's WACC.
 - B) the project's hurdle rate.
 - C) yield to maturity on the bonds issued to finance the project.
-

Question #23 of 62

Wanda Brunner, CFA, is working on a capital project valuation and needs to determine the appropriate discount rate. She has the following information available:

- Risk-free-rate = 8%
- Market Beta = 1.0
- Company Beta = 1.1
- Project Beta = 1.2
- Expected market return = 13%
- Trailing 12-months market return = 12%

Which of the following is closest to the *most* appropriate discount rate?

- A) 13.5%.
 - B) 13.0%.
 - C) 14.0%.
-

Question #24 of 62

Which of the following statements about the equivalent annual annuity approach for capital budgeting is *least* accurate?

- A) A 5-year project has a NPV of \$2,000, if the firm's cost of capital is 10% the equivalent annual annuity is \$725.
 - B) When comparing mutually exclusive projects with unequal lives, replacement chain analysis yields the same decision as the equivalent annual annuity method.
 - C) The replacement chain approach assumes that it is possible to make continuous replacements each time the asset's life ends.
-

Question #25 of 62

Which of the following statements regarding inflation is CORRECT? Inflation:

- A) causes the weighted average cost of capital (WACC) to increase and the present value of the cash flows to increase.
 - B) is built into the weighted average cost of capital (WACC) and thus the net present value (NPV) is adjusted for expected inflation.
 - C) is already present in the future cash flows therefore they need no further adjustment.
-

Question #26 of 62

An increase in expected inflation will generally:

- A) decrease the weighted average cost of capital (WACC).
 - B) increase the weighted average cost of capital (WACC).
 - C) leave weighted average cost of capital (WACC) unchanged.
-

Question #27 of 62

The *most* appropriate definition of economic income is:

- A) cash flow.
- B) cash flow minus economic depreciation.

C) accounting income minus economic depreciation.

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Sharon Kelley and Joyce Wening are discussing potential capital projects for the Flagstaff Corporation. Kelley is concerned about making errors in the capital budgeting decision making process and wants to take necessary steps to avoid such errors. In response to Kelley's concerns, Wening makes the following statements:

Statement 1: We should avoid including factors such as management time and information technology support since these are sunk costs that should not be attributed to the project.

Statement 2: Once we have determined a set of profitable project options, we should stop considering other alternatives in order to focus our resources on making sure that we are not omitting relevant cash flows or double counting cash flows for our existing set of projects.

- A) Both are correct.
 - B) Only one is correct.
 - C) Both are incorrect.
-

Question #29 of 62

Karen Feasey, the Plant Manager of Industrial Coatings, is trying to decide whether to replace the old coatings machine with a new computerized machine. Her executive assistant gathers the following information:

Company Assumptions:

- Tax rate: 40%
- Weighted average cost of capital (WACC): 13%

New Machine Assumptions:

- Cost of (includes shipping and installation): \$150,000
- Salvage value at end of year 5: \$35,000
- Depreciation Schedule: MACRS 7-year, with depreciation rates in years 1-5 of 14%, 25%, 17%, 13%, and 9%, respectively
- Purchase will initially increase current assets by \$15,000 and will increase current liabilities by \$10,000
- Impact on Operating Cash Flows Years 1-5 (includes depreciation and taxes): \$28,000 (assume equal amount each year for simplicity)

Old Machine Assumptions:

- Sell old machine for current market value: \$25,000
- Book value: \$15,000

During the process of making the decision whether or not to replace the old machine, Feasey calculates the initial cash outlay as approximately:

- A)** \$130,000.
- B)** \$134,000.
- C)** \$155,000.

Question #30 of 62

In the absence of capital rationing, a firm should take on the most profitable investments first and keep expanding their investments to the point where the marginal:

- A)** return of the last investment equals the risk free rate.
- B)** cost of debt equals the marginal cost of equity.

C) return of the last investment equals the marginal cost of capital.

Liu is the proprietor of a small chain of print shops called Quik Printz, that has grown rapidly over the last few years. Much of the growth of Quik Printz has come from Liu's ability to provide a quick turnaround on fairly complex orders and from a dedicated staff of graphic designers.

Liu is considering replacing his current offset printing machine with a new cutting edge printing machine that would allow him to expand his range. The new machine would cost £200,000 and be used for a four-year period. If Liu decided to opt for the new machine the old machine could be sold on for £50,000 immediately. If Liu decides not to go ahead with the project the old machine would continue to be used for the next four years before finally being scrapped for £10,000.

Liu uses straight-line depreciation for tax and accounting purposes and assumes no salvage value for accounting purposes. The old machine cost £80,000 and was originally expected to have an 8 year life. The old machine is now 4 years old and has a book value of £40,000. Liu expects the new machine to allow him to produce the 8-fold booklets which can fit in standard sized mailing envelopes. Liu has spent £5,000 on market research that has established that there is a significant market for this product. As a result of the machine Liu expects his yearly sales to be £1,250,000, where as if he continued to use the old machine sales would only be £950,000 per annum.

Naturally Liu expects this increase in revenues to have an impact on his cost base. Liu expects to have to invest a further £40,000 in working capital if he decided to adopt the new machine. Additionally the new machine will result in incremental cash operating expenses of £120,000 per annum.

At the end of its four-year operating life the new machine could be sold for £25,000.

Quik Printz is currently paying tax at a 40% rate and has a cost of capital of 15%. Liu assumes that the new machine will have similar risk to the firm and will be funded using the existing mix of debt and equity.

Liu makes a couple of comments to you regarding the impact of inflation on capital budgeting:

Comment 1: "In my estimates of operating cash flows I have included the impact of inflation on cash flows. Since I have used nominal cash flows I can discount them using a cost of capital that excludes inflation, such as a real rate"

Comment 2: "The impact of inflation on the depreciation tax shield is that,

while it is constant in nominal terms, it's likely to be reduced in real terms"

Liu also wants to consider the stand-a-lone risk of the project and has decided to undertake Monte Carlo simulation. Liu asks you to help him clarify his understanding of the process and makes two comments:

Comment 1: "The whole process seems to be driven by assumed distributions for each of the inputs of the NPV calculation. The results I get from Monte Carlo are therefore likely to be affected by the mean and standard deviation that I assume for each of my inputs"

Comment 2: "The process of randomly picking values for each input from their associated distribution is repeated many times with each simulation being used to calculate an NPV. After I've run the simulation many times I should then calculate the mean of all possible NPVs and the standard deviation around that mean"

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What would be the initial outlay at $t=0$ for the replacement project?

- A) £194,000
- B) £190,000
- C) £240,000

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The after-tax operating cash flow for year 1 is *closest* to:

- A) £124,000
- B) £128,000
- C) £222,000

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The terminal year after-tax non-operating cash flow is *closest* to:

- A) £69,000
 - B) £55,000
 - C) £49,000
-

Question #34 of 62

The NPV of Liu's replacement project is *closest* to:

- A) £125,283
 - B) £109,432
 - C) £188,033
-

Question #35 of 62

Regarding Liu's statements about inflation and capital budgeting:

- A) Both statements are correct
 - B) One statement is correct
 - C) Both statements are incorrect
-

Question #36 of 62

Regarding Liu's statements about Monte Carlo simulation:

- A) Both statements are incorrect
 - B) One statement is correct
 - C) Both statements are correct
-

Alias, Inc. is a maker of plastic containers for the food and beverage industry. Bruce Atkinson, Alias' director of operations, is looking at upgrading the firm's manufacturing capacity in an effort to improve the firm's competitive position.

Atkinson is being assisted by Linda Ralston, a financial analyst recently hired by Alias. Over the last three months, Ralston and Atkinson have been going to trade shows and conducting other research on different machines and processes used in the plastic container industry. Ralston estimates that travel and hotel costs expended as a result of their research amounted to \$8,000. Atkinson considers the money well spent because he now had two great ideas for improving Alias' competitiveness in the industry.

The first of these ideas is that Atkinson is considering replacing a bottle blow molding machine. This machine was purchased for \$50,000 3 years ago and is being depreciated for tax purposes over 5 years to a zero salvage value using straight-line depreciation. The firm has 2 years of depreciation remaining on the old machine.

If Atkinson decides to make the replacement, the old machine can be sold today for \$10,000. The new machine will cost the firm \$100,000. According to Ralston's projections, the new machine will increase revenue by \$40,000 per year for 3 years but will also increase costs by \$5,000 per year. The machine will be depreciated over a modified accelerated cost recovery system (MACRS) 3-year class life. At the end of year 3, the equipment will be sold for \$20,000. The firm's tax rate is 35%.

Atkinson is also considering an investment in a new silk screen labeling machine that can put labels on Alias plastic bottles as part of the manufacturing process. Ralston estimates that the new labeling machine will cost \$50,000, and that shipping and installation costs will be \$7,500. The addition of the labeling machine will require a \$2,000 investment in spare parts inventory at the inception of the project, but these parts can be resold for \$2,000 at the project's end. Compared with the manual process that Alias used to use for putting on labels, Ralston estimates that the new machine will reduce costs by \$25,000 per year for 4 years. The labeling machine will be depreciated over a MACRS 5-year class life. At the end of year 4, the equipment will be sold for \$8,000.

Depreciation schedules under MACRS are shown in the exhibit below:

Ownership Year	Class of Investment			
	3-Year	5-Year	7-Year	10-Year
1	33%	20%	14%	10%
2	45%	32%	25%	18%

3	15%	19%	17%	14%
4	7%	12%	13%	12%
5		11%	9%	9%
6		6%	9%	7%
7			9%	7%
8			4%	7%
9				7%
10				6%
11				3%
	100%	100%	100%	100%

Before making the final calculations, Atkinson and Ralston discuss net present value analysis for the projects they are considering. Ralston tells Atkinson, "when calculating the net present value of the two new projects, we also need to account for the costs expended as a result of researching the project options." Atkinson makes a note on his legal pad and says to Ralston, "There is no need to make any adjustments for inflation in our estimations of future project cash flows because inflation is included as part of the expected returns used to calculate our weighted average cost of capital." After their conversation, Ralston and Atkinson prepare their report to present to Alias' CEO.

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The initial investment outlay for purchasing the new bottle blow molding machine is *closest* to:

- A) -\$100,000.
- B) -\$90,000.
- C) -\$86,500.

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The year 1 operating cash flow for the new bottle blow molding machine is *closest* to:

- A) \$22,750.

B) \$30,800.

C) \$34,300.

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The total cash flow from the bottle blow molding machine in year 3 is *closest* to:

A) \$48,000.

B) \$28,000.

C) \$43,450.

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The initial cash flow for the labeling machine is *closest* to:

A) -\$59,500.

B) -\$50,000.

C) -\$57,500.

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The year 2 operating cash flow for the labeling machine is *closest* to:

A) \$22,690.

B) \$34,650.

C) \$21,040.

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With regard to the conversation between Ralston and Atkinson concerning NPV analysis:

- A) Ralston's statement is incorrect; Atkinson's statement is incorrect.
- B) Ralston's statement is correct; Atkinson's statement is incorrect.
- C) Ralston's statement is incorrect; Atkinson's statement is correct.
-

Question #43 of 62

Which of the following is *least likely* to cause a problem when analyzing a capital budgeting project?

- A) Using the firm's weighted average cost of capital for the discount rate on all projects.
- B) Basing investment decisions on the impact on earnings per share.
- C) Incorporating actions taken by competitors in the capital budgeting analysis.
-

Question #44 of 62

Takamura Motors is evaluating a new piece of equipment that will automatically install power windows in cars coming off the production line. The equipment cost is \$3.5 million, and the firm estimates that the present value of the annual cost savings from installing the equipment is \$2.8 million. The production manager is also considering purchasing a module that will allow the equipment to be used for Takamura's SUV production. The additional module represents a real option with a cost of \$1.1 million dollars. The production manager estimates that adding the module would give Takamura cost savings of an additional \$2.0 million.

What is the profitability of the project before and after considering the real option?

- | | <u>Before</u> | <u>After</u> |
|----|---------------|--------------|
| A) | \$1,300,000 | \$200,000 |
| B) | -\$700,000 | \$200,000 |
| C) | -\$700,000 | \$1,800,000 |
-

Question #45 of 62

Financial leverage would NOT be increased if a firm financed its next project with:

- A) bonds with embedded call options.
 - B) preferred stock.
 - C) common stock.
-

Question #46 of 62

Which of the following statements is *most* accurate?

- A) In a graphical depiction of sensitivity analysis, the project with the steeper line would be considered most risky, because a small error in estimating a variable, such as unit sales, ...
 - B) A company that does not adjust the discount rate for differences in project risk is likely to accept an excessive number of low risk projects.
 - C) The financial manager of a large corporation should view stand alone risk as most important because of its impact on debt capacity, credit worthiness, and job stability.
-

Question #47 of 62

Which of the following statements about risk analysis techniques is *least* accurate?

- A) Sensitivity analysis is incomplete, because it fails to consider the probability distributions of the independent variables.
 - B) In sensitivity analysis, the dependent variable is plotted on the y-axis and the independent variable on the x-axis. The steeper the slope on the resulting line the less ...
 - C) Scenario analysis is a risk analysis technique that considers both the sensitivity of the dependent variable to changes in the independent variables and the range of likely ...
-

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If central bank actions caused the risk-free rate to increase, what is the *most* likely change to cost of debt and equity capital?

- A) Both increase.
 - B) Both decrease.
 - C) One increase and one decrease.
-

Question #49 of 62

Jackson Huang is an analyst for Oswald Technologies. Huang is considering a \$150 million capital project that is expected to produce operating earnings before interest and taxes of \$80 million per year for all three years of the project's life. The project is being depreciated on a straight-line basis and at the end of 3 years the project will have zero salvage value. Huang believes the project is an average risk project for the firm and is planning to apply Oswald's weighted average cost of capital (WACC) of 8% and tax rate of 30% to the project. Huang's supervisor has asked him to use both the economic income and economic profit approaches to analyze the project. After completing his analysis, Huang makes the following statements to his supervisor.

- | | |
|--------------|---|
| Statement 1: | In the first year of the project's life, the economic income exceeds the economic profit generated from the project. |
| Statement 2: | The discount rate applied to the economic profit to calculate the project's net present value (NPV) will be identical to the economic rate of return earned by the project each year. |

How should Huang's supervisor respond to his statements?

- A) Agree with neither.
 - B) Agree with one only.
 - C) Agree with both.
-

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Firehouse Company is investing in a €300 million project that is being depreciated on a straight-line basis to zero over a two-year life with no salvage value. The project will generate operating earnings of €130 million each year for the two years. The Firehouse's weighted average cost of capital and required rate of return for the project is 10%. Firehouse's tax rate is 30%. What is Firehouse's economic profit for years 1 and 2?

	<u>Year 1</u>	<u>Year 2</u>
A) €20	€20	
B) €42	€22	
C) €61	€76	

Question #51 of 62

Rachel Moore, an analyst with Dawson Corporation, is discussing a potential capital project with her colleague, Phillip Cora. The project involves producing a new product that will be sold in discount retail stores. If sales for the new product are favorable, Dawson has the ability to purchase new equipment for the existing production facility that will expand production to double its current rate. However, Moore is concerned that other companies may easily replicate the product and that low barriers to entry will reduce Dawson's profitability. If sales for the new product are disappointing after the first two years, Dawson has a potential buyer that will pay \$2 million for the production facility. Moore explains these facts to Cora and asks him for help in computing an accurate net present value (NPV) for the project. Cora replies with the following statements:

- Statement 1: You cannot compute a dollar value for the project that includes both the expansion option and the abandonment option, since only one of them can actually be exercised.
- Statement 2: Since you do not have any control over what is going on at other companies, you should not factor in the creation of competing products from other companies into your analysis, and focus totally on the incremental cash flows generated from our production of the product.

How should Moore respond to Cora's statements?

- A) Agree with one only.

- B) Agree with neither.
 - C) Agree with both
-

Question #52 of 62

Norine Benson is studying for the Level I CFA examination and is having difficulty with the broader concepts of capital budgeting. Her study partner, Henri Manz, tests her understanding by asking her to identify which of the following statements is *most* accurate?

- A) An analyst can ignore inflation since price level expectations are built into the weighted average cost of capital (WACC).
 - B) Replacement decisions involve mutually exclusive projects.
 - C) For mutually exclusive projects, the decision rule is to pick the project that has the highest internal rate of return (IRR).
-

Question #53 of 62

James Case and Erica Gallardo are considering differences between accounting income and economic income when evaluating capital projects. Case makes the following statements to Gallardo:

- | | |
|--------------|--|
| Statement 1: | One of the main reasons why accounting income and economic income will differ is that interest expense is subtracted when calculating accounting income, but is not considered when computing economic income. |
| Statement 2: | Another reason why accounting income and economic income may differ is that accounting depreciation is based on original costs while economic depreciation is based on market values. |

Gallardo considers both of Case's statements. Gallardo would find which statements *CORRECT*?

- A) Only one is correct.
- B) Neither are correct.
- C) Both are correct.

Question #54 of 62

Jayco, Inc. is evaluating two mutually exclusive investment projects. Assume both projects can be repeated indefinitely. Printer A has a net present value (NPV) of \$20,000 over a three-year life and Printer B has a NPV of \$25,000 over a five-year life. The project types are equally risky and the firm's cost of capital is 12%. What is the equivalent annual annuity (EAA) of Project A and B?

	<u>Project A</u>	<u>Project B</u>
A) \$8,327		\$6,935
B) \$8,327		\$5,326
C) \$7,592		\$6,935

Question #55 of 62

Which of the following statements about Monte Carlo simulation is *least* accurate? Monte Carlo simulation:

- A) is capable of using probability distributions for variables as input data.
 - B) can be useful for estimating the stand-alone risk of a project.
 - C) is the most accurate risk analysis tool because it is based on real data.
-

Question #56 of 62

With respect to capital budgeting, expected inflation is accounted for in a net present value calculation by:

- A) Adjusting expected cash flows and using a nominal WACC in response to changes in inflation.
- B) Excluding inflation from the calculation of the WACC and instead inflating the expected cash flows.

C) Using a nominal WACC and excluding inflation from expected cash flows.

Question #57 of 62

Paul Ulring, Chief Executive Officer of Arlington Machinery, has asked Sara Trafer about the benefits of using a variety of valuation models for evaluating capital projects. In response to Ulring's questions, Trafer makes the following statements:

- Statement 1: The economic profit, residual income, and claims valuation methods of valuation should all result in the same valuation for an asset or project, despite the use of different discounts rates in the calculations.
- Statement 2: The claims valuation and economic profit valuation models both include cash flows that will flow to debt holders, and the cost of debt is a factor in both calculations.

Which is CORRECT regarding Trafer's statements?

- A) Both are correct.
- B) Both are incorrect.
- C) Only one is correct.

Question #58 of 62

Given the following information, what is the initial cash outflow?

Purchase price of the new machine	8,000
Shipping and Installation charge	\$2,000
Sale price of old machine	\$6,000
Book value of old machine	\$2,000
Inventory increases if installed	\$3,000
Accounts payable increase if installed	\$1,000
Tax rate on Capital Gains	25%

- A) -\$10,000.
 - B) -\$7,000.
 - C) -\$3,000.
-

Question #59 of 62

Michael Fullen is discussing the evaluation of capital budgeting projects with his coworker, Katina Katzenmoyer. During conversation, Katzenmoyer makes the following statements regarding the determination of real option values:

- | | |
|--------------|---|
| Statement 1: | For independent projects, an analyst must determine a value for the real option that is separate from the project regardless of the profitability of the project. |
| Statement 2: | Abandonment options can be valuable, but should only be exercised when the abandonment value is greater than the discounted present value of the remaining cash flows of the project. |

Are the statements made by Katzenmoyer correct?

- A) Both are incorrect.
 - B) Only one is correct.
 - C) Both are correct.
-

Question #60 of 62

Which of the following is *most likely* to cause a problem when evaluating a capital budgeting project?

- A) Avoiding the use of IRR when evaluating mutually exclusive projects.
 - B) Taking on the pet projects of management without going through the complete capital budgeting process.
 - C) Including overhead costs in the total cost of a capital project.
-

Question #61 of 62

Firehouse Company is investing in a €300 million project that is being depreciated on a straight-line basis over a two-year life with no salvage value. The project will generate operating earnings of €130 million each year for the two years. The required rate of return for the project is 10% and Firehouse's tax rate is 30%. What is Firehouse's economic income for years 1 and 2?

	<u>Year 1</u>	<u>Year 2</u>
A) -€20	-€20	
B) €42	€22	
C) €61	€76	

Question #62 of 62

With respect to capital budgeting and measuring net present value, to avoid biases from an increase in expected inflation, an analyst should revise:

- A) both weighted average cost of capital (WACC) and cash flows up.
- B) weighted average cost of capital (WACC) up and cash flows down.
- C) weighted average cost of capital (WACC) down and cash flows up.