26 CAPITAL INVESTMENTS & CAPITAL ALLOCATION

1. Which of the following examples best represents a flexibility option?
   (A) In three years, a company can invest $500 million to increase the size of its project by 40%.
   (B) In two years, a company can cease operating a factory if the present value of production is negative.
   (C) In one year, a company can increase the price of its product by up to 30% if demand rises.

2. A real option can:
   (A) never have a negative value.
   (B) have a negative value only if it is not exercised.
   (C) have a negative value only if a project's net present value (NPV) is negative.

3. The CFO of Axis Manufacturing is evaluating the introduction of a new product. The costs of a recently completed marketing study for the new product and the possible increase in the sales of a related product made by Axis are best described (respectively) as:
   (A) opportunity cost; externality.
   (B) externality; cannibalization.
   (C) sunk cost; externality.

4. Following a significant and persistent increase in nickel prices, a mine operator decides to open a new nickel mine in Canada. Opening the mine is best characterized as:
   (A) an expansion option.
   (B) a fundamental option.
   (C) a flexibility option.

5. A firm is reviewing an investment opportunity that requires an initial cash outlay of $336,875 and promises to return the following irregular payments:
   Year 1: $100,000
   Year 2: $82,000
   Year 3: $76,000
   Year 4: $111,000
   Year 5: $142,000
   If the required rate of return for the firm is 8%, what is the net present value of the investment?
   (A) $64,582.
   (B) $99,860.
   (C) $86,133.

6. Johnson's Jar Lids is deciding whether to begin producing jars. Johnson's pays a consultant $50,000 for market research that concludes Johnson's sales of jar lids will increase by 5% if it also produces jars. In choosing the cash flows to include when evaluating a project to begin producing jars, Johnson's should:
   (A) include both the cost of the market research and the effect on the sales of jar lids.
   (B) include the cost of the market research and exclude the effect on the sales of jar ids.
   (C) exclude the cost of the market research and include the effect on the sales of jar lids.

7. A movie studio spends $15 million to buy the rights to a novel that will allow the studio to produce a movie based on this novel in the future. Which of the following real options best characterizes this scenario?
   (A) Flexibility option.
   (B) Fundamental option.
   (C) Expansion option.

8. Fisher, Inc., is evaluating the benefits of investing in a new industrial printer. The printer will cost $28,000 and increase after-tax cash flows by $7,000 during each of the next four years and $6,000 in each of the two years after that. The internal rate of return (IRR) of the printer project is closest to:
   (A) 11.6%.
   (B) 11.8%.
   (C) 12.0%.

9. A company is considering a $10,000 project that will last 5 years.
   - Annual after-tax cash flows are expected to be $3,000
   - Cost of capital = 9.7%

   What is the project's net present value (NPV)?
   (A) +$1,460.
   (B) -$1,460.
   (C) +$11,460.

10. Which of the following is least relevant in determining project cash flow for a capital investment?
    (A) Sunk costs.
    (B) Opportunity costs.
    (C) Tax impacts.

11. With respect to capital investments, the greatest amount of detailed analysis is typically required when deciding whether to:
    (A) replace a functioning machine with a newer model to reduce costs.
    (B) address safety-related concerns.
    (C) introduce a new product or develop a new market.

12. Which of the following steps is least likely to be a step in the capital allocation process?
    (A) Arranging financing for capital projects.
    (B) Conducting a post-audit to identify errors in the forecasting process.
    (C) Forecasting cash flows and analysing project profitability.

13. The financial manager at Genesis Company is looking into the purchase of an apartment complex for $550,000. Net after-tax cash flows are expected to be $65,000 for each of the next five years, then drop to $50,000 for four years. Genesis' required rate of return is 9% on projects of this nature. After nine years, Genesis Company expects to sell the property for after-tax proceeds of $300,000. What is the internal rate of return on this project?
    (A) 7.01%.
    (B) 6.66%.
    (C) 13.99%.

14. An investment is purchased at a cost of $775,000 and returns $300,000 at the end of years 2 and 3. At the end of year 4 the investment receives a final payment of $400,000. The IRR of this investment is closest to:
    (A) 8.65%.
    (B) 9.45%.
    (C) 13.20%.

15. Lincoln Coal is planning a new coal mine, which will cost $430,000 to build. The mine will bring cash inflows of $200,000 annually over the next seven years. It will then cost $170,000 to close down the mine in the following year. Assume all cash flows occur at the end of the year. Alternatively, Lincoln Coal may choose to sell the site today. If Lincoln has a 16% required rate of return, the minimum price they should accept for the property is closest to:
    (A) $310,000.
    (B) $318,000.
    (C) $326,000.

16. Should a company accept a project that has an IRR of 14% and an NPV of $2.8 million if the cost of capital is 12%?
    (A) Yes, based on the NPV and the IRR.
    (B) Yes, based only on the NPV.
    (C) No, based on the NPV and the IRR.

17. One of the basic principles of capital allocation is that:
    (A) decisions are based on cash flows.
    (B) opportunity costs should be excluded from the analysis of a project.
    (C) projects should be analyzed on a pre-tax basis.

18. An auto manufacturer recently introduced new technologies into its production of its popular pickup truck. The new technologies will allow the manufacturer to easily convert its production pickup trucks to electric vehicles in a few years. This choice is best characterized as a:
    (A) growth option.
    (B) flexibility option.
    (C) timing option.

19. If a calculated net present value is negative, the discount rate used is:
    (A) greater than the internal rate of return.
    (B) less than the internal rate of return.
    (C) equal to the internal rate of return.

20. The estimated annual after-tax cash flows of a proposed investment are shown below:
    Year 1: $10,000
    Year 2: $15,000
    Year 3: $18,000
    After-tax cash flow from sale of investment at the end of year 3 is $120,000 The initial cost of the investment is $100,000, and the required rate of return is 12%.The net present value (NPV) of the project is closest to:
    (A) $19,113.
    (B) $63,000.
    (C) -$66,301.

21. Which of the following types of capital investments are most likely to generate little to no revenue?
    (A) Going concern projects.
    (B) New product or market development.
    (C) Regulatory projects