

Note: If the question in the video is labeled with a number, i.e. 1,2,3, please ignore. Questions are labeled in the playlist by number and are in the same order in this pdf.

1. What is the NPV of a project that costs \$518,000 and returns \$296,000 for each of the next 3 years and then \$79,800 for each of the following 5 years, if the opportunity cost of capital is 10.30%?
 - a. \$398,118
 - b. \$351,265
 - c. \$437,948
 - d. \$528,055
 - e. \$417,057

2. What is the IRR for a project that costs \$52,400 and has cash flows starting at \$5,600 at the end of the first year, and then increasing by \$4,700 per year for the next five years?
 - a. 32.06%
 - b. 8.19%
 - c. 41.68%
 - d. 10.65%
 - e. 18.28%

3. What is the profitability index for a project with the following characteristics: An initial investment of \$84,000, annual cash flows of \$28,900 for 9 years, and a cost of capital at 3.30%?
 - a. 1.37
 - b. 3.17
 - c. 2.64
 - d. 4.12
 - e. 1.64

4. What is the maximum that you should invest in a project today if the inflows are estimated at \$36,200 annually for the next 6 years, and the cost of capital is 12.20%?
 - a. \$193,583
 - b. \$217,200
 - c. \$108,869
 - d. \$147,994
 - e. \$254,124

5. The American Manufacturing Company (AMC) is considering buying one of two machines, which have identical capacity and can do the same job, but have different costs and economic lives: Machine M costs \$8,650 and will last 8 years. It costs the company \$760 per year to operate. Machine N costs \$11,140 and will last 6 years. It costs \$780 per year to operate. If the cost of capital is 10.50%, which machine should the company buy?

- a. M because of its lower EAC of \$2,411
- b. M because of its lower EAC of \$3,134
- c. N because of its higher EAC of \$3,375
- d. N because of its lower EAC of \$2,700
- e. M because of its higher EAC of \$2,009

6. Alza Ltd. is evaluating a project that requires a cash outflow of \$X today and has an IRR of 14.70%. The project will see inflows of \$21,200 each year for the next 20 years. If similar projects in the marketplace earn 4.60% annually, what is the NPV of this project?

- a. \$156,461
- b. \$106,508
- c. \$134,933
- d. \$273,394
- e. \$138,461

7. Susie is considering whether to buy or lease a car. She can buy the car for \$35,000 and sell it after 6 years for \$6,000. What is the maximum amount that she would pay per year to lease, rather than to buy if the discount rate is 10 percent per year? Assume that the lease payments are annual and payable at the beginning of each year.

- a. \$7,259
- b. \$6,355
- c. \$7,003
- d. \$6,789
- e. \$6,599

8. If a project has consecutive cash flows over 4 years of \$1,000, \$2,000, \$3,000 and \$4,400 and has an exact payback of 2.40 years, what is the project's IRR?

- a. 24.76%
- b. 30.95%
- c. 44.56%
- d. 55.70%
- e. 37.14%

9. What is the minimum cash flow that should be received at the end of year three to make the following 3-year project "acceptable" if the initial cost is \$45,600; cash flows at the end of years one and two are \$19,900 each; and the opportunity cost of capital is 12.80%?

- a. \$15,674
- b. \$10,265
- c. \$12,318
- d. \$13,895
- e. \$17,680

10. Consider the two following mutually-exclusive projects

<u>Year</u>	<u>Project A</u>	<u>Project B</u>
0	-\$100	-\$100
1	20	40
2	50	45
3	70	50

If the firm's cost of capital is 11%, which project(s) should you accept and why?

- A) Project A because it has a higher NPV.
- B) Project B because it has a higher IRR.
- C) Project A because it has a higher NPV and a higher IRR.
- D) Both projects because both have an IRR greater than the cost of capital.
- E) Both projects because both have a positive NPV.

11. Blueprint Co. is considering whether or not to replace an old machine. It is expected that the old machine will last three more years, during which it will cost \$5,000 in the first year, \$6,000 in the second year and \$7,000 in the third to operate it. A new machine costs \$16,000 and has expected economic life of 7 years. To operate the new machine, it will cost \$3,000 per year for the first three years and \$4,000 per year for the last four years. If the discount rate is 8%, the equivalent annual cost of the old and new machine is, respectively,

- A) \$5,949 \$5,813
- B) \$5,949 \$6,578
- C) \$6,747 \$5,124
- D) \$6,747 \$6,069
- E) \$6,747 \$6,772

12. What is the profitability index for a project costing \$550,000 today and providing a net cash inflow of \$165,000 annually for 5 years at an opportunity cost of capital of 9% per annum?

- A) 0.30
- B) 1.51
- C) 5.05
- D) 0.659
- E) 0.167

13. As a new graduate of York University in Finance you obtained an entry level job with a salary of \$50,000. The job requires you to see clients within the GTA and you need to decide between keeping your old car at annual maintenance cost of \$9,000 per year for the next 3 years. Alternatively, you can purchase a new Honda Civic for \$20,000 plus annual maintenance of \$4,000 for the next 7 years. At a cost of capital of 8%, you should

- A) Keep the old car because \$9000 is more affordable than \$24,000.
- B) Buy the new car because the Equivalent Annual Cost is \$1000 less.
- C) You are indifferent between keeping the old car and buying a new car
- D) Buy the new car because the Equivalent Annual Cost is \$7841.41
- E) Keep the old car because the Equivalent Annual Cost is lower by \$1158.59

14. Tata Consulting is considering a new 5 year project and the expected annual cash flows \$7,500, \$8,000, \$8,500, \$9,000, \$9,500 respective and the initial cost is \$24,000. Assume the discount rate is 9%. What is the discounted payback period?

- A) 3.39
- B) 2.40
- C) 3.60
- D) 1.49
- E) 1.67

15. Projects A and B have the following expected net cash flows.

Year	A	B
0	-\$300,000	-\$450,000
1	\$150,000	\$200,000
2	\$150,000	\$200,000
3	\$150,000	\$200,000

Assume that both projects have a 10% cost of capital. What is the Net Present Value (NPV) of the project that has the higher IRR?

- A) \$73,027.80
- B) \$47,370.40
- C) \$37,547.19
- D) -50,059.16
- E) \$83,025.00