Problem Statement

In this course, you have learnt various concepts related to investment decisions, financing decisions and valuations. In this assignment, you have to solve the two questions related to the concepts discussed in this course.

Part 1

You have recently assumed a new position in your organisation as the Head of the Product Development Department. Your company is an automobile development firm involved in developing two projects, Project X and Project Y. The two projects are mutually exclusive, that is, the management would like to select only one of them. Within a week of taking up the new role, the CEO assigns you the task of identifying these two projects. You are asked to prepare a note detailing the following, to be presented to the Board of Directors, who will approve the projects involving capital expenditure only if they have the financial viability:

i) Cost of capital for funding projects X and Y (2 marks)

ii) Comparison of the projects using the different techniques of capital budgeting/project evaluation:

- NPV of projects X and Y (2 marks)
- IRR of projects X and Y (2 marks)
- Payback period of projects X and Y (2 marks)
- Discounted payback period of projects X and Y (2 marks)
- Profitability index of projects X and Y (2 marks)

iii) Which project should the company go ahead with and why? (2 marks)

Assumptions

Description	Project X	Project Y
Financing mix : Debt-Equity	1:2	1.5:2.5
Cost of debt	9%	9%
Cost of equity	18%	18%

Year	Project X (Cash Flows)	Project Y (Cash Flows)
0	(120)	(300)
1	63	110
2	79	199
3	69	149
4	12	22

Part 2

You have gained the following information from your finance team about your company.

1. Revenue Growth = 30%
2. EBITDA Margin = 40%
3. D&A (as % of Capex) = 20%
4. Capex (as % of Revenue) = 1.5%
5. Discount rate = 12%
6. Tax rate = 21%

The revenue value for 2017 is 8360 crores.

Additional simplifying assumptions:

- The company has negligible debt. Debt can be considered as 0.
- Working capital remains constant throughout. So there is no change in net working capital.
- The free cash flows from 2023 onwards are constant and equal to the 2022 value. They continue forever.

i) Calculate the company's expected FCF in 2018. (Hints of the steps involved in FCF calculation given below) (4 marks)

- Identify company's revenue in 2017
- Compute expected revenue in 2018
- Compute expected EBITDA in 2018
- Compute expected capex in 2018
- Compute expected D&A (Depreciation & Amortisation) in 2018
- Compute expected EBIT in 2018
- Compute expected net operating income in 2018
- With this information, calculate FCF

ii) What is your company's expected FCFs for 2019, 2020, 2021, and 2022? (8 marks)

(Follow the same process used in Part (i))

iii) What is the terminal value of the constant stream of cash flow from 2023 onwards? (2 marks)

iv) What is the Enterprise Value (EV) of your company in 2017? (2 marks)

Use the following excel sheet to perform your calculations.