Leveraged Buyout Problems

(for Paper and Operational LBO)

Problem 1: FMCG – Packaged Food Industry

A private equity fund is evaluating the acquisition of a **mid-sized packaged food manufacturing company** operating in the Indian FMCG sector. The company produces branded ready-to-eat and snack food products, benefiting from stable consumer demand, a wide distribution network, and moderate pricing power. FMCG companies are typically valued using **EBITDA multiples**, given their predictable cash flows and relatively low business risk.

The target company reported **LTM sales of ₹6,500,000**, with an **EBITDA margin of 22%**. Based on comparable FMCG firms, the fund believes an **entry EBITDA multiple of 8.0×** is appropriate. Sales are expected to grow at **10% per annum** over the next five years, while the EBITDA margin is projected to stabilize at **24%**. The corporate tax rate is **25%**. The acquisition will be financed with **30% debt**, carrying an annual interest rate of **10%**.

For capital assumptions, depreciation is estimated at **6% of sales**, capital expenditure at **7% of sales**, and net working capital investment at **8% of incremental sales**. At the exit (end of year 5), the company is expected to be sold at an exit EBITDA multiple of 9.0 times.

Required:
Using the model template logic,

1. Estimate the **entry enterprise value and equity investment**.
2. Prepare the **five-year projected income statement**.
3. Prepare the **five-year cash flow statement and cumulative free cash flow**.
4. Estimate the **exit enterprise value, exit equity value**, and **IRR to equity investors**.

Problem 2: IT Services – Mid-Tier Software Services Firm

A PE investor is analyzing a buyout opportunity in a **mid-tier IT services company** providing application development and maintenance services to global clients. The industry is characterized by **high operating margins, low capital intensity**, and strong dependence on revenue growth. Valuation in this sector is primarily driven by **EBITDA multiples and growth expectations**.

The company has reported **LTM sales of ₹12,000,000**, with an **EBITDA margin of 32%**. Comparable listed firms suggest an **entry EBITDA multiple of 10.0×**. Revenue is expected to grow at **14% annually** over the next five years, with EBITDA margins improving to **35%**. The applicable corporate tax rate is **22%**. The acquisition will be financed with **20% debt**, at an interest rate of **9%**.

Depreciation is expected to be **4% of sales**, capital expenditure at **5% of sales**, and net working capital investment at **6% of sales**. The exit multiple is assumed to be **11.0× EBITDA** at the end of year five.

Required:
Apply the given model structure to calculate:

1. Entry EV, debt, and equity contribution.
2. Five-year income statement projections.
3. Free cash flows and cumulative cash flows.
4. Exit equity value and **IRR**.

Problem 3: Pharmaceuticals – Generic Drug Manufacturer

A private equity fund is considering the acquisition of a **generic pharmaceutical manufacturer** supplying domestic and export markets. The industry is characterized by **regulatory compliance, moderate growth, and relatively high margins**, but also sustained capital expenditure requirements.

The target company has **LTM sales of ₹9,000,000** and an **EBITDA margin of 28%**. Based on peer valuations, an **entry EBITDA multiple of 7.5×** is considered reasonable. Sales are projected to grow at **9% per year**, with EBITDA margins stabilizing at **30%**. The corporate tax rate is **25%**. The transaction will be financed using **35% debt**, with an interest rate of **11%**.

Depreciation is estimated at **8% of sales**, capital expenditure at **10% of sales**, and net working capital investment at **12% of sales**. The fund expects to exit after five years at an **EBITDA multiple of 8.5×**.

Required:
Using the LBO template,

1. Compute the entry valuation and financing structure.
2. Prepare projected income and cash flow statements.
3. Estimate cumulative free cash flows.
4. Compute exit valuation and investor IRR.

Problem 4: Automobile Components – Auto Ancillary Manufacturer

A PE firm is evaluating an investment in an **automobile components manufacturer** supplying OEMs. The industry is cyclical and capital-intensive, with moderate margins and higher working capital requirements. Valuation is commonly benchmarked against **EBITDA multiples of comparable auto ancillary firms**.

The company reports **LTM sales of ₹15,000,000** and an **EBITDA margin of 18%**. An **entry EBITDA multiple of 6.5×** is assumed. Revenue is expected to grow at **an annual rate of 8%**, with EBITDA margins improving modestly to **20%**. The corporate tax rate is **25%**. The deal will be financed with **40% debt** at an interest rate of **12%**.

Depreciation is **9% of sales**, capital expenditure is **11% of sales**, and net working capital investment equals **15% of sales**. The exit multiple after five years is estimated at **7.0× EBITDA**.

Required:
Estimate entry and exit valuations, project income and cash flows, and compute the **IRR** using the model framework.

Problem 5: Healthcare Services – Multi-Specialty Hospital Chain

A private equity fund is assessing the acquisition of a **regional multi-specialty hospital chain**. Healthcare services typically exhibit **stable demand, moderate growth, and relatively high operating leverage**, making EBITDA-based valuation appropriate.

The hospital group has **LTM sales of ₹10,500,000** with an **EBITDA margin of 26%**. The fund applies an **entry EBITDA multiple of 9.0×**. Sales are expected to grow at **11% per year**, while EBITDA margins stabilize at **28%**. The corporate tax rate is **24%**. The acquisition is financed with **25% debt**, carrying an interest rate of **10.5%**.

Depreciation is **7% of sales**, capital expenditure **9% of sales**, and net working capital investment **10% of sales**. The expected exit multiple after five years is **10.0× EBITDA**.

Required:
Using the given LBO model structure:

1. Calculate entry valuation and equity investment.
2. Prepare five-year income and cash flow statements.
3. Estimate exit value and **IRR to equity holders**.
