Time allowed: 2-1/2 Hours

Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the question paper, writing anything except the Roll No will be treated as **Unfair Means**. In case of rough work please use answer sheet.

Sections	No. of Questions to attempt	Marks	Marks
A	3 out of 5 (Short Questions)	5 Marks each	3*5 = 15
B	2 out of 3 (Long Questions)	10 Marks each	2*10 = 20
C	Compulsory Case Study	15 Marks	15
		Total Marks	50

SECTION – A

A-1 Compare and discriminate different vehicle of finances including project and infrastructure finance

A-2 How to justify that project and infrastructure finance challenges Modigliani & Miller Proposition?

A-3 Justify sponsors' choices for an infrastructure project considering different financing theories.

A-4 Use your existing concept to design (at least four designs) all possible capital structure of a large project of Rs. 1500 Crores ((USD 220 million)with D/V 70% that have at least one real option.

A-5 Compute draw-down of debt and equity funding. The construction cost during the construction period of four years is:-

    Year – 1 Rs. 10 million
    Year – 2 Rs. 50 million
    Year – 3 Rs. 40 million
    Year – 4 Rs. 40 million

Transaction cost of Rs. 2 million every year for 4 years to be spent by the sponsors to set up SPV. Upfront Costs of Rs. 3 million to be paid in first year to the Government. The debt and equity should be should have 80% gearing with fixed Interest rate on debt of 16% p.a.

SECTION - B

B-1 SBI Cap Limited in the capacity of advisor has taken the responsibility of the structuring and syndication of a project finance loan for an amount of 300 million euro. The advisor receives a success fee of 90 basis points. The deal has been organized by HSBC as a syndicate in which HSBC and Canara Bank are respectively mandated lead arranger and co-arranger on a committed basis to underwrite the entire loan amount in the ratio of 1: 4. HSBC will be paid 1.25% in the capacity of mandated Lead Arranger and Canara Bank will get 75 BPS in the capacity of co-arranger. HDFC Bank Limited, Punjab National Bank and Corporation Bank participate in the role of managers for an amount of 250 million euro. The management fees among HDFC Bank Limited, Punjab National Bank and Corporation Bank finalized with mutual consent are 20, 30 and 35 BPS respectively, and worked out based on their participation of 40 million, 90 million and 120 million. This means that after the selling process, the lead mandated arranger and co-arranger will participate as lenders for the remaining amount subdivided based on the agreed ratio. Work out the success fee, underwriting and management fees that would be earned by the entities as per their role in syndication with relevant assumptions.

B-2 Compute per unit tariff for an independent power generating plant based on the assumptions given below. You have to combine different components to arrive at total tariff per unit of generation. Assume for this purpose a 20 MW gas-fired power plant costing US$ 16 million. The sponsor(s) is planning to finance 80% of the project cost from debt at 11% p.a. fixed rate of interest from Banks payable in annual installments of principal plus interest under an equal principal repayment structure, and the rest from equity with 20% expected rate of return. For the purpose of simplifying our case, we will ignore the construction period and assume 12 years of financing, including a two-year grace period for principal effective up to two years after commissioning. Other assumptions regarding the proposed plant are as follows:

1. Power Purchase Agreement (PPA) term 15 years
2. Plant load factor 85% per year
3. Fixed O&M rate US$60,000/MW
4. Variable O&M rate US$ 0.0013/kWh/year
5. Tariff is to be computed to fully recover debt and equity along with returns on them within PPA period.

B-3 Sponsors of a copper mining project desire to compute debt capacity based on 65% dedicated per cent of operating cash flow earmarked for debt service. Market price of copper is hovering around $4.0 per pound for the last one year. Copper extraction plant operates at 90% of its capacity of 150 million pounds. Cash operating expenses is around $ 2.50 per pound with income tax rate of 33%. Currently, lenders are willing to extend loan for not more than 12 years with extra moratorium of 3 years at pre-tax rate of 10% per annum. Sponsors are expecting return on their capital at 22% p.a. Non-cash expenses are considered as zero.

SECTION C – Compulsory

Ms. Dawn East, the CFO of Main Subductor Corp., has to decide whether to start production of zircon subductors. The investment required is $12 million. The fixed operating cost of $700000/- per year is required to generate revenue for six years. At today's price, the project would generate revenues of $1.7 million per year. The output is constant, but revenue is proportionate to price. She also observed a strong upward trend in subductor prices, and end up forecasting annual growth at 9% for the next six years with annual standard deviation of 15%. For the sake of simplicity, you should ignore taxes etc. Using DCF approach, calculate NPV at 9% discounting

rate. Risk-free rate of interest is to be taken as 6% p.a. Ms. Dawn East has assumed a project life of 6 years. At that time the project equipment, which normally depreciated @ $1.2million p.a., should be worth $4.00 million. This should be considered as salvage value.

If the cash flows are far below the expectations, it is useful to have the option to bail out and recover the value of the project's plant, equipment or other assets. This option to abandon is equivalent to a put option. You exercise that abandonment option if the value recovered from the project's asset is greater than the present value of continuing the project for at least one more year. You are required to compute the value of the real option of abandonment using binomial approach (Risk-neutral probability)