



COST OF CAPITAL [8 Marks]

CA NAVNEET MUNDHRA

<p>COST OF DEBT (Kd)</p> <p>Redeemable (%):- $\left[\frac{\text{Int. Amt.} \cdot (1-t) + \frac{RP-IP}{n} \times 100}{\frac{RP+IP}{2}} \times 100 \right]$</p> <p>Irredeemable (%):- $\left[\frac{\text{Int. Amt.} (1-t)}{IP} \times 100 \right]$</p>	<p>COST OF PREFERENCE SHARE</p> <p>Redeemable (%):- $\left[\frac{\text{Pref. Dividend} + \frac{RP-IP}{n} \times 100}{\frac{RP+IP}{2}} \times 100 \right]$</p> <p>Irredeemable (%):- $\left[\frac{\text{Pref. Dividend}}{\text{Amt.} / IP} \times 100 \right]$</p>	<p>EQUITY SHARES (Ke) ≥ RETAINED EARNINGS (Kr): Always irredeemable</p> <p>DIVIDEND APPROACH $\left[\frac{DPS}{P_0} \times 100 \right] \%$</p> <p>EARNINGS APPROACH $\left[\frac{EPS}{P_0} \times 100 \right] \%$</p>	<p>DIVIDEND GROWTH APPROACH / DIVIDEND DISCOUNT APPROACH / GORDEN MODEL $\left[\frac{D_1 + g}{P_0} \right] \times 100 \%$</p> <p>PREFERRED</p>	<p>EARNINGS GROWTH APPROACH $\left[\frac{EPS_1 + g}{P_0} \right] \times 100 \%$</p> <p>CAPM $\left[R_f + (R_m - R_f) \beta \right]$</p>	
<p>X Int. Amt / Pref. Dividend = F.V. x Rate.</p> <p>X RP / IP = at par / at discount / at premium.</p> <p>X RP is generally F.V. [If RP = net IP]</p> <p>X IP is generally F.V. [then assume IP = MP]</p> <p>X IP is always net of flotation cost (F.C.)</p> <p>i.e. net IP = IP - F.C.</p>		<p>X P₀ = MPS (IP net of F.C.)</p> <p>X D₁ = D₀ (1+g) → [paid/past expected / to be paid] [years]</p> <p>X EPS₁ = EPS₀ (1+g)</p> <p>X g = b x r [Retention x ROE] ratio</p> <p>X R_f = Risk free return</p> <p>X R_m - R_f = Risk premium</p>		<p>X R_m = Market Rate / Return</p> <p>X β = $\frac{\sigma_s}{\sigma_m} \times r = \left\{ \frac{SD \text{ of stock}}{SD \text{ of market}} \right\} \times \text{correlation coefficient}$</p> <p>X Ke > Kr ⇒ If there is F.C. [as for F.C. is considered & shareholder's personal tax] = [Kr = Ke (1 - shareholder personal tax rate)]</p> <p>X Ke = Kr ⇒ If there is no F.C.</p>	
<p>WACC (K₀/K_c) & Marginal WACC (for additional capital)</p> $K_0 / K_c = \frac{(W_d \times K_d) + (W_p \times K_p) + (W_e \times K_e) + (W_r \times K_r)}{(W_d + W_p + W_e + W_r)}$		<p>Now, weights can be — (if nothing mentioned take MV) B.V.</p> <p>For — debentures → From B/s (given) → Market price x No. of debentures</p> <p>PSC → From B/s (given) → Market price x No. of preference shares</p> <p>ESC → From B/s (given) → Market price x No. of shares (in ratio of Bv)</p> <p>Retained Earnings → From B/s (given) → $\left(\frac{\text{Total Market Price} \times \text{B.V. of ESC}}{\text{Total B.V.}} \right)$ (TMP x B.V. of R.E. / Total B.V.)</p>		<p>X R_f = Risk free return</p> <p>X R_m - R_f = Risk premium</p>	



LEVERAGIES [5 Marks]

CA NAYNEET MUNDHRA

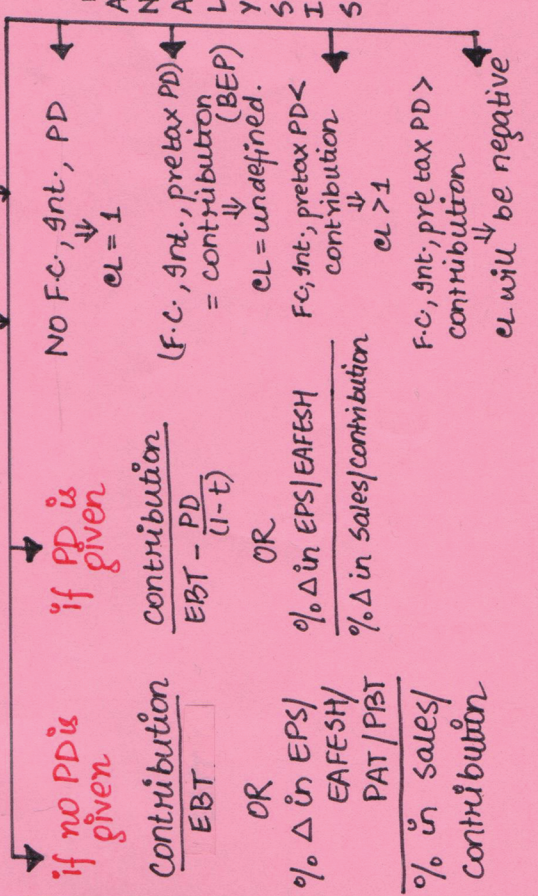
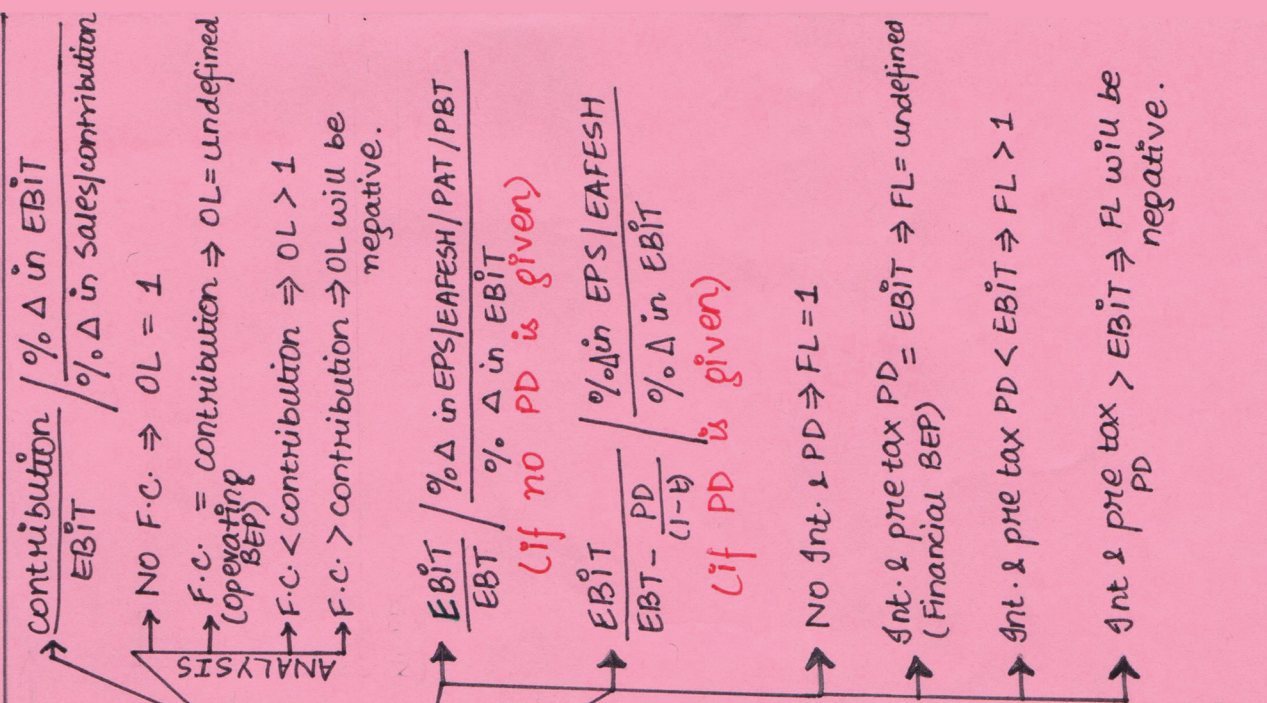
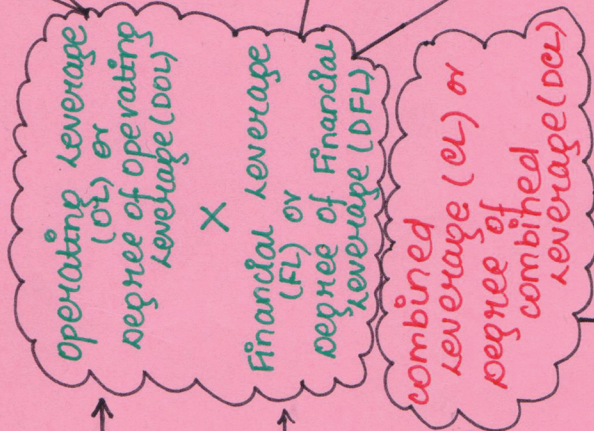
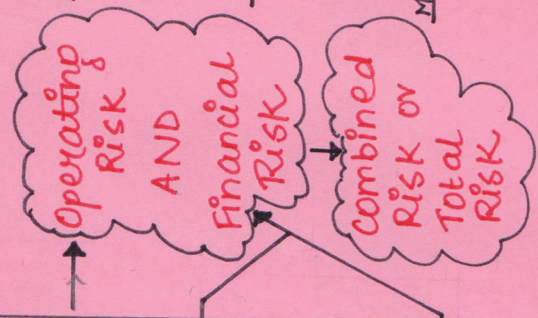
Income Statement

Sales	xxx (xxx)
(-) V.C.	xxx (xxx)
contribution	xxx
(-) F.C.	xxx (xxx)
operating profit/ EBIT	xxx
-> Interest	xxx (xxx)
EBT/PBT	xxx
(-) Tax	xxx
EAT/PAT	xxx
(-) Preference dividend (PD) (if any)	xxx
EAFESH/PAFESH	xxx
EPS (₹/share) = $\frac{EAFESH}{\text{No. of eq. shares}}$	

FL as Trading on Equity Double Edged sword

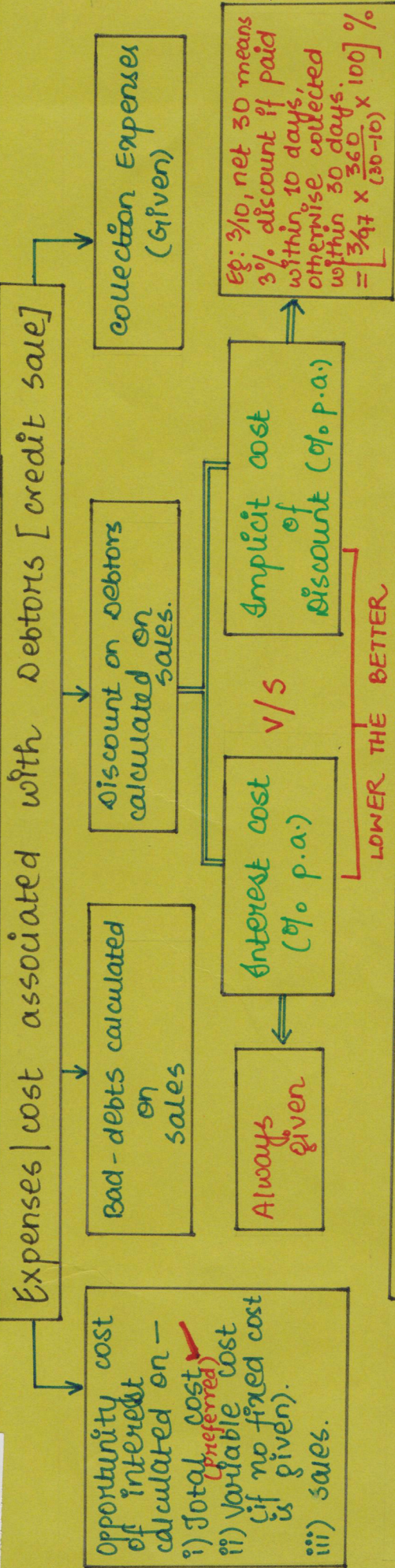
$ROE = \left[\frac{ROI + (ROI - K_d) \times D}{E} \right]$ (if no PD after tax given)

- x Fav. FL $\Rightarrow ROI > K_d$
- x unfav. FL $\Rightarrow ROI < K_d$
- x Indifferent $\Rightarrow ROI = K_d$





MANAGEMENT OF RECEIVABLES [5 Marks] CA NAVNEET MUNDHRA



DECISION ON MANAGEMENT OF DEBTORS.....

If sales are different (Total App.)

Income statement

Sales	.xxx
(-) V.C contribution	(xxx)
(-) F.C. EBIT	(xxx)
(-) Interest (Opp. cost)	(xxx)
(-) Bad-debts	(xxx)
(-) collection expenses	(xxx)
(-) discount allowed	(xxx)
surplus before tax	xxx
(-) Tax surplus after tax	(xxx)

HIGHER THE BETTER.

If sales are same or not given

Cost Statement

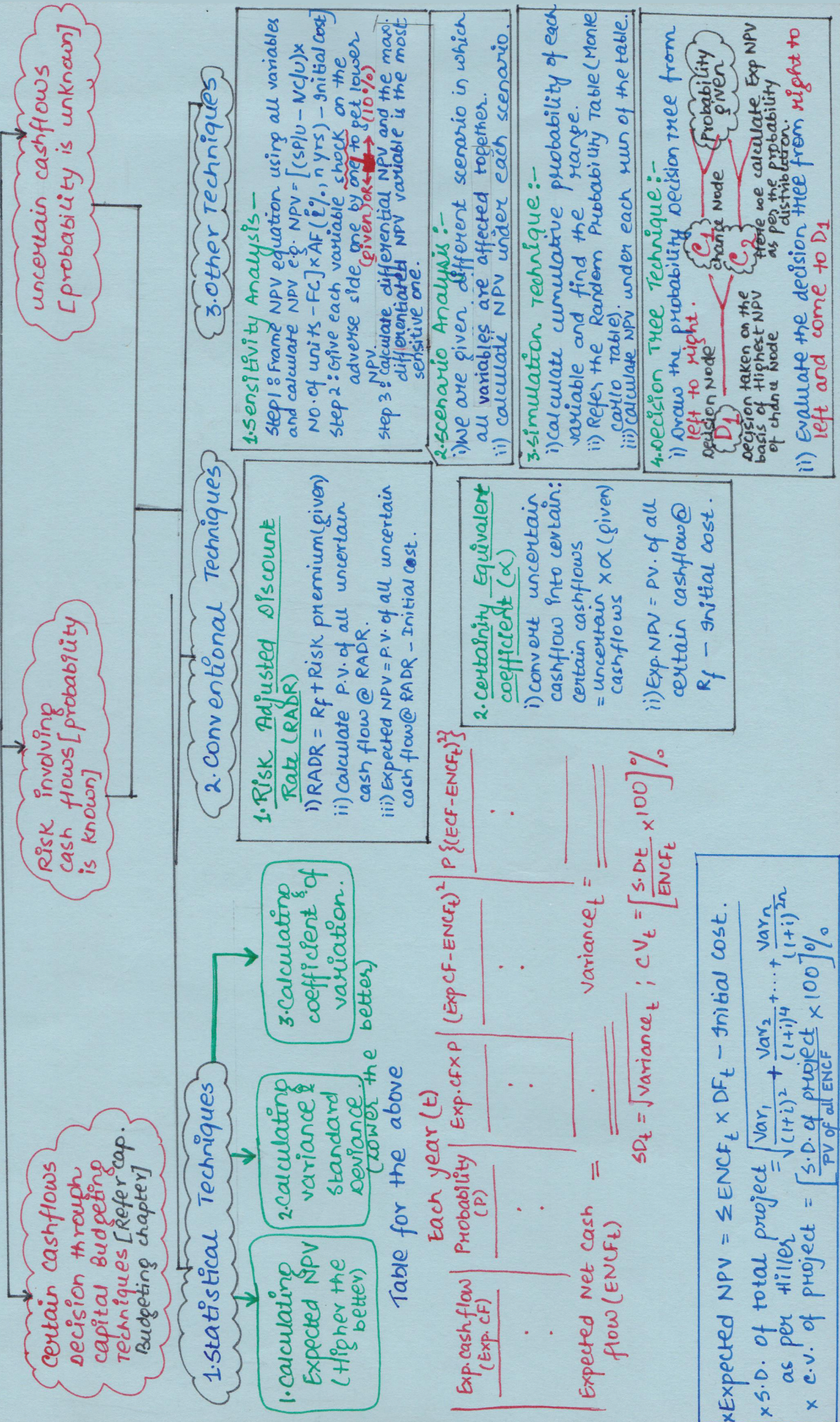
Interest (Opp. cost)	xxx
Bad-debts	xxx
collection expenses	xxx
discount Allowed	xxx
cost related to debtor	xxx

LOWER THE BETTER.



RISK ANALYSIS IN CAPITAL BUDGETING [6 MARKS] CA NAVNEET · MUNDHRA

CASH FLOWS



Certain cashflows
decision through
capital budgeting
techniques [Refer cap.
Budgeting chapter]

**Risk Involving
cash flows [probability
is known]**

**Uncertain cashflows
[probability is unknown]**

1. Statistical Techniques

- 1. calculating Expected NPV (Higher the better)
- 2. calculating variance & standard deviation (Lower the better)
- 3. Calculating coefficient of variation.

Table for the above

Exp. cash flow (Exp. CF)	Probability (P)	Exp. CF x P	(Exp CF - ENCF) ²	P {(ECF - ENCF) ² }
·	·	·	·	·
·	·	·	·	·
·	·	·	·	·

$\text{Expected Net cash flow (ENCF)} = \sum \text{Exp. CF} \times P$
 $\text{Variance}_t = \sum P \{ (ECF - ENCF)^2 \}$
 $SD_t = \sqrt{\text{Variance}_t}$; $CV_t = \left[\frac{SD_t}{ENCF_t} \times 100 \right] \%$

2. Conventional Techniques

- #### 1. Risk Adjusted Discount Rate (RADR)
- i) $RADR = R_f + \text{Risk premium (given)}$
 - ii) Calculate P.V. of all uncertain cash flow @ RADR.
 - iii) Expected NPV = P.V. of all uncertain cash flow @ RADR - Initial cost.

- #### 2. Certainty Equivalent Coefficient (α)
- i) convert uncertain cashflow into certain: = uncertain x α (given) cashflows
 - ii) Exp. NPV = P.V. of all certain cashflow @ R_f - initial cost.

3. Other Techniques

- #### 1. Sensitivity Analysis
- Step 1: Frame NPV equation using all variables and calculate NPV e.g. $NPV = [(SPLU - VCU) \times \text{No. of units} - FC] \times AF (\frac{\%}{100}, n \text{ yrs}) - \text{Initial cost}$
 - Step 2: Give each variable check on the adverse side one by one to get lower NPV. (Given) \rightarrow \rightarrow (10%)
 - Step 3: Calculate differential NPV and the max. differentiated NPV variable is the most sensitive one.
- #### 2. Scenario Analysis
- i) We are given different scenario in which all variables are affected together.
 - ii) calculate NPV under each scenario.
- #### 3. Simulation technique
- i) calculate cumulative probability of each variable and find the range.
 - ii) Refer the Random Probability Table (Monte Carlo Table).
 - iii) calculate NPV under each run of the table.
- #### 4. Decision Tree Technique
- i) Draw the probability decision tree from left to right.
 Decision Node \rightarrow Chance Node \rightarrow Probability given
 D1 \rightarrow D2
 Decision taken on the basis of highest NPV of child node.
 Here we calculate Exp NPV as per the probability distribution.
 ii) Evaluate the decision tree from right to left and come to D1