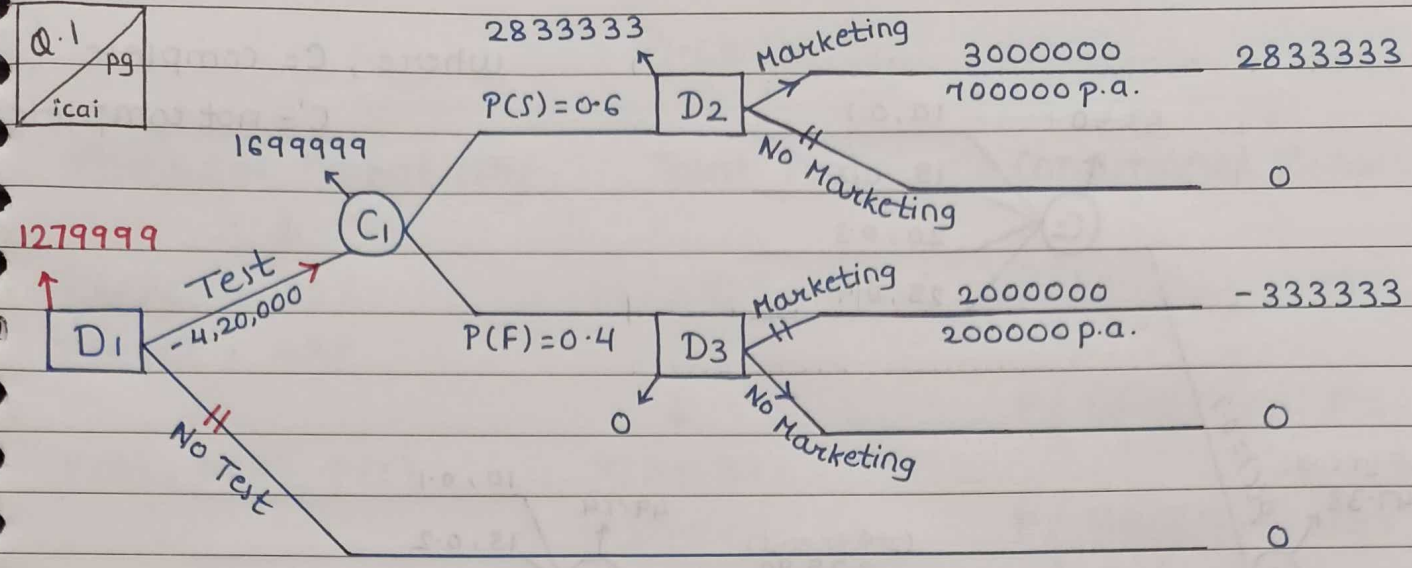
Q.1 pg icai



- At D2, $\frac{700000}{0.12} - 3000000 = \underline{2833333}$ = P.V. vs. $\underline{0}$

  ∴ At D2, we will market & EMV = 2833333

- At D3, $\frac{200000}{0.12} - 2000000 = \underline{-333333}$ vs. $\underline{0}$

  ∴ At D3, we will not market & EMV = 0

- At C_1, EMV = $0.6 \times 2833333 + 0.4 \times 0 = 1699999.8$

- At D_1, NPV = $1699999 - 420000 = \underline{1279999}$ vs. $\underline{0}$

  ∴ At D_1, we should conduct a test

  NPV of this decision = 1279999 ≅ 1280000

Q.2

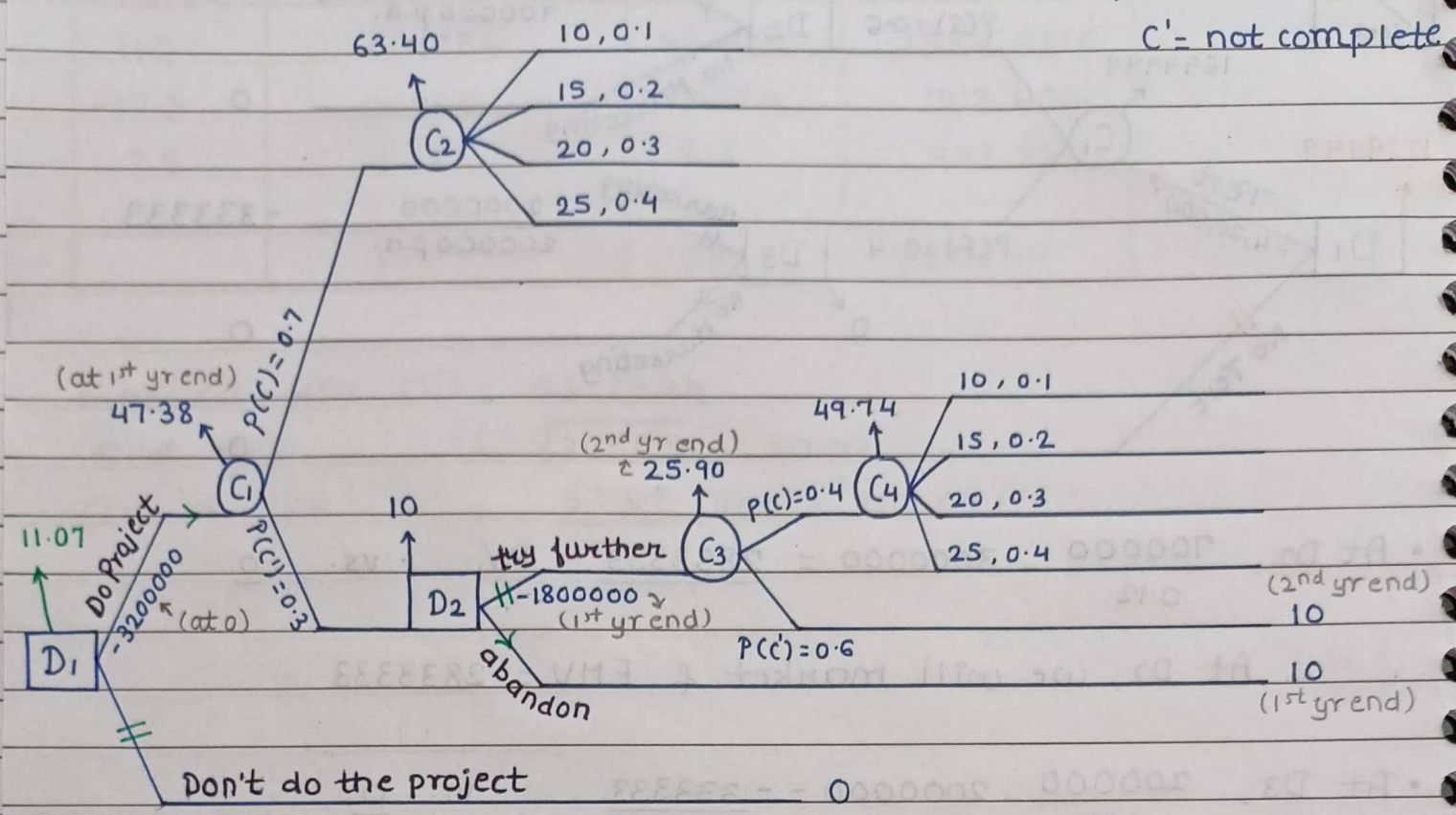
- At C_2, Expected Cash Flow
  $= 10 \times 0.1 + 15 \times 0.2 + 20 \times 0.3 + 25 \times 0.4$
  = 20 p.a. for 4 years

  ∴ EMV at C_2 = 20 PVAF (10%, 4) = 20×3.1698 = 63.40 lakhs

- At C_4, EMV = 20 PVAF (10%, 3) = 20×2.4869 = 49.74 lakhs

- At C_3, EMV = $0.4 \times 49.74 + 0.6 \times 10$ = 25.896 ≅ 25.90 lakhs

where, C = complete
C' = not complete



- At D2, $EMV = Max\left[\left(\frac{25.9}{1.1} - 18\right), 10\right] = Max\ (5.55, 10) = \underline{10}$ lakh
- At C1, $EMV = 0.7 \times 63.40 + 0.3 \times 10 = 47.38$ lakh
- At D1, $EMV = Max\left[\left(\frac{47.38}{1.1} - 321\right), 0\right] = Max\ (11.07, 0) = 11.07$

At D1, we will start the project by investing 3200000.
If it gets completed in year 1, well & good.
If it does not get completed in year 1, we will then abandon the project.

*** When to write amt. of cash outflow in Dt**

1) Jisme P.V. diya hua rehta hai..... Direct write NPV at the end point. [Q.1 & Q.3]

2) Jisme CFAT diya hua hai..... write amt. of cash outflow at the point where it is happening. [Q.2 - NB pg. 04]

Probability

Marginal Probability

$P(+ve) = 52\%$

$P(-ve) = 48\%$

$P(A), P(B), P(C)$

Joint Prob.

$52\% \times 92\% = 47.84\%$

$P(A \cap B)$

$P(A \cap C)$

Conditional Probability

$P\left(\frac{\text{success}}{+ve}\right) = 92\%$

$P\left(\frac{\text{failure}}{+ve}\right) = 8\%$

$P\left(\frac{\text{success}}{-ve}\right) = 25\%$

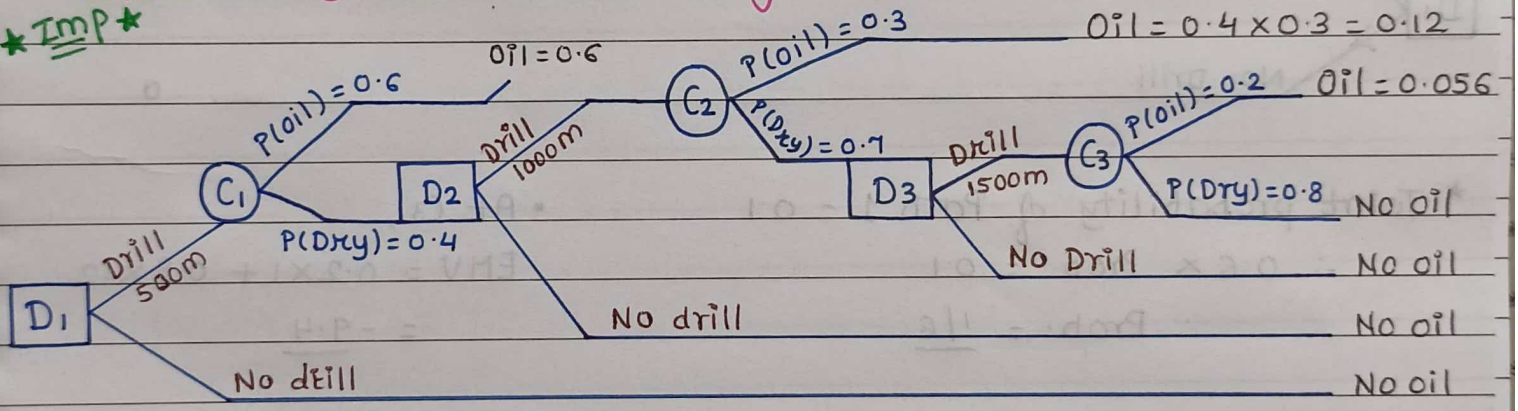
$P\left(\frac{\text{failure}}{-ve}\right) = 75\%$

$P(B/A), P(C/A)$

- 92%. :- Conditional Prob.- Prob. of success when event has already occured (+ve test:event).
- 52%. :- Marginal Prob. - Prob. of success if the event takes place now.

∴ Special Type sum : Drilling

Imp



Oil @ 500 = 0.6

Oil @ 1000 (Conditional) = 0.3

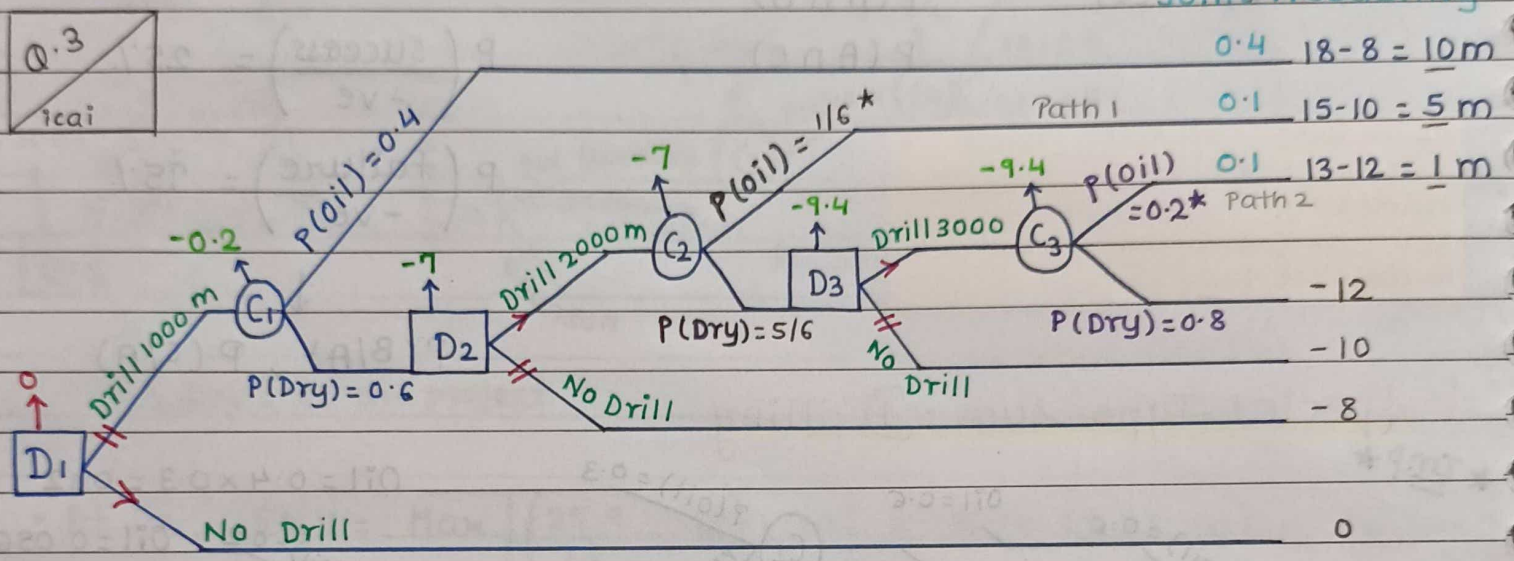
Oil @ 1500 (Conditional) = 0.2

	Joint Probability	Cumulative Probability
Oil @ C_1	0.6	0.6 → 1st attempt tak ka chance
@ C_2	0.12	0.72 → 2nd attempt tak ka chance
@ C_3	0.056	0.776 → upto 1500 m

Cumulative probability is given then -

→ Step 1 : De-cumulate the same → 0.6, 0.12, 0.056 } Probability of entire path
There are joint probability

→ Step 2 : Look at the path properly & you will be able to find conditional probability.



* Joint probability of Path 1 = 0.1
∴ 0.6 × Prob. = 0.1
∴ Prob. = 1/6

* Joint probability of Path 2 = 0.1
∴ 0.6 × 5/6 × Prob. = 0.1
∴ Prob. = 0.2

• At D_3,
EMV = Max (-9.4, -12) = -9.4

• At D_2,
EMV = Max (-7, -8) = -7

• At D_1, EMV = Max (-0.2, 0) = 0

• At C_3,
EMV = 0.2 × 1 + 0.8 × 12
= -9.4

• At C_2,
EMV = 1/6 × 5 + 5/6 × (-9.4)
= -7

• At C_3,
EMV = 0.4 × 10 + 0.6 × (-7)
= -0.2