

GUESSTIMATION

Problem Statement:

What is the total number of internships (including apprenticeships) that get offered in a year in India?

Solution:

Number of students in India enrolling in college every year = 30 million

Tier 1 + Tier 2 = 20% of 30 mil. = 6 mil.

Tier 3 + Tier 4 = 80% of 30 mil. = 24 mil.

- ➔ Here we have categorised colleges into 2 categories according to their rankings
 - 1) Tier 1 + Tier 2
 - 2) Tier 3 + Tier 4
- ➔ We have considered that 20% of the total students belong to the 1st category and 80% to the second category.

1. For Tier 1 + Tier 2 = 6 million students

UG Students = 70% of 6 mil. = 4.2 mil.

PG Students = 30% of 6 mil. = 1.8 mil.

- ➔ For simplicity we have assumed that all programs can be divided into UG and PG, courses like integrated programs are considered included in these.

For UG Students:

- ➔ We will assume that all UG programs have 4 academic years (1st, 2nd, 3rd and 4th year)
- ➔ We assume that all the students who enroll in the 1st year complete the program and pass all the respective years.
- ➔ We assume that maximum internships are done in the 3rd year of the program
- ➔ We assume that apprenticeship offers given only to the 4th year students.
- ➔ We assume that no student interns after graduating

% of total students getting internships in each year

	Total students in each year	1st year	2nd year	3rd year	4th year (internships)	4th year apprenticeships
Engineering and Technology	20% of 4.2 mil = 84000	10% = 8400	30% = 25,200	100% = 84,000	30% = 25,200	30% = 25,200
Humanities	50% of 4.2 mil = 21,00,000	5% = 1,05,000	15% = 3,15,000	50% = 10,50,000	15% = 3,15,000	15% = 3,15,000
Science	10% of 4.2 mil = 42,000	5%= 2100	15% = 6300	50% = 21,000	15% = 6300	15% = 6300
Commerce	10% of 4.2 mil = 42,000	5%= 2100	15% = 6300	50% = 21,000	15% = 6300	15% = 6300
Others	10% of 4.2 mil = 42,000	5%= 2100	15% = 6300	50% = 21,000	15% = 6300	15% = 6300
Total		1,19,700	3,59,100	2,52,000	3,59,100	3,59,100

Grand Total = 14,49,000

For PG Students:

- ➔ We will assume that all PG programs have 2 academic years (1st and 2nd)
- ➔ We assume that all the students who enroll in the 1st year complete the program and pass both the year.
- ➔ We assume that maximum internships are done in the 1st year of the program and apprenticeship offers are given in the second year.
- ➔ We assume that no student interns after graduating

% of total students getting internships in each year

	Total students in each year	1st year	2nd year (internships)	2nd year (apprenticeships)
Management	20% of 1.8 mil = 3,60,000	100% = 3,60,000	30% = 1,08,000	40% = 1,44,000
Others	80% of 1.8 mil = 14,40,000	70% = 11,52,000	50% = 7,20,000	30% = 4,32,000
Total		15,12,000	8,28,000	5,78,000

Grand Total = 29,18,000

2. For Tier 3 + Tier 4 = 24 million students

UG Students = 70% of 24 mil. = 16.8 mil.

PG Students = 30% of 24 mil. = 7.2 mil.

- ➔ For simplicity we have assumed that all programs can be divided into UG and PG, courses like integrated programs are considered included in these.

For UG Students:

- ➔ We will assume that all UG programs have 4 academic years (1st, 2nd, 3rd and 4th year)
- ➔ We assume that out all the students who enroll in the 1st year, 80% reach 3rd and 4th year (= 13.44 mil.)
- ➔ We assume that internships are done in the 3rd year of the program.
- ➔ We assume that apprenticeship offers given only to the 4th year students.
- ➔ We assume that students who graduated previous year also apply for internship and apprenticeships.

% of total students getting internships in each year

	Total students in each year	3rd year	4th year (internships)	4th year apprenticeships	Graduate (internships)	Graduate apprenticeships
Engineering and Technology	20% of 13.44 mil = 26,88,000	80% = 21,50,400	30% = 8,06,400	30% = 8,06,400	20% = 5,37,600	20% = 5,37,600
Humanities	50% of 13.44 mil = 67,20,000	10% = 6,72,000	10% = 6,72,000	10% = 6,72,000	10% = 6,72,000	10% = 6,72,000
Science	10% of 13.44 mil = 13,44,000	20% = 2,68,800	20% = 2,68,800	20% = 2,68,800	20% = 2,68,800	20% = 2,68,800
Commerce	10% of 13.44 mil = 13,44,000	30% = 4,03,200	30% = 4,03,200	30% = 4,03,200	30% = 4,03,200	30% = 4,03,200
Others	10% of 13.44 mil = 13,44,000	10% = 1,34,400	10% = 1,34,400	10% = 1,34,400	10% = 1,34,400	10% = 1,34,400
Total		33,86,800	22,84,800	22,84,800	20,16,000	20,16,000

Grand Total = 1,19,88,400

For PG Students:

- ➔ We will assume that all PG programs have 2 academic years (1st and 2nd)
- ➔ We assume that out all the students who enroll in the 1st year, 80% reach 2nd year (= 5.76 mil.)
- ➔ We assume that maximum internships are done in the 1st year of the program and apprenticeship offers are given in the second year.
- ➔ We assume that no student interns after graduating

% of total students getting internships in each year

	Total students In 1st year	Total students In 2nd year	1st year	2nd year intern.	2nd year apprentice.	Graduate intern	Graduate apprentice
Management	20% of 7.2 mil = 1440000	20% of 5.76 mil = 11,52,000	70% = 10,08,000	40% = 4,60,800	20% = 2,30,400	20% = 2,30,400	20% = 2,30,400
Others	80% of 7.2 mil = 5760000	80% of 5.76 mil = 46,08,000	30% = 17,28,000	30% = 13,82,400	20% = 9,21,600	20% = 9,21,600	20% = 9,21,600
Total			27,36,000	18,43,200	11,52,000	11,52,000	11,52,000

Grand Total = 80,35,200

Total Number:

Adding the four Grand Totals = 2,43,90,600

→ Total number of internships (including apprenticeships) that get offered in a year in India = 24 million

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