

• Microsoft Excel :

Microsoft Excel is a helpful and powerful program for data analysis and documentation. It is a spreadsheet program, which contains a number of rows and columns, where each intersection of a column and row is called a cell, and each cell contains one point of data or one piece of information. It is used to perform various operations like calculations, pivot tables, graphs, etc.

In this lab, we are going to include marks of 24 students in MS-Excel and use different formulas to calculate the required result.

The name of students along with their obtained marks in each of 5 subjects is entered and the following formulas are used:

1) Highlighting red color for cells containing marks < 24:

For each obtained marks containing less than 24 i.e. failed, the cells are selected and under conditional formatting \rightarrow less than, tab, 24 is entered so that students getting less than 24 marks are highlighted red in their respective cells.

2) For Total marks:

$R3 = \text{SUM}(E3, H3, K3, N3, Q3)$ to calculate sum of obtained marks in 5 subjects.

3) For Percentage:

Tab the % sign on Home menu, then $S3 (= R3 / 300)$ as 300 is the total marks.

4) For RESULT :

$T3 (= IF (MIN (E2 : Q2) \geq 24, "PASS", "FAIL"))$

And also, the Result column is selected then under conditional formatting \rightarrow Highlight cell rules \rightarrow text that contains is selected and "FAIL" is entered.

This highlights "FAIL" students' cells filling red color.

5) For Division :

% is selected in Home Tab, then

$U3 (= IF (AND (T3 = "PASS", S3 \geq 75\%), "DISTINCTION", IF (AND (T3 = "PASS", S3 \geq 60\%), "FIRST DIV", IF (AND (T3 = "PASS", S3 \geq 50\%), "SECOND DIV", "*"))))$

6) For RANK :

$V3 (= IF (T3 = "FAIL", "*", RANK (S3, S3 : S26)))$

In conclusion, these formulas help us create a spreadsheet of students with their results and saves us much time with accuracy.

229

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1			Math			IIT			DL			C-programming			Physics									
2	ID no.	Name	F.M	P.M	Obtained	F.M	P.M	Obtained	F.M	P.M	Obtained	F.M	P.M	Obtained	F.M	P.M	Obtained	Total marks	Percentage	Result	Division	Rank		
3	1	Abhishek	60	24	50	60	24	48	60	24	23	60	24	50	60	24	45	216	72%	FAIL	*	*		
4	2	Amish	60	24	40	60	24	47	60	24	35	60	24	45	60	24	35	202	67%	PASS	FIRST DIV	16		
5	3	Aryan	60	24	45	60	24	43	60	24	36	60	24	46	60	24	36	206	69%	PASS	FIRST DIV	15		
6	4	Ashmita	60	24	32	60	24	41	60	24	37	60	24	44	60	24	38	192	64%	PASS	FIRST DIV	17		
7	5	Binita	60	24	40	60	24	35	60	24	38	60	24	41	60	24	33	187	62%	PASS	FIRST DIV	20		
8	6	Bikesh	60	24	48	60	24	34	60	24	34	60	24	45	60	24	55	216	72%	PASS	FIRST DIV	9		
9	7	Bharat	60	24	45	60	24	33	60	24	32	60	24	33	60	24	40	183	61%	PASS	FIRST DIV	23		
10	8	Dikshya	60	24	42	60	24	48	60	24	31	60	24	45	60	24	41	207	69%	PASS	FIRST DIV	14		
11	9	Kripesh	60	24	50	60	24	47	60	24	40	60	24	36	60	24	46	219	73%	PASS	FIRST DIV	8		
12	10	Manish	60	24	22	60	24	46	60	24	42	60	24	31	60	24	43	184	61%	FAIL	*	*		
13	11	Niharika	60	24	23	60	24	50	60	24	32	60	24	37	60	24	48	190	63%	FAIL	*	*		
14	12	Niva	60	24	49	60	24	49	60	24	40	60	24	39	60	24	49	226	75%	PASS	DISTINCTION	6		
15	13	Poem	60	24	54	60	24	55	60	24	49	60	24	50	60	24	48	256	85%	PASS	DISTINCTION	1		
16	14	Pradyumna	60	24	45	60	24	52	60	24	42	60	24	48	60	24	44	231	77%	PASS	DISTINCTION	5		
17	15	Pragati	60	24	41	60	24	44	60	24	19	60	24	48	60	24	36	188	63%	FAIL	*	*		
18	16	Pranab	60	24	43	60	24	47	60	24	37	60	24	50	60	24	47	224	75%	PASS	FIRST DIV	7		
19	17	Prashanna	60	24	51	60	24	56	60	24	48	60	24	48	60	24	45	248	83%	PASS	DISTINCTION	4		
20	18	Samjhana	60	24	47	60	24	44	60	24	47	60	24	45	60	24	32	215	72%	PASS	FIRST DIV	11		
21	19	Sandesh	60	24	50	60	24	48	60	24	41	60	24	42	60	24	33	214	71%	PASS	FIRST DIV	12		
22	20	Shreyan	60	24	42	60	24	39	60	24	47	60	24	36	60	24	23	187	62%	FAIL	*	*		
23	21	Subarna	60	24	30	60	24	42	60	24	22	60	24	37	60	24	35	166	55%	FAIL	*	*		
24	22	Supriya	60	24	42	60	24	48	60	24	45	60	24	39	60	24	35	209	70%	PASS	FIRST DIV	13		
25	23	Suraj	60	24	57	60	24	55	60	24	40	60	24	52	60	24	51	255	85%	PASS	DISTINCTION	2		
26	24	Suyash	60	24	55	60	24	56	60	24	42	60	24	51	60	24	49	253	84%	PASS	DISTINCTION	3		