



PHYSICS CLASSES

FREQUENCY
(Let's match our waves)

IIT-JEE (Mains/Adv)/AIIMS/AIPMT/XI/XII

ASHUTOSH CHATURVEDI

(B.Tech.IIT-BHU)

ESSENTIAL MATHEMATICS [B]

Date : 2-06-2019

M. M. : 217

	Name	Marks	Rank
1	Kanishk Singhal	203	1
2	Priyesh	199	2
3	Alenkar Saxena	182	3
4	Stuti Juneja	179	4
5	Vaibhav Joshi	168	5
6	Abhinav Singh Yadav	162	6
7	Sanidhya Jain	161	7
8	Sarvagya Surana	161	7
9	Shreesh Pathak	160	8
10	Suyash Kolte	159	9
11	Abhay Bansal	151	10
12	Divyakarni Singh	147	11
13	Sanskriti Dhurandhar	141	12
14	Shivam Gupta	132	13
15	Neha Motwani	127	14
16	Anushka Soni	125	15

	Name	Marks	Rank
17	Vikas Tandan	122	16
18	Aishwarya Sinha	116	17
19	Ananya Agrawal	114	18
20	Soumya Chopda	112	19
21	Yash Dodani	109	20
22	Aachal kothari	106	21
23	Abhishek Aneshwari	103	22
24	Ashutosh Prajapati	96	23
25	Utkarsh Verma	95	24
26	Sweety Kumari	82	25
27	Purty Chopra	77	26
28	Raj Panday	77	26
29	Adarsh Gaharwar	61	27
30	Yuvraj Dewangan	38	28
31	Shishti Sahu	38	28
32	Vedant Chopra	17	29

D -18, Shailendra Nagar, Mob. : 9993020110
www.ashutoshchaturvediphysicsclasses.com

ESSENTIAL MATHEMATICS [B]

ANSWERS KEY

M.M. – 217

1. (b) 2. (d) 3. (d) 4. (c) 5. (d) 6. (c) 7. (a) 8. .
 (d) 9. (c) 10. (a) 11. (c) 12. (d) 13. (a) 14. (c)
 15. (a) 16. (d) 17. (a) 18. (b) 19. (a) 20. (a) 21. (b)
 22. $2 \pm \sqrt{3}$ 23. $250\sqrt{5}N, \tan^{-1}(2) \text{ W of } N$ 24. North-West 25. 2 26. 1
 27. $\sqrt{13}m$ 28. -1, 3 29. 4 m 30. $\frac{4\hat{i} + 5\hat{j} + 2\hat{k}}{\sqrt{45}}$ 31. $15\hat{i} + 20\hat{j}$
 32. zero 33. $\theta = 127^\circ$ 34. $A \rightarrow q, B \rightarrow r, C \rightarrow p, D \rightarrow s$
 35. (a) $\sec^2 x - \operatorname{cosec}^2 x$ (b) $e^x \left[\frac{1}{x} + \ln x \right]$ (c) $-2(x-1)^{-3}$ (d) $2[x^2 e^x + 2x e^x]$
 (e) $\frac{1 - \ln x}{x^2}$ (f) $99x^{98}$ (g) $-\frac{3}{x^2} + \frac{8}{x^3}$ (h) $2 \cos 2x$
 (i) $x + 2x \ln x$ (j) $\frac{1}{3}x^{-2/3} - \frac{1}{3}x^{-4/3}$ (k) $\frac{5}{(3x-2)^2}$ (l) $2x + \frac{2}{x^3} + 1 - \frac{1}{x^2}$
 (m) $\cos x + \sec^2 x$ (n) $\frac{\ln x e^x - \frac{e^x}{x}}{(\ln x)^2}$ (o) $5e^x x^4 + x^5 e^x$ (p) $-x^2 \sin x$
 (q) $-27(4-3x)^8$ (r) $-\frac{1}{9}x^{-4/3}$ (s) $3 \sin^2 x \cos x$ (t) $2 + \ln x^2$
 (u) $-e^x \sin e^x$ (v) $-\frac{\sin x}{2\sqrt{\cos x}}$
 36. (a) $\ln x - \frac{1}{x}$ (b) $-x^2 + \ln x + 4x$ (c) $-\frac{x^{-100}}{50}$ (d) $\frac{1}{3}$
 (e) $-\frac{8}{3}$ (f) $\frac{3}{2}$ (g) $\frac{2}{5}$ (h) 4
 (i) 2 (j) $\frac{3}{2}$ (k) $\frac{4x^3}{3} + 9x - 6x^2$ (l) $\frac{1}{4}$
 (m) $-\frac{1}{2x^2} - \frac{1}{x}$ (n) $\frac{2\sqrt{2}}{3}$ (o) $\frac{112}{3}$ (p) $\frac{4}{3}$
 37. (a) $-\sqrt{3}/2$ (b) $\frac{-\sqrt{3}}{2}$ (c) $\frac{24}{7}$ (d) $\frac{1}{\sqrt{10}}$
 (e) $\frac{-4-3\sqrt{3}}{10}$ (f) -1 (g) $\frac{\sqrt{3}-1}{2\sqrt{2}}$ (h) $-\frac{3}{5}$
 (i) -1 (j) 0 (k) $-\frac{1}{2}$