



**TARGET : NEET (UG) 2024**

**Course : SARANSH (Youtube Live CRASH COURSE)**

**PHYSICS**

**DPP**

**DAILY PRACTICE PROBLEMS**

**DPP NO. 1**

**DPP No. : 1**

SR. No.	DPPs Qs. Details		Marking Scheme				Time Details			
	Type of Questions	Code	Full Marks	(-ve Marks	Total Ques.	Total Marks	Qs (in Min.) for Each Qs	Time (in Min.)	Max. Time (in Min.)	
1	MULTIPLE CHOICE QUESTION (ONLY ONE CORRECT OPTION)	MCQ	4	-1	10	40	1		10	
	<b>Total</b>				<b>10</b>	<b>40</b>			<b>10</b>	

- If  $A = 3\hat{i} + 4\hat{j}$  and  $B = 7\hat{i} + 24\hat{j}$ , the vector having the same magnitude as B and parallel to A is  
 (1)  $5\hat{i} + 20\hat{j}$                       (2)  $15\hat{i} + 10\hat{j}$                       (3)  $20\hat{i} + 15\hat{j}$                       (4)  $15\hat{i} + 20\hat{j}$
- The unit vector parallel to the resultant of the vectors  $\vec{A} = 4\hat{i} + 3\hat{j} + 6\hat{k}$  and  $\vec{B} = -\hat{i} + 3\hat{j} - 8\hat{k}$  is  
 (1)  $\frac{1}{7}(3\hat{i} + 6\hat{j} - 2\hat{k})$               (2)  $\frac{1}{7}(3\hat{i} + 6\hat{j} + 2\hat{k})$               (3)  $\frac{1}{49}(3\hat{i} + 6\hat{j} - 2\hat{k})$               (4)  $\frac{1}{49}(3\hat{i} - 6\hat{j} + 2\hat{k})$
- Two forces, each of magnitude F have a resultant of the same magnitude F. The angle between the two forces is  
 (1)  $45^\circ$                               (2)  $120^\circ$                               (3)  $150^\circ$                               (4)  $60^\circ$
- Slope of the shown graph.
 
 (1) First increases then decreases                      (2) First decrease then increases  
 (3) increase    (4) decrease
- The torque of the force  $\vec{F} = (2\hat{i} - 3\hat{j} + 4\hat{k})\text{N}$  acting at the point  $\vec{r} = (3\hat{i} + 2\hat{j} + 3\hat{k})\text{m}$  about the origin be  
 (1)  $6\hat{i} - 6\hat{j} + 12\hat{k}$                       (2)  $17\hat{i} - 6\hat{j} - 13\hat{k}$                       (3)  $-6\hat{i} + 6\hat{j} - 12\hat{k}$                       (4)  $-17\hat{i} + 6\hat{j} + 13\hat{k}$
- If  $y = \sin(x) + \ln(x^2) + e^{2x}$  then  $dy/dx$  will be :  
 (1)  $\cos x + 2/x + e^{2x}$               (2)  $\cos x + 2/x + 2e^{2x}$               (3)  $-\cos x + 2/x^2 + e^{2x}$               (4)  $-\cos x - 2/x^2 + 2e^{2x}$
- If  $f(x) = 5$ , then the value of  $f(10)$  will be  
 (1) 10                                      (2) 5                                      (3) 15                                      (4) None of these
- The speed ( $v$ ) of a particle moving along a straight line is given by  $v = t^2 + 3t - 4$  where  $v$  is in m/s and  $t$  in second. Find time  $t$  at which the particle will momentarily come to rest.  
 (1) 3                                      (2) 4                                      (3) 2                                      (4) 1
- $y = e^x \ln x$   
 (1)  $e^x \ln x + \frac{e^x}{x}$                       (2)  $e^x \ln x - \frac{e^x}{x}$                       (3)  $e^x \ln x - \frac{e}{x}$                       (4) None of these
- Given  $s = t^2 + 5t + 3$ , find  $\frac{ds}{dt}$ , at  $t = 1$   
 (1) 7                                      (2) 9                                      (3) 12                                      (4) 15