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DPM CLASSES

6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)

TEST - PAPER (CBSE/NCERT)

THREE DIMENSIONAL GEOMETRY

SESSION -2024-25

CLASS - 12th

JOIN TODAY FOR ADVANCE CONCEPTS

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MRP: ₹ 100/- ONLY

ALSO, BASIC CONCEPTS CLASSES IN SUMMER

VACATION Apr, May & Jun (Every Year)

Add: Block -B, Near Glory Villa, 60 feet Road (Nearest land mark Scindia Statue), Shatabdipuram, Gwalior

Time: 1 hr :- Three dimensional Geometry :- mm!

Q. 1. Find the angle between the lines -

$\vec{r} = 3\hat{i} - 2\hat{j} + 6\hat{k} + \lambda(2\hat{i} + \hat{j} + 2\hat{k})$ and

$\vec{r} = (2\hat{j} - 5\hat{k}) + \mu(6\hat{i} + 3\hat{j} + 2\hat{k})$

Q. 2. Prove that the lines through A(0, -1, -1) and B(4, 5, 1) intersects the line through C(3, 9, 4) and D(-4, 4, 4).

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Q. 3. Prove that the lines $x = py + q$, $z = ry + s$ and $x = p'y + q'$, $z = r'y + s'$ are perpendicular if $pp' + rr' + 1 = 0$.

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Q. 4. Find the equation of a plane which bisects perpendicularly the lines joining the points A(2, 3, 4) and B(4, 5, 8) at right angles.

Q. 5. Find the equation of the plane through the points (2, 1, 0) (3, -2, -2) and (3, 1, 7)

Q.6. Find the equation of the lines passing through the point $(3,0,1)$ and parallel to the planes $x+2y=0$ and $3y-z=0$.

Q.7. Find the equation of the plane through the points $(2,1,-1), (-1,3,4)$ and perpendicular to the plane $x-2y+4z=10$.

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Q.8. Find the equation of the plane which is perpendicular to the plane $5x+3y+6z+8=0$ and which contains the line of intersection of the planes $x+2y+3z-4=0$ and $2x+y-z+5=0$.

Q.9. Show that the straight lines whose direction cosines are given by $2l+2m-n=0$ and $mn+nl+lm=0$ are at right angles.

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Q.10. Find the equation of the plane through the intersection of the planes $\vec{r}\cdot(\hat{i}+3\hat{j})-6=0$ and $\vec{r}\cdot(3\hat{i}-\hat{j}-4\hat{k})=0$ whose perpendicular distance from origin is unity.

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