

Ch = 621 ടെംബര് 2021 നേരിൽ

1) സൂചനയിൽ _____ എഴുതി അടുക്കാം.

- (a) $(2, -1)$ (b) $(\cos \alpha, 2 \sin \alpha)$
 (c) $(\sin \alpha, \cos \alpha)$ (d) $(\sin \alpha, \cos \beta)$

2) സൂചന പിൽ _____ എഴുതി അടുക്കാം.

- (a) $(\cos \theta \cos \alpha, \cos \theta \sin \alpha, \sin \theta)$
 (b) $(\cos \theta \sin \alpha, \cos \theta \sin \alpha, \sin \theta)$
 (c) $(\cos \theta \sin \alpha, \cos \theta \sin \alpha, \sin \alpha)$
 (d) ഒരി നേരി എഴുപി ചെല്ല

3) $(\bar{x} - \bar{y}) \times (\bar{x} + \bar{y}) = \underline{\hspace{2cm}}$

- (a) $\bar{x} + \bar{y}$ (b) $\bar{x}^2 - \bar{y}^2$ (c) $\bar{0}$ (d) $2(\bar{x} + \bar{y})$

4) $|\bar{a}| = 5, |\bar{b}| = 3$, എനി $|\bar{a} - \bar{b}| = 4$ നി $\bar{a} - \bar{b}$ ഡിഗ്രി.

- (a) -9 (b) 0 (c) 9 (d) എഴുപി ചെല്ല

5) $|\bar{a}| = 10, |\bar{b}| = 2$ എനി $\bar{a} - \bar{b} = 12$ നി $|\bar{a} \times \bar{b}|$ ഡിഗ്രി.

- (a) 12 (b) 14 (c) 16 (d) 18

6) മീറ്റർ $(2, 1, 1)$ വിനി $(1, 2, 3)$ ഓഫോ നേരിൽ
 അടുക്കാം അവനി.

- (a) $\frac{+1}{\sqrt{35}} (-1, 5, -3)$ (b) $\frac{+1}{\sqrt{35}} (1-5, 3)$ (c) $\frac{+1}{\sqrt{35}} (-1-5, -3)$
 (d) $+ \frac{1}{\sqrt{35}} (1-5, -3)$

7) കൊണ്ട് അനുശീലനം ചെയ്യുന്നത് $\bar{b} = 2\bar{i} + \bar{j}$ എന്നാൽ $a + b = 0$ എന്ന് നിരീക്ഷണം ചെയ്യുന്നത്

(a) 1 (b) -1 (c) 0 (d) 2

8) $|x\bar{i}| = |\bar{y}| = |\bar{x} - \bar{y}|$ എന്നാൽ $|\bar{x} + \bar{y}| =$

(a) $3|\bar{x}|$ (b) $5\sqrt{3}|\bar{x}|$ (c) $2|\bar{x}|$ (d) $\sqrt{2}|\bar{x}|$

9) $\bar{i} + \sqrt{3}\bar{j}$ എന്നാൽ $\sqrt{3}\bar{i} + a\bar{j}$ ആക്കേണ്ടിരിക്കുന്നതുമായി ഒരു സംബന്ധം ഉണ്ടോ?

(a) 1 (b) -1 (c) 2 (d) -2

10) അനുശീലനം ചെയ്യുന്നത് $\bar{i} + \bar{j} + k\bar{i}$ എന്നാൽ \bar{j} ആക്കേണ്ടിരിക്കുന്നതുമായി ഒരു സംബന്ധം ഉണ്ടോ?

(a) -1 (b) 0 (c) 1 (d) 2

11) വിദ്യുതിയുടെ വിവരങ്ങൾ താഴെ പറയുന്നവയാണ്

$A(0, -1, -1)$, $B(2, 2, 3)$, $C(4, 4, 4)$ എന്നീ മുൻകൊണ്ട്

$V = ABC$ എന്നതു

(a) $\frac{16}{3}$ (b) 16 (c) 32 (d) $\frac{32}{3}$

12) മുൻകൊണ്ടുള്ള വിദ്യുതിയുടെ രൂപീഫലം $2\bar{i} + k\bar{i}$ എന്നാൽ എന്ത് ഏക്കരണ ചെയ്യാം?

(a) $\sqrt{\frac{3}{2}}$ (b) $\frac{\sqrt{3}}{2}$ (c) $\frac{\sqrt{2}}{3}$ (d) $\frac{2}{\sqrt{3}}$

13) കോൺഗ്രേഷൻ റെസൂലുലിറ്റ് അദ്ദേഹം A, B എന്നീ രീതിയിൽ

$3 + \cos 2A + \cos 2B + \cos 2C =$

(a) 1 (b) 3 (c) 2 (d) 0

- 14) ഓരോ അനുഭവം മുമ്പിൽ നിന്ന് $\frac{5}{\sqrt{3}}$ കുറയ്ക്കാൻ വേണ്ട അനുഭവം ആണ്
- (a) 6 (b) $\frac{\sqrt{3}}{2}$ (c) 12 (d) 4

- 15) അംഗൾ $\vec{x} = (\sqrt{3}, 0, -\sqrt{3})$ അനുഭവം $\vec{y} = (1, 0, -1)$
ഓരോ അംഗൾ —

- (a) സാമ്യാനി തുല. (b) സാമ്യാനി തുല. (c) രൂപീയത്വം (d) രൂപീയം

- 16) $(4, 5, -1)$ അനുഭവം $(1, -4, 5)$ കുറയ്ക്കാൻ വേണ്ട അനുഭവം
- (a) $(7, 7, 7)$ (b) $(-7, 7, 7)$ (c) $(7, -7, 7)$ (d) $(7, -7, -7)$

- 17) ഓരോ $\vec{x} \in \mathbb{R}^3$, $\vec{y} \in \mathbb{R}^3$ അനുഭവം $|\vec{x} + \vec{y}| = |\vec{x} - \vec{y}|$ എന്ന്
 $\vec{x} \cdot \vec{y} =$ —
- (a) $|\vec{x}|^2$ (b) $|\vec{y}|^2$ (c) 0 (d) സാമ്യാനി തുല.

- 18) അംഗൾ $2\vec{i} + 3\vec{j} - 5\vec{k}$ ഓരോ അംഗൾ —
- (a) $\frac{2}{\sqrt{38}}, \frac{3}{\sqrt{38}}, \frac{5}{\sqrt{38}}$ (b) $\frac{1}{\sqrt{38}}, \frac{1}{\sqrt{38}}, \frac{1}{\sqrt{38}}$ —
- (c) $\frac{2}{\sqrt{38}}, \frac{-3}{\sqrt{38}}, \frac{5}{\sqrt{38}}$ (d) $\frac{2}{\sqrt{38}}, \frac{3}{\sqrt{38}}, -\frac{5}{\sqrt{38}}$

- 19) ഓരോ $\vec{x}, \vec{y} \in \mathbb{R}^3$ അംഗൾ $\vec{x} \cdot (\vec{x} \times \vec{y}) = 0$ എന്ന്
ഓരോ അംഗൾ —
- (a) $\vec{y} = (\vec{x} \times \vec{y})$ (b) $\vec{x} \perp (\vec{x} + \vec{y})$
- (c) $\vec{x} \perp \vec{y}$ (d) സാമ്യാനി തുല.

20 > अद्वैती $\vec{i} + \vec{j} + \vec{k}$ का रेशमी एवं दिशा —

- (a) $\cos^{-1} \frac{1}{\sqrt{3}}$, $\cos^{-1} \frac{1}{\sqrt{3}}$, $\cos^{-1} \frac{1}{\sqrt{3}}$
- (b) $\cos^{-1} \frac{1}{3}$, $\cos^{-1} \frac{1}{3}$, $\cos^{-1} \frac{1}{3}$
- (c) $\frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}, \frac{1}{\sqrt{3}}$
- (d) 0, 0, 0.

Ch-7 નિર્ધારિત ગુણી

1) નિર્દેશાંક (3, 2, 1) એને (5, 6, 7) મિલ નેતૃત્વ દળી શેનોની રેલી ક્યું છે?

- (a) (8, 8, 8) (b) (2, 4, 3) (c) (4, 3, 8) (d) (2, 4, 6)

$$2) \frac{3-x}{1} = \frac{y-2}{5} = \frac{z-3}{1} \text{ એ } \text{નિર્ધારિત ગુણી ક્યું?.$$

- (a) (1, 5, 1) (b) (-1, 5, 1)
 (c) (1, 5, $\frac{1}{2}$) (d) (-1, 5, $\frac{1}{2}$)

$$3) \frac{x-1}{c} = \frac{y+2}{-2} = \frac{z-3}{4} \text{ એ } \frac{x-5}{1} = \frac{y-3}{1} = \frac{z+1}{c}$$

એ રેલી સમાન હોય ત્થાં c વાળો.

- (a) 2 (b) 1 (c) -2 (d) 0

4) સમીક્ષા $x+2y+3z-6=0$ એ સર્વાંગીની સ્પેસ સીડી ક્યું?

- (a) (1, 2, 5) (b) $(\frac{1}{\sqrt{h}}, \frac{2}{\sqrt{h}}, \frac{3}{\sqrt{h}})$
 (c) (-1, -2, -3) (d) નહીં.

5) $x+2y+2=1$ એને $\vec{r} = (0, 0, 0) + k(2, 1, -1)$
 KER દ્વારા નૃણાંજ માટે ક્યું?

- (a) $\frac{\pi}{6}$ (b) $\frac{\pi}{3}$ (c) $\frac{\pi}{2}$ (d) $\frac{\pi}{4}$

6) અમાનળી અનિતાનું $x = 2\pi/3$, $y = \pi/3$ હોય કે તો $z = 2\pi/3$ નો દાર્શનિક સ્વરૂપ ક્રમ $\frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{2}$ માનો રહ્યું છે. ગોમણેદુમાંથી અમાનાનું દર્શના માનો હોય $\sqrt{2}$ હોય તો એવી અમાનનું હશે. — છે.

- (a) $x+y+z = 2$ (b) $x+y = 2$
 (c) $x+y+z = 1$ (d) $x+y+z = 0$

7) \overline{x} હોય ની વેગનાનું હોય માટે

$$\overline{x} \times \overline{m} = \overline{o} \quad \text{—}$$

- (a) જે હોયની સમાન હોય (b) જે હોયની સિધ્યાત્મક
 (c) જે હોયની પ્રોફેસ (d) જે હોયની સિધ્યાત્મક
 સાચી સમાન

8) A (2, 1, 6) હોય B (4, 8, 12) નો \overline{AB} નો
 મદ્યબિંદુ P હોય (ગોમણેદુમાંથી નસારી લાગે રહ્યું)
 હોય —

- (a) $x-3 = y-6 = z-9 = k$, $k \in \mathbb{R}$
 (b) $x+3 = y+6 = z+9 = k$, $k \in \mathbb{R}$
 (c) $\frac{x-3}{-3} = \frac{y-6}{-6} = \frac{z-9}{-9} = k$, $k \in \mathbb{R}$
 (d) $\frac{x+3}{3} = \frac{y+6}{6} = \frac{z+9}{9} = k$, $k \in \mathbb{R}$.

9) $\frac{x-5}{1} = \frac{3y-1}{2} = \frac{z-7}{5}$ નો વેગનાનું — છે.

- (a) $(1, \frac{2}{3}, 5)$ (b) $(1, 2, 5)$
 (c) $(1, -\frac{2}{3}, 5)$ (d) $(1, \frac{3}{2}, 5)$

10) ક્રમાંકાની $\frac{x}{2} = \frac{y}{2} = \frac{z}{1}$ તથા $\frac{x}{2} = \frac{y}{1} = \frac{z}{-2}$

અનેટો વૃગુણ — દો.

- (a) 0 (b) $\frac{\pi}{3}$ (c) $\frac{\pi}{4}$ (d) $\frac{\pi}{2}$

11) ક્રમાંકાની $L = \frac{x}{2} = \frac{y}{-3} = \frac{z}{1}$ તથા $M: \frac{x-3}{3} = \frac{y-1}{5} = \frac{z+3}{2}$

ત્થા L એટ મા — દો.

- (a) સમાંગુ (b) વ્યાસમાંત્રિક (c) પ્રાચીપદ્ધતિ (d) વ્યક્તિકારી

12) અમાંગાની $x+y+2=1$ તથા $2x-y+2z=1$ અનેટો

વૃગુણ — દો.

- (a) $\cos^{-1}\frac{1}{3}$ (b) $\cos^{-1}\frac{1}{\sqrt{3}}$ (c) $\cos^{-1}\frac{1}{5}$ (d) $\cos^{-1}\frac{2}{\sqrt{3}}$

13) અમાંગાની $x+2y-3z=0$ ગા અનુભૂતિ

દિશાઓની એટો

- (a) 1, 2, -3 (b) -1, -2, -3

- (c) $\frac{-1}{\sqrt{10}}, \frac{2}{\sqrt{10}}, \frac{3}{\sqrt{10}}$ (d) $\frac{1}{\sqrt{10}}, \frac{2}{\sqrt{10}}, \frac{-3}{\sqrt{10}}$

14) ક્રમાંક $x-1 = y-2 = z-3$ એટ અમાંગાની $x+y+z=1$

અનેટો વૃગુણ હો — દો.

- (a) $\frac{\pi}{2}$ (b) $\frac{\pi}{3}$ (c) $\frac{\pi}{4}$ (d) $\frac{\pi}{6}$

15) હી ક્રમાંકાની $\overline{r} = (2, -3, 7) + k(2, 1, 5), k \in \mathbb{R}$

એટ $\overline{r}_2 = (1, 2, 3) + k(3, -4, 4), k \in \mathbb{R}$

નેચુંબું હો એટ ની $a =$ —

- (a) 2 (b) -6 (c) 1 (d) 5 -1

16) $(2, 3, -1)$ એટા $(3, -h, -5)$ નીચે નવીં રીત
દ્વારા ક્રમાનુષ્ઠાન — હિં ફેલે છે.

- (a) $(1, 0, 13)$
- (b) $(1, 0, 19)$
- (c) $(\frac{13}{6}, 0, -\frac{19}{6})$
- (d) $(0, -1, 13)$

17) બ્રોમાન્ડિયાની સમાજ નેટી નિયમ (a, b, c) એટા
ની સમાપ્તિ જીવન — એન્ટી.

(a) $ax+by+cz = a+b+c$

(b) $ax+by+cz = abc$

(c) $\frac{x}{a} + \frac{y}{b} + \frac{z}{c} = 1$

(d) $ax+by+cz = a^2+b^2+z^2$

18) સમાન અનુભૂતિ કે ક્રમાનુષ્ઠાન — છે.

- (a) $(0, 1, 1)$
- (b) $(2, 0, 2)$
- (c) $(1, 0, 0)$
- (d) $(0, 1, 0)$

19) સમાન $2x-y+2z=1$ એટા $4x-2y+hz=1$

ક્રમાનુષ્ઠાન — છે.

- (a) $\frac{1}{3}$
- (b) 3
- (c) $\frac{1}{6}$
- (d) 6

20) દ્વારા $\frac{x}{2} - \frac{y}{2} = \frac{z}{1}$ એન્ટી સમાન $2x+2y+z=1$

ક્રમાનુષ્ઠાન — છે.

- (a) $\sin^{-1} \frac{1}{h}$
- (b) $\sin^{-1} \frac{1}{3}$

- (c) $\sin^{-1} \frac{1}{\sqrt{6}}$
- (d) $\sin^{-1} \frac{1}{9}$