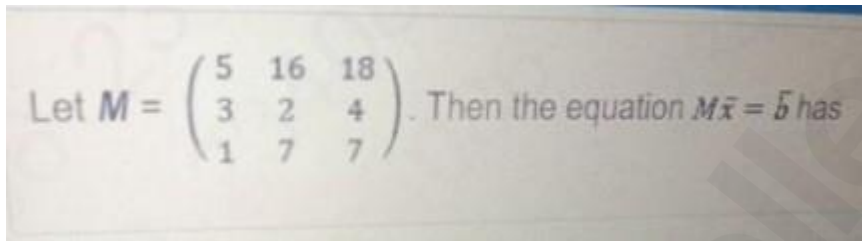


## VITEEE 2021 Memory Based Questions and Answers for **29 May Slot 1**

**Ques.** Area bounded by curve  $y=x^2$  and  $y=5x$

**Ans.**  $125/6$  sq units



**Ques.**

**Ques.** If  $|z - i| \leq z_1 = 4 + i4$ , then the maximum value of  $|iz + z_1|$  is

**Ques.**  $a + 2b + 3c = 0$

$(a \times b) + (b \times c^{-1}) + (c \times a^{-1}) = ?$

**Ques.**  $a((b \times c) \times (a+b+c))$  is equal to

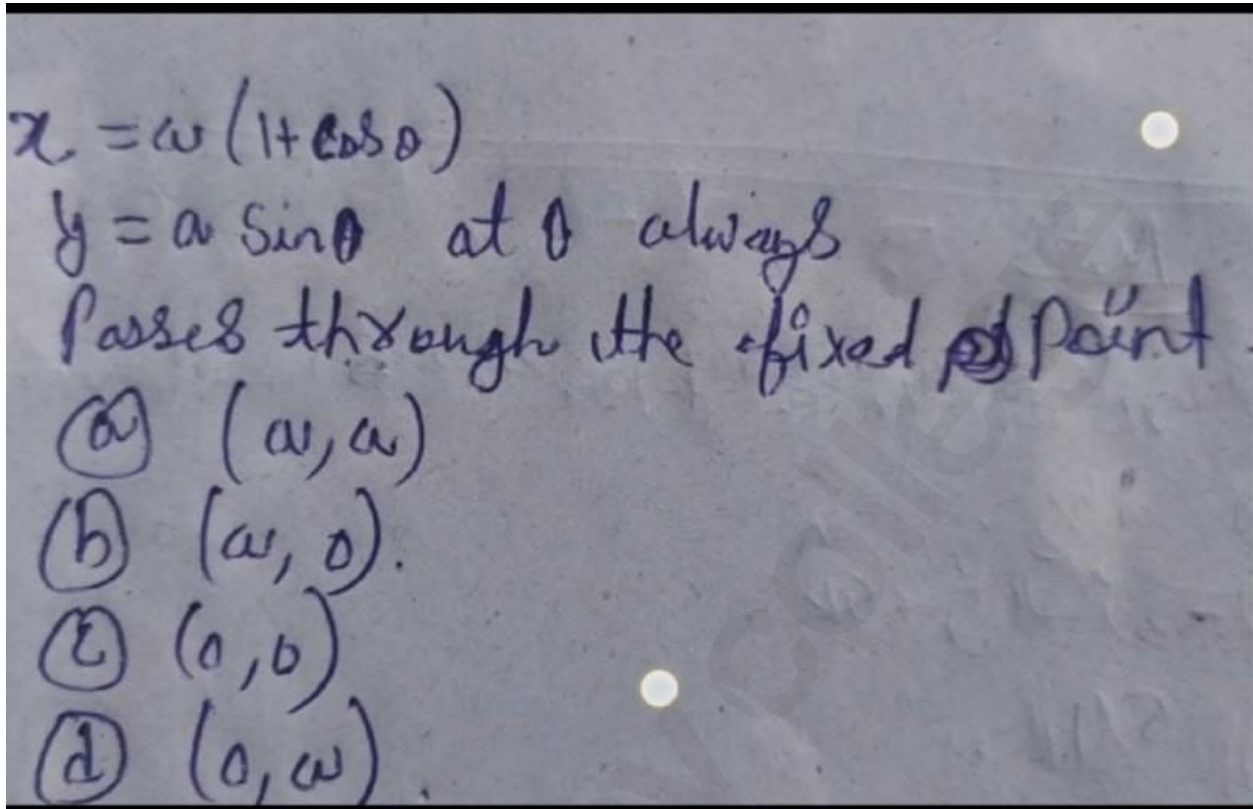
**Ques.** The angle between the line  $x-5/10 = y-1/2 = z=2/11$  and the plane  $2x + 3y - 6z = 7$  is equal to

**Ques.** Direction cosine of a line is  $(1/z, 1/x, n)$  then the value of  $n$  is

**Ques.**  $\int x^4 e^x dx =$

**Ans.**  $e^x(x^4 - 4x^3 + 12x^2 - 24x + 24) + C$

Ques.



Ques. Three points  $(a, 2, 3)$ ,  $(0, b, 5)$ , and  $(6, 7, c)$  are collinear. The  $a, b, c$  should strictly.

Ques. If  $a + 2b + 3c = 0$ , then  $(a \times b) = (b \times c) + (c \times d)$  is equal to

Ques.  $y+z = 1$ ;  $x+y+z = 1$ ;  $x+2y+2z = a$  is consistent. What is the value of  $a$ ?

Ques. The integrating factor of the differential equation  $dy/dx + P(x)y = Q(x)$  is  $x$  then  $P(x) =$

Ques. Consider a random variable  $x$  with  $E(x) = 1$  and  $E(x^2) = 1$ , then

Ques. The conic  $3x^2 + 6xy + 3y^2 - 4x + 5y = 12$  represents

Ques. The value of  $\tan [\sin^{-1}(5/13) + \cot^{-1}(5/4)]$  is equal to

Ques. Let  $z = \sqrt{3}/2 - i/2$  Then the smallest positive integer  $n$  such that  $(z^{95} + i^{67}) = z^n$  is

Ques. The function  $f(x) = \tan^{-1}(\sin x - \cos x)$  is an increasing function in

Ques. The function  $f(x) = |x| + |x|/x$  is

**Ans.** discontinuous at the origin because  $|x|/x$  discontinuous there

