KINETICS
We Nurture The Future
IIT-JEE | Medical | Foundations

Linear Equations for Two Variables

Question 1.
A linear equation in two variables has maximum :
(a) Only one solution
(b) Two solution
(c) Infinite solution
(d) None of these

Answer: (c) Infinite solution

Question 2.
Solutions of the equation $2x + 5y = 0$ is:
(a) 3,0
(b) -3,2
(c) 0,0
(d) 0,4

Answer: (c) 0,0

Question 3.
All linear equations in two variables have ———— .
(a) One solution
(b) Infinitely many solutions
(c) Three solutions
(d) Two solution

Answer: (b) Infinitely many solutions

Question 4.
The equation of a line parallel to x-axis and 3 units above the origin is
(a) $x = -3$
(b) $x = 3$

(c) y = -3
(d) y = 3

Answer: (d) y = 3

Question 5.
If (2, 0) is a solution of the linear equation 2x +3y = k, then the value of k is:
(a) 4
(b) 6
(c) 5
(d) 2

Answer: (a) 4

Question 6.
The graph of x = 3 is a line:
(a) Parallel to x-axis at a distance of 3 units from the origin
(b) Parallel to y-axis at a distance of 3 units from the origin
(c) Makes an intercept 3 on x-axis
(d) Makes an intercept 3 on y-axis

Answer: (b) Parallel to y-axis at a distance of 3 units from the origin

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Question 7.
y = 0 is the equation of
(a) a line parallel to x-axis
(b) a line parallel to y-axis
(c) x-axis
(d) y-axis

Answer: (b) a line parallel to y-axis

Question 8.
The value of k if x = 2, y = 1 is a solution of equation 2x – k = – 3y is:
(a) 6
(b) 5
(c) 7
(d) -7

Answer: (c) 7

Question 9.
For two lines $2x + y = 1$ and $x – y = 2$ if the x coordinate of the common point is 1 what is the y coordinate?
(a) -1
(b) 2
(c) -2
(d) 3

Answer: (a) -1

Question 10.
Five years ago, A was thrice as old as B and ten years later, A shall be twice as old as B. What is the present age of A.
(a) 20
(b) 50
(c) 60
(d) 40

Answer: (b) 50

Question 11.
Rozly can row downstream 20km in 2 hours, and the upstream 4km in 2 hours. What will be the speed of rowing in still water?
(a) 6 km/hr
(b) 4 km/hr
(c) 3 km/hr
(d) 7 km/hr

Answer: (b) 4 km/hr

Question 12.
The graph of linear equation $x+2y = 2$, cuts the y-axis at:
(a) (2,0)
(b) (0,2)
(c) (0,1)
(d) (1,1)

Answer: (c) (0,1)

Question 13.
If the line represented by the equation $3x + \alpha y = 8$ passes through the points (2,2), then the value of α is
(a) 0
(b) 4
(c) 3
(d) 1

Answer: (d) 1

Question 14.
If x = a, y = b is the solution of the pair of equation x-y = 2 and x+y = 4 then what will be value of a and b
(a) 2,1
(b) 3,1
(c) 4,6
(d) 1,2

Answer: (b) 3,1

Question 15.
The solution of the equation $x + y = 3$, $3x – 2y = 4$ is :
(a) $x = 2, y = 1$
(b) $x = 1, y = 2$
(c) $x = –2, y = 1$
(d) $x = –2, y = –1$

Answer: (a) $x = 2, y = 1$

Question 16.
The value of k if $x = 2, y = 1$ is a solution of equation $2x – k = – 3y$ is
(a) 7
(b) -7
(c) 6
(d) 5

Answer: (a) 7

Question 17.
If x and y are both positive solutions of equation ax+by+c=0, always lie in:

(a) First quadrant
(b) Second quadrant
(c) Third quadrant
(d) Fourth quadrant

Answer: (a) First quadrant

Question 18.
The linear equation $4x - 10y = 14$ has:
(a) A unique solution
(b) Two solutions
(c) Infinitely many solutions
(d) No solutions

Answer: (c) Infinitely many solutions

Question 19.
An equation of the type ————————- represents a line passing through the origin.
(a) $y = m + x + 1$
(b) $y = m + x$
(c) $y = mx$
(d) $x = m - y$

Answer: (c) $y = mx$

Question 20.
The point lying on the equation $2x - y = 5$ is:
(a) (3, 4)
(b) (-3, 1)
(c) (6, 1)
(d) (2, -1)

Answer: (d) (2, -1)

Question 21.
The sum of two digits and the number formed by interchanging its digit is 110. If ten is subtracted from the first number, the new number is 4 more than 5 times of the sum of the digits in the first number. Find the first number.
(a) 46
(b) 48

(c) 64
(d) 84

Answer: (c) 64

Question 22.
For the equation 5x – 7y = 35, if y = 5, then the value of 'x' is
(a) -12
(b) -14
(b) 14
(d) 12

Answer: (b) 14

Question 23.
The straight line passing through the points (0, 0), (–1, 1) and (1, – 1) has the equation :
(a) 2 – x = 3y
(b) y = x
(c) 2x – y = 0
(d) x + y = 0

Answer: (d) x + y = 0

Question 24.
The value of k, if x = 1, y = 2 is a solution of the equation 2x + 3y = k.
(a) 5
(b) 6
(c) 7
(d) 8

Answer: (d) 8

Question 25.
The solution of equation x-2y = 4 is:
(a) (0,2)
(b) (2,0)
(c) (4,0)
(d) (1,1)

Answer: (c) (4,0)