

34. The slope of a straight line parallel to the line  $2x + 4y + 5 = 0$  is .....
- a) 2                      b)  $1/2$                       c)  $-1/2$                       d) -2
35. The angle of inclination of a straight line whose slope is is .....
- a)  $0^\circ$                       b)  $30^\circ$                       c)  $60^\circ$                       d)  $90^\circ$
36. The angle of inclination of the straight line  $5y = 5x + 10$  is .....
- a)  $0^\circ$                       b)  $30^\circ$                       c)  $60^\circ$                       d)  $45^\circ$
37. In  $\triangle ABC$ ,  $AB=6\text{cm}$  and  $AD$  is the angle bisector of  $\angle A$   
If  $BD : DC = 3 : 2$  then  $AC = \dots\dots$
- a) 4 cm                      b) 6 cm                      c) 8 cm                      d) 10 cm
38. If  $A + B = 90^\circ$  then  $\sin A \cos B + \cos A \sin B = \dots\dots\dots$
- a) 2                      b) 1                      c) 0                      d)  $45^\circ$
39. = .....
- a)  $\sin \theta + \cos \theta$                       b)  $\sin \theta - \cos \theta$                       c)  $\sin \theta \cos \theta$                       d)  $\operatorname{cosec} \theta + \cot \theta$
40.  $\operatorname{Cosec}^2 67^\circ - \tan^2 23^\circ = \dots\dots\dots$
- a) 0                      b) -1                      c) 1                      d) 2

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UNIVERSAL MATRIC HR SEC SCHOOL

MATHEMATICS

Creative Questions

(This type of questions may be asked in the examination )

- The father of Geometry is -----  
a) Euclid                      b)Thales                      c) Hipparchus                      d) Pythagoras
- The father of trigonometry is -----  
a)Euclid                      b)Thales                      c) Hipperchus                      d) pythagoras
- The father of algebra = -----  
a)Diophantus                      b) Aryabhata                      c) Al-khwarizmi                      d)Demorgan
- The G.C.D of  $15x^4y^3z^5, 12x^2y^7z^2$  .....

a)  $15x^4y^7z^5$                       b)  $3x^2y^3z^2$                       c)  $12x^2y^3z^2$                       d)  $3x^4y^7z^5$

- The G.C.D of  $35x^3y^3z^4, 49x^2yz^3, 14xy^2z^2$ .....

a)  $7xyz^2$                       b)  $7x^5y^3z^4$                       c)  $35x^5y^3z^4$                       d)  $7x^2y^2z^4$

- The L.C.M of  $35a^2c^3b, 42a^3cb^2, 30ac^2b^3 = \dots\dots\dots$

a)  $75a^2b^2c^2$                       b)  $210a^3b^3c^3$                       c)  $210a^3b^2c^2$                       d)  $30a^3b^3c^3$

- The LCM of  $a^{m+1}, a^{m+2}, a^{m+3} = \dots\dots\dots$  a)  $a^{m+3}$                       b)  $a^{m+1}$                       c)  $a^{m+2}$                       d)  $a^{m+6}$
- The lowest term of  $x$

a)  $(x + 2)$                       b)  $(x - 2)$                       c)  $(2x + 1)$                       d)  $3x$

- The square root of  $121x^8y^6 - 81x^4y^8$  .....

a)                      b)                      c)                      d) a)

- The square root of  $289(a-b)^4(b-c)^6$  .....

a)  $17|(a-b)(b-c)|$   
b)  $17|(a-b)^2(b-c)^2|$                       c)  $17|(a-b)^2(b-c)^3|$                       d)  $17|(a-b)^4(b-c)^6|$

- Matrix  $A = [a_{ij}]_{m \times n}$  is a row matrix if .....

- a)  $m = n$                       b)  $n = 1$                       c)  $m = 1$                       d)  $a_{ij} = 0$
12. Matrix  $A = [a_{ij}]_{m \times n}$  is a column matrix if.....
- a)  $m = n$                       b)  $n = 1$                       c)  $m = 1$                       d)  $a_{ij} = 0$
13. Matrix  $A = [a_{ij}]_{m \times n}$  is a square matrix if.....
- a)  $m = n$                       b)  $n = 1$                       c)  $m = 1$                       d)  $a_{ij} = 0$
14.  $(\sin \theta + \cos \theta)^2 - (\sin \theta - \cos \theta)^2 = \dots\dots\dots$
- a) 1                                  b)  $4 \sin \theta \cos \theta$                       c) 0                                  d)  $2 \sin \theta \cos \theta$
15. If  $\sin \theta = \cos \theta$  then the value of ' $\theta$ ' is .....
- a)  $0^\circ$                                   b)  $30^\circ$                                   c)  $45^\circ$                                   d)  $60^\circ$
16.  $1 - \tan^2 45^\circ = \dots\dots\dots$  a) 0                      b) 1                      c) -1                      d)
17. If  $\tan \theta = \cot \theta$  then the value of  $\theta$  is .....
- a)  $0^\circ$                                   b)  $45^\circ$                                   c)  $60^\circ$                                   d)  $90^\circ$
18.  $\cos (90^\circ - \theta) = \dots\dots\dots$
- a)  $\sin \theta$                                   b)  $\tan \theta$                                   c)  $\cos \theta$                                   d)  $\operatorname{cosec} \theta$
19.  $\sec (90^\circ - \theta) = \dots\dots\dots$
- a)  $\sin \theta$                                   b)  $\tan \theta$                                   c)  $\cos \theta$                                   d)  $\operatorname{cosec} \theta$
20. The equation of a rectangular hyperbola is of the form .....
- a)  $xy = k$                                   b)  $x = c$                                   c)  $y = kx$                                   d)  $y = k$
21. The equation of x - axis is .....
- a)  $x = 0$                                   b)  $x = k$                                   c)  $y = 0$                                   d)  $y = k$
22. The equation of y - axis is .....
- a)  $x = 0$                                   b)  $x = k$                                   c)  $y = 0$                                   d)  $y = k$
23. The equation of a straight line parallel to y - axis is .....
- a)  $x = 0$                       b)  $y = 0$                       c)  $x = k$                       d)  $y = k$

24. The equation of a straight line parallel to x - axis is .....
- a)  $x = 0$                       b)  $y = 0$                       c)  $x = k$                       d)  $y = k$
25. The mid point of the line joining  $(3, 0)$  and  $(-1, 4)$  is .....
- a)  $(1, 2)$                       b)  $(2, 4)$                       c)  $(2, 1)$                       d)  $(2, 2)$
26. The value of  $3 + 6 + 9 + \dots\dots\dots + 60$ .
- a) 510                      b) 600                      c) 570                      d) 630
27. If  $2 + 4 + 6 + \dots\dots\dots + 2k = 90$  then the value of k is .....
- a) 8                      b) 10                      c) 9                      d) 11
28. If 2, x, 2 are in A.P then the common difference is .....
- a)                      b) - 1                      c) + 1                      d)
29. If  $\alpha + \beta = 14$  and  $\alpha - \beta = 2$  then  $\alpha\beta = \dots\dots\dots$
- a) 42                      b) 44                      c) 46                      d) 48
30. If  $x^2 + = 23$ ,  $x > 0$  then  $x +$  is .....
- a) 2                                  b) 3                                  c) 4                                  d) 5
31. The value of when  $x = 4$  is .....
- a) 3                                  b) -3                                  c) 6                                  d) -6
32. The centroid of a triangle is the origin. If  $(1, -2)$  and  $(-3, 5)$  are two vertices then the third vertex is .....
- a)  $(-2, 3)$                       b)  $(2, 3)$                       c)  $(-2, -3)$                       d)  $(2, -3)$
33. The slope of a straight line parallel to x - axis is .....
- a) 0                                  b) 1                                  c) -1                                  d) not defined

ANSWER KEY :

1. a) Euclid

2. c) Hipperchus
3. c) Al-khwarizmi
4. b)  $3x^2y^3z^2$
5. a)  $7xyz^2$
6. b)  $210a^3b^3c^3$
7. a)  $a^{m+3}$
8. d)  $3x$
9. a)
10. c)  $17|(a-b)^2(b-c)^3|$
11. b)  $m=1$
12. c)  $n=1$
13. a)  $m=n$
14. b)  $4\sin\theta\cos\theta$
15. c)  $45^\circ$
16. a) 0
17. b)  $45^\circ$
18. a)  $\sin\theta$
19. d)  $\operatorname{cosec}\theta$
20. a)  $xy=k$
21. b)  $y=0$

22. a)  $x=0$

23. c)  $x=k$

24. d)  $y=k$

25. a)  $(1, 2)$
26. d) 630
27. b)  $k=9$
28. c)  $+1$
29. c) 46
30. d) 5
31. c) 6
32. d)  $(2, -3)$
33. a) 0
34. c)  $-1/2$
35. c) 60
36. d)  $45^\circ$
37. a) 4 cm
38. b) 1
39. c)  $\sin\theta\cos\theta$
40. b) 1

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