MODEL QUESTION PAPER

GENERAL MATHEMATICS (CLASS X)

Total Time: 2 Hours   **(GENERAL GROUP)**   **Total Marks: 100**

SECTION "A" MULTIPLE CHOICE QUESTIONS

NOTE: (i) Attempt all the questions of this section.

(ii) Do not copy down the questions, write only the answer against the proper number of the question and its part according to the question paper.

(iii) Each question carries TWO Marks.

Q.1 Choose the best answer from the given options: (50 Marks)

i. $\sqrt{16} \times \sqrt{25} =$:

          * 36   * 20   * 18   * 15

ii.   x:6:: 10: 4, the value of x will be :

          * 8   * 10   * 15   * 12

iii.   The additive inverse of a+b is :

          * a-b   * b-a   * –(a+b)   * 1/ a+b

iv.   In base five system 9= ( )$_5$

          * 123   * 12   * 23   * 14

v.   Rate of Zakat is :

          * 40%   * 20%   * 2.5%   * 25%

vi.   Representation of statistical data classified from Row and Column is called

          * frequency   * Tabulation   * Class interval   * None of these

vii.   The order pair (0, -5) lies on:

          * 1 st quadrant   * 3 rd quadrant   * Negative y-axis   * Negative x-axis

viii.   In Decimal system $1023_5=$:

          * 138   * 128   * 123   * 148

ix. $3^0 \times 3^{-1} \times 3 =$

    * 0   * 1   * 27   * 9

x. $5.7 \times 10^7 =$

    * 57.0000   * 5.7000000   *5.700000   * 57000000.0

xi. $2(2y0)^2 =$

    * 6   * 8   * 12   * 8y2

xii. The order pair (-5, -5) lies on:

    * 1 st quadrant   * 2 nd quadrant   * 3 rd quadrant   * 4 th quadrant

xiii. The common logarithm has the base_____.

    *5   * e   * 10   * 0

xiv. If $\log_{10} 1000 = y$, then $y =$ _____.

    * 10   * 2   * 3   * 0

xv. {0, 1, 2, 3, ………}is the set of :

    * Prime No.   * Integers   * Whole No.   * Even No.

xvi. The set {1, 3, 5, 7, ……} is closed for:

    * Addition   * Multiplication   * Subtraction   * Division

xvii. In Tarka the share of widow is :

    • 1/6   *1/8   *1   *2

xviii. In the standard form 6874.321 =

    *6.874321×10^3 *68.74321×10^2 *687.4321×10 *0.6874321

xix) Representation of statistical data classified from Row and Column is called

    * frequency   * Tabulation   * Class interval   * None of these

XX. A line-segment whose end-points are two points of a circle is called:

    * Line   * Chord   * Tangent   * Secant

XXI. $(a+b)2 - (a - b)2 =$

* 4ab   * a^2-b^2 * a^2+b^2 * $2(a^2-b^2)$

xxii. Formula to find the area of the circle is :

* $2\pi r$ * $\pi r/2$ * $\pi r2$ * πr

xxiii. The straight line which touches the circle at one point is called :

* Secant   * Tangent   * Radius   * Chord

xxiv. The set of first three prime numbers is:

*{2, 3, 5}   * {1, 2, 3}   * {1, 3, 5}   * {1, 2, 7}

xxv. The characteristics of log 0.00396 is _____.

* $\bar{3}$ * 3   * $\bar{2}$ * 4
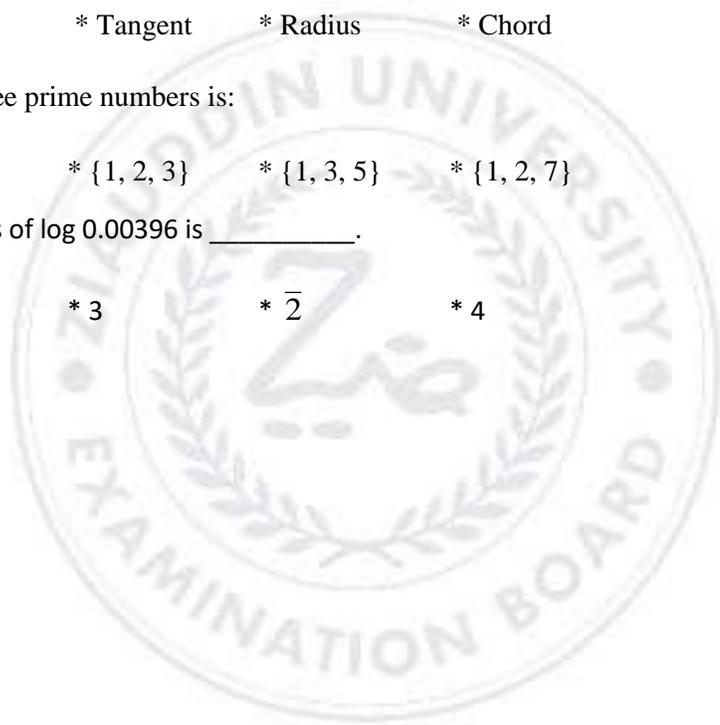
SECTION 'B' (SHORT ANSWER -QUESTIONS) (Marks: 30)

Note: Attempt any Nine (06) questions from this section. All questions carry equal marks

Q.2   If log10 2= 0.3010, log10 3= 0.4771, log10 5= 0.6990 then find the value of log10 30.

Q.3   400 persons had a food stock for 6 days .How many persons should leave so that the same food is sufficient for 8 days?

Q.4   Evaluate x + y - z when

$$x = 8l^5 - 3l^3 + 6l^2 - 1$$

$$y = 7l^4 - 8l^3 - 6l^5 + 2$$

$$z = -3l^5 - 2l^3 + 4l^4 + 8 - 2l^2$$

Q.5   Simplify $(x^3-64) \div (4x+x^2+16)$

Q.6   Find the continued product of

$(3a-4b)(9a^2 + 16b^2)(3a+4b)$

Q.7   Find the slope of the line segment CD while the coordinates of 'C' and 'D' are (5,1) and(2,6) respectively.

Q.8   In Arabic 8 students secured 48,16,10,45,12,36,5 and 35 marks , find their median.

Q.9   Factorize   (i) $3x^2 -30x-72$

(ii) $25x^4y^4-10x^2y^2+1$

Q.10   A circle of 6 cm radius. Find the length of a 600 arc of the circle and also the area of the sector of the same angle.

SECTION 'C' (DESCRIPTIVE ANSWER-QUESTIONS) (Marks: 20)

Note: Attempt any Two (02) questions from this section. All questions carry equal marks

Q.16. A man left behind him an inheritance (Tarka) worth Rs 30,000. Distribute the tarka among his four sons and three daughters such that each son gets twice as much as a daughter. The deceased dies leaving behind him a debt of Rs 8000.

Q.17. Find the solution set of the equations:

x+y= 4, 2x –y = 5

Q.18. Draw a circle of 4cm radius. Take a point P at a distance of 6cm from its center and draw two tangents to the circle from the point P. Write steps of construction.

Q.19. 8 masons can build a 10 meters long wall in 22 days. How many masons would be required to build a 165 meters long wall in 6 days?