**[Model Paper](http://www.result.pk)**

**[Mathematics (10](http://www.result.pk)[th](http://www.result.pk)[)](http://www.result.pk)**

**[Total Time: 3 Hours Max: Marks: 75](http://www.result.pk)**

**[Note:](http://www.result.pk)** **[There are THREE Sections of this Paper i.e. A.B and C, attempt each according to the given instructions.](http://www.result.pk)**

**[Time: 20 Minutes](http://www.result.pk)****[SECTION-A](http://www.result.pk)** **[Marks: 15](http://www.result.pk)**

**[Note:](http://www.result.pk)** [Attempt all parts of Section – A. Section –A must be return to the superintendent after](http://www.result.pk)

[20 minutes even if you have not attempted any question. Overwriting/ defacing/Cutting etc](http://www.result.pk)

[is prohibited in Section-A and no credit will be given to such answer.](http://www.result.pk)

**[I.                   Write the correct option i.e. A/B/C/D in the empty boxes.](http://www.result.pk)**

[i.           http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image001.gifThe sum of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image003.gif& the reciprocal of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image005.gif is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image007.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image009.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image011.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image013.gif](http://www.result.pk)

[ii.         The sum of the roots of a quadratic equation is 2 & the sum of cubes of the roots is](http://www.result.pk)

[98. The equation is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image016.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image018.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image020.gif(D) None of these](http://www.result.pk)

[iii.       The solution Set of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image022.gif is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) { 1 } (B) { 2 } (C) { -1, 2 } (D) { -1, 1 }](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gifiv. If a & b are the roots of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image024.gifthen the value of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image026.gifis \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image028.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image030.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image032.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image034.gif](http://www.result.pk)

[v.         http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image001.gifIf http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image036.gif then \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) m = kn (B) n = km (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image038.gif (D) mn = k](http://www.result.pk)

[vi.       The third proportion of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image040.gif & abc is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image042.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image044.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image046.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image048.gif](http://www.result.pk)

[vii.     http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image050.gif is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif](http://www.result.pk)

[(A) Proper fraction (B) Improper fraction (C)Irrational fraction(D) None of these](http://www.result.pk)

[viii.   If http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image052.gifthen A & B are \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Empty sets (B) Equal sets (C)Overlapping sets(D) Disjoint sets](http://www.result.pk)

[ix.       If R = { (a,2), (b,3), (c,3) } then Range R = \_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image053.gif](http://www.result.pk)

[(A) { 1, 2 } (B) { 2, 3 } (C) { a,b,c } (D) { a,c }](http://www.result.pk)

[x.         The average pocket money of 30 students is Rs. 20/- the total amount in the class is](http://www.result.pk)

[\_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif](http://www.result.pk)

[(A) Rs. 20/- (B) Rs. 30/- (C) Rs. 300/- (D) Rs. 600/-](http://www.result.pk)

[xi.       http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image055.gif = \_\_\_\_\_\_\_\_\_\_\_\_\_\_ radians.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image057.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image059.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image061.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image063.gif](http://www.result.pk)

[xii.     http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image065.gif = \_\_\_\_\_\_\_\_\_\_\_\_\_\_.http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gif](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image067.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image069.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image071.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image073.gif](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image053.gifxiii. The distance of the centre from any point of the circle is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) Secant (B) Diameter (C) Tangent (D) Radius](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image014.gifxiv. From a point at a distance of 5cm from the centre of the circle of radius 3cm, tangents](http://www.result.pk)

[are drawn to the circle. The length of each tangent will be \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) 3cm (B) 5cm (C) 4cm (D) 6cm](http://www.result.pk)

[http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image053.gifxv. The central angle of a minor arc of circle is http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image075.gif, the angle subtended by the](http://www.result.pk)

[corresponding major arc is of measure \_\_\_\_\_\_\_\_\_\_\_\_\_\_.](http://www.result.pk)

[(A) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image077.gif (B) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image079.gif (C) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image081.gif (D) http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image083.gif](http://www.result.pk)

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**[Note:](http://www.result.pk)****[Time allowed for section B and C is 2 hours and 40 minutes.](http://www.result.pk)**

**[SECTION “B” Marks: 36](http://www.result.pk)**

[II.                Attempt any NINE Parts out of the following. Each Part carries equal marks.](http://www.result.pk)

[i. Solve, http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image085.gif](http://www.result.pk)

[ii. Solve. http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image087.gif](http://www.result.pk)

[iii. Evaluate, http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image089.gif](http://www.result.pk)

[iv. If http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image091.gif are the roots of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image093.gif find k such that http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image095.gif](http://www.result.pk)

[v. The sum of two numbers is 11 & sum of their square is 65. Find the numbers.](http://www.result.pk)

[vi. Solve, http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image097.gif](http://www.result.pk)

[vii. Find the mean proportional of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image099.gif & http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image101.gif](http://www.result.pk)

[viii. If U = { 1, 2, 3, ………, 10}](http://www.result.pk)

[A = { 2, 4, 6, 8, 10 }](http://www.result.pk)

[B = { 1, 3, 5, 7, 9 } Then verify http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image103.gif](http://www.result.pk)

[ix. Calculate the standard deviation of the following data.](http://www.result.pk)

[Weight of apples (g): 75 85 95 105](http://www.result.pk)

[Frequency (f): 50 75 72 43](http://www.result.pk)

[x. Prove, http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image105.gif](http://www.result.pk)

[xi. Find the angle of elevation when a 6m high bamboot makes a shadow of length http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image107.gif](http://www.result.pk)

[xii. Find partial fractions of http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image109.gif](http://www.result.pk)

**[SECTION “C” Marks: 24](http://www.result.pk)**

**[Note: Attempt any THREE questions of the following. Each question carries equal Marks.](http://www.result.pk)**

**[III.](http://www.result.pk)** [A straight line, drawn from the centre of a circle to bisect a chord (which is not a diameter) is](http://www.result.pk)

[perpendicular to the chord.](http://www.result.pk)

**[IV.](http://www.result.pk)** [If two circles touch externally, the distance between their centres is equal to the sum of their radii .](http://www.result.pk)

**[V.](http://www.result.pk)** [Construct a triangle ABC such that http://www.bisess.edu.pk/model_papers_ssc/MATH_files/image111.gifDraw circum](http://www.result.pk)

[circle to this triangle.](http://www.result.pk)

**[VI.](http://www.result.pk)** [Radii of two circles are 2cm & 3cm & their centres are 8cm apart. Draw direct common tangents](http://www.result.pk)

[to the circles.](http://www.result.pk)