**Balochistan Board of Intermediate and Secondary Education, Quetta**

Model Paper for SSC Examination 2017 and Onwards

Subject: Mathematics Total Marks = 75 Class 9th

**NOTE: Part – I is compulsory, solve five questions from part – II and two questions from part – III. Rubbing/Cutting and use of lead pencil is not allowed.**

**PART – I**

Q. No. 1: Choose the correct answer (Rubbing/Cutting is not allowed) (12x1=12)

1. If A=$\left[\begin{matrix}2&3\\5&7\end{matrix}\right]$ then │A│ = \_\_\_\_\_\_\_\_\_\_\_

* 1. 1 b. -1 c. 29 d. 11
1. (-4,-5) lies in \_\_\_\_\_\_\_\_\_\_\_\_ quadrant.
	1. II b. III c. IV d. I
2. (-4/2) = \_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 6 b. 8 c. 16 d. -16
3. If log3x=5 then x=\_\_\_\_\_\_\_\_\_\_\_\_
	1. 256 b. 216 c. 15 d. 243
4. Loga –logb = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Log a/b b. log b/a c. log axb d. a/b
5. (a+b)(a-b)=\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. A2 + b2 b. a2-b2 c. a2 +b2 +2ab d. a2 +b2 -2ab
6. What should be added to x4 + 9 to make a perfect square
	1. -6x2 b. 6x3 c. 6x d.12x2
7. If x+6=3 then x = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 3 b. 9 c. -3 d. 18
8. Any closed figure having three sides is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Rohmbus b. Square c. Triangle d. Rectangle
9. In parallelogram none of the angle is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 60˚ b. 180 ˚ c. 90˚ d. 360˚
10. The sum of angles in a quadrilateral is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 180˚ b. 270˚ c.340˚ d. 360˚
11. If 3cm and 5cm are two sides of a right angled triangle, then hypotenuse
	1. 8cm b. 15cm c. 28cm d. 34cm

Q 2: Give short answers of the following (any eight) (8x3=24)

 Note: Each part carry equal marks

1. If hypotenuse of a triangle is 2 cm and Base is 3cm then find the value of perpendicular
2. If the length of a rectangle is 12cm and width is 6cm then find the area.
3. Define circumcentre of a triangle and orthocenter of a triangle.
4. If $\sqrt{x-1}$ = $\sqrt{5}$ then find ‘x’
5. If x2 – 1 and x6 – 1, find H.C.F
6. Factorize the x2 + 6x – 5
7. What do you meant by remainder theorem?
8. Rationalize the denominator of 7­­\_\_\_\_

 $\sqrt{2}$ - $\sqrt{5}$

1. What is surds? Who adopted it.
2. If a + b=4 , a – b= 3 find a2+b2
3. Find the number of digits in 4/5
4. What is the value of c7

**PART – II**

NOTE: Solve any five questions from the following (5x5=25)

Q 1: Use Matrix inversion method to solve the simultaneous equation

 4x + 3y = 6

 X – 2y= 7

Q 2: Multiply Z1= 3 + 2c and Z2 = 5 + 7c

Q 3: Find the value of x

 If log2781 = x/3

Q 4: Find the difference

 \_ 2x - 3\_ - \_ x - 2\_

 9x – 6 6x – 4

Q 5: If 1/x = $\sqrt{10}$ + 2 , find x+1/x and x – 1/x

Q 6: The remainder of 3x2 – Px – 7 is 3 when it is divided by x – 2. Find the value of P.

Q 7: Find the square root of x4 – 2x3 + 3x2 – 2x + 1 by division method

Q 8: Solve the absolute value equation

 4x – 2 = 6x + 3

 5 2

Q 9: Find the distance between P(1.5,-4.5) and Q(-2.5,3.5)

**PART – III**

**NOTE: Attempt any two** (7x2=14)

Q 1: If two angles of a triangle are congruent then the sides opposite to them are also congruent.

Q 2: Construct a ∆ABC such that m B=85˚, m A= 35˚ and mAB = 8cm

Q 3: If a line segment intersects the two sides of a triangle in the same ratio then it is parallel to the third side.

Q 4: Constructing a rectangle equal in area to a given triangle