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

Model Paper for SSC Examination 2017 and Onwards

Subject: Mathematics Total Marks = 75 Class 10th

**PART – I**

NOTE: Part – I is compulsory, solve any eight questions from Part – II and three questions from Part – III. Rubbing, Cutting and use of lead pencil is not allowed.

Part - I

Q 1: Choose the correct answer (12x1=12)

1. Degree of quadratic equation is
	1. 2 b. 3 c. 1 d. -2
2. i3 = \_\_\_\_\_\_\_\_\_\_\_\_
	1. -1 b. 1 c.+1 d. - √1
3. If a= 3 , b=4 then a2+b2+2ab=
	1. 25 b. 34 c. 49 d. 94
4. The continued proportion in 16,x and 4 are
	1. 16 b.-8 c. +8 d. 8
5. x3+2x+3 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 x+ 2

* 1. Mixed friction b. Proper friction c. Improper friction d. Real Numbers
1. If A= { 1,3,5 } and B= { 1,4,6 } then A – B = \_\_\_\_\_\_\_\_\_\_\_\_
	1. φ b. { 1,3,5 } c. { 2,4,6 } d. { 1,2,3,4,5,6 }
2. If Xm = 88, Xo = 16 then R=\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 72 b. 62 c. 104 d. 34
3. If Ʃ x= 144 , n=12 then X = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. 14 b. 12 c. 156 d.16
4. The most occurring value in a set of data is called
	1. Mean b. Medium c. Mode d. Harmonic Mean
5. The 60th part of one degree is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Degree b. Minute c. Second d. Sector
6. TanƟ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. SinƟ b. CosƟ c. 1 – Cosec2Ɵ d. 1+ cot2Ɵ

CosƟ SinƟ

1. A circle has only one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	1. Secant b. Chord c. Diameter d. Centre

Q 2: Answer the following questions (Any Eight) (8x3=24)

1. X2 = 5x
2. Without solving the equation write the cube roots of 8, 27 and 216.
3. Give the example of symmetric function from daily life.
4. Define the Joint variation.
5. What is Variation, write the kinds of variation.
6. Can you decompose an improper fraction into partial fraction? If not why?
7. If A= { a,b,c,d } and B= { c,d,e,f } then find A∩B = ?
8. Who is Jan Venn? Write his contribution in Mathematics?
9. If Xm= 1520 and Xo = 1370 find the value of R= ?
10. IF X= 425 and n= 10, Ʃx=?
11. Convert the following into decimal 1736
12. Define the angle of Elevation.

**PART – II**

Solve any five questions

Q 1: Factorize the following

 X2 – 11x + 24

Q 2: Solve the equation

 $\sqrt{3}$x +4 = 2x + 1

Q 3: The sum of square of two consecutive odd integers is 34. Find the integers.

Q 4: If x varies directly as y and x=9 when y=15 find

Q 5: Resolve into partial fractions

 3x + 8\_\_\_

 (x + 2)(x - 3)

Q 6: If R= {(x,y)│x,y є N ^ x + y =4} then find Domain and Range of R.

Q 7: Find the standard deviation of the data 15,21,18,24,20,16 by direct method.

Q 8: Prove that

 Tan2Ɵ – sin2Ɵ = tan2Ɵ · Sin2Ɵ

**PART – III**

Solve any two questions of the following

Q 1: In ΔABC a=6cm, b=8cm and c=10cm find m A.

Q 2: Two chords of a circle which are equidistance from the centre are congruent.

Q 3: Any two angles in the same segment of a circle are equal.

Q 4: Draw a tangent to a circle with radius 3.5 cm at point (p). if (p) lies on the circumference.