**AFSS CENTRAL EVALUATION SYSTEM**

Central Assessment Team (CAT), HO Islamabad

**Final Term/ Annual Examination 2016 – 2017**

**Mathematics - Class VII**

**100 marks 3 hours**

**INFORMATION FOR STUDENTS**

Marks are given against each question or part of question.

Write your name, roll number and date in the spaces provided below.

|  |  |
| --- | --- |
| Student’s Name:  | Roll No: |
| Center’s Name: | Date: |
|  | Day: |
| Invigilator’s Name: | Sign: |
| Marks Obtained:  | Remarks: |
| Examiner’s Name:Date: | Sign :Day: |

***OBJECTIVE-40(marks)***

**Q No1:Fill in the blanks. 10**

i) The measure of the quantity of surface occupied by a figure is known as its \_\_\_\_\_\_\_\_\_\_\_\_.

ii) Volume of a rectangular solid = length x \_\_\_\_\_\_\_\_\_ x height.

iii) The distance all around a shape is called its \_\_\_\_\_\_\_\_\_.

iv) A \_\_\_\_\_\_\_\_\_\_\_ is a quadrilateral in which the opposite sides are parallel.

v) Any one of the corresponding pair of parallel sides of parallelogram is called

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-.

vi) A chord that passes through the Centre of the circle is called \_\_\_\_\_\_\_\_\_\_\_.

vii) 10x + 6 = 4, this algebraic statement is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

viii) The square of (4a+1) is equal to \_\_\_\_\_\_\_\_\_\_\_­­­­­­\_\_\_\_.

ix) (a2 – b2) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

x) In 42, 4 is called \_\_\_\_\_\_\_\_\_\_\_ and small raised number is called exponent.

**Q No2:Write ‘T’ for true or ‘F’ for false statement . 5**

i) A circle is a parallelogram. \_\_\_\_\_\_

ii) $\frac{x^{7}}{x^{4}}$ = $x^{3}$ \_\_\_\_\_\_

iii) xm × xn = xm+n ­­­­­­­­­­­­­\_\_\_\_\_\_

iv) Zero is a odd number. \_\_\_\_\_\_

v) All integers are real numbers. \_\_\_\_\_\_

**Q No3:Match the column A with Column B. 5**

|  |  |
| --- | --- |
| **Column A** | **Column B** |
| Volume of a cube | $\frac{1}{2}$ × (sum of the parallel sides) x altitude. |
| Area of rectangle | $\frac{1}{2}$ (b × h) |
| Area of triangle | *6l* 2 |
| Surface area of the cube  | *l* × b |
| Area of a Trapezium | *l* × *l* × *l=l3* |

**Q. No. 3: Choose the best answer. 10**

i) $\sqrt{10 }$is a

 a) rational no (b) irrational no (c) none of them

ii) Sum of $+\frac{3}{5}$ and $-\frac{3}{5}$ is equal to

 a) $\frac{2}{5}$ (b) $\frac{1}{5}$ (c) 0

iii) 24 = \_\_\_\_\_\_\_\_\_\_\_\_

 a) *2* (b) $1$ (c) 16

iv) (a +b)2 = \_\_\_\_\_\_\_\_\_\_\_\_

 a) a2 + b2 + 2ab (b) a2 + b2 - 2ab (c) none of these

v) The sum of three consecutive multiples of 9 is 81.The least of them is

 a) 36 b) 27 c) 9 d) 18

vi) If m + $\frac{1}{m}$ = 2 then the value of m - $\frac{1}{m}$ is

 a) $2$ b) 4 c) 1 d) 0

vii) If 2x - 10 = 6 then the value of x is equal to

 a) 5 (b) 8 (c) 4 (d) 2

viii) An acute angle is less than

 a) 90O (b) 180 O (c) 360 O

ix) If A = {2,4,6,8}, B = {1,3,5,7} then A U B is:

 a) {1,2,3,4,5,6,7,8} (b) {1,2,3} (c) {1,2}

x) (2-4)2 = \_\_\_\_\_\_\_\_\_\_

 a) 25 (b) 2-8 (c) 210

**Q No4:Solve any 5 of the following short questions. 5 x 2 = 10**

i) Expand (1 +m-3n)2.

ii) Evaluate with the help of formulae 994 x 994

iii) Solve the equation .3(x + 4) + 5(x + 3) = 2x - 27

iv) Resolve into factors x4+ x2+1.

v) Find the square of 2q2 +3q2

vi) Multiply (4a +5)(4a-5)

vii) Simplify $\frac{-18x^{3}y^{5}}{12xy2}$

***SUBJECTIVE-60***

**Solve any five of the following questions. 5 x 12 = 60**

 **Q No1(a):**Simplify $\frac{a^{2 }-ab}{a}+\frac{b^{2 }-bc}{b}+\frac{c^{2 }-ca}{c}$.

 **(b):**The difference between three-fourths and three-fifths of a number is

 9.Determine the number.

 **Q No2(a):**Construct the triangle ABC with BC = 4cm, CA=5cm and

∠ABC = 60O.

 **(b):**Draw ΔABC with BC = 6cm, CA = 12cm, AB = 13cm and verify the

Pythagoras theorem.

 **Q No3(a):**Find the greatest common factors of ab2(a+b)2, a2b(a2-b2), a2b2(a+b).

 **(b):**The dimensions of a room are (3x+1), (2x-1) and (x+3) units

 respectively, Determine the area of the floor and the volume.

 **Q No4(a):**The length of the of the triangle is twice its breadth. Find its perimeter

if its length is 12cm.

 **(b):**Multiply (x2-5x-6) and (x-4).

 **Q No5(a):**Find the greatest common factors of (ab)(a – b) ,a2 (a – b) , b2 (a – b)2

 **(b):**Resolve x4 + x2 + 1 into factors.

 **Q No6(a):** Find the area of a rhombus is 54cm2 and its perimeter is 36cm.Find its

 altitude.

 **(b):** If a -$\frac{1}{a}=2$, then find the value of a4+ $\frac{1}{a4}$ .

**Q No7(a):** Show that -$\frac{2}{3}(\frac{4}{5}+\frac{-8}{15}$ ) =( $\frac{-2}{3}$ x$\frac{4}{5})+(\frac{-2}{3}$ x $\frac{-8}{15})$ .

 **(b):** If A = {0,3,6,9}, B = {1,3,5,7} then find (i) A $/$ B (ii) B $/$ A