**AFSS CENTRAL EVALUATION SYSTEM**

Central Assessment Team (CAT), HO Islamabad

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

**MATHEMATICS - Class VIII**

**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:Circle the the best answer. 20**

i) The difference between the maximum and minimum values is known as \_\_\_\_\_\_\_\_\_ of the data.

1. Class mark b) Range c) Average

ii) The number of items falling in any class interval is called the:

 a) Frequency distribution (b) class-mark (c) class-limits

iii) Hero’s formula of Area of the triangle = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. √ s(s-a)(s-b)(s-c) b) s= c)

iv) Volume of a sphere of radius r is:

 a) 4πr3 (b) πr3 (c) πr2

v) Dividend= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 a) Quotient× Divisor+ Remainder b) Quotient× Divisor ⌐ Remainder c) Quotient- Divisor+ Remainder

vi) If =

 a) ad = bc (b) ac = bd (c) both a & b

vii) (*a*+ b)3 is equal to

 a) a3 + b3+3ab(a+b) b) a3 - b3-3ab(a-b) c) (a-b)(a+b)

viii) In the expression 26=64, 64 is called \_\_\_\_\_\_\_\_\_\_ .

 a)Base b)Exponent c)sixth power of the base 2

ix) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 a) 4 (b) 16 (c) 8

x) is a

 a) rational No (b) irrational No (c) integer

xi) is equal to

 a) (b) (c) m × n

xii) The square root of 144 is

 a) 16 (b) 14 (c) 12

xiii) Perimeter of the rectangle is

1. 2(l+b) b) (l+b) c) 2(l-b) d) ½ (l+b)

xiv) Area of the trapezium = \_\_\_\_\_\_\_\_\_\_\_\_.

1. ( a+ b)h b) 2(a+b) c) 4ab

xv) What is the circumference of the circles with radius 7cm?

1. 24cm b) 7cm c) 22cm d) 44cm

xvi) The range between 200 & 100 is:

 a) 200 (b) 100 (c) 80

xvii) If 2a – 3 = 3 then value of a is

 a) 2 (b) 3 (c) 3

xviii) The mean value of 10,20,30 and 40 is \_\_\_\_\_\_\_\_\_\_\_\_.

 a) 40 b) 100 c)25 d) 16

xix) (a2 -2ab + b2) ÷ (a - b)

 a) (a + b)2 (b) (c) (a - b)

*xx)* [5a3]2 = \_\_\_\_\_\_\_\_\_\_

 a) 5a3  (b) 25a6 (c) 1

**Q No2:Solve any 10 of the following short questions. 10 x 2 = 20**

i) Simplify

ii) If x = -1, then find the value of 81

iii) Find the cube of (p2-q2-r2).

iv) The class-marks of the distribution are 5,11,17,23 and 29.Find the

 class- intervals and the class size.

iv) Factorize +1

v) The perimeter of a square is 48m. Find its area.

vi) Find the radius of the circle with an area of 616 cm2.

vii) Solve the equation.

viii) Reduce to its the lowest term.

ix) Divide by .

x) Find the positive square root of the 225.

xi) Draw a line segment of length 5cm.Divide it into 4 equal parts.

xii) Add the following binary number (1011)2 ÷ (111) 2

xiii) If U={1,2,3,4,5,6} ,A = {2,4,6,8}, B={6,7} find (A U B)

xiv) Find the cost of 200 shares of Rs.25 each at premium.

***SUBJECTIVE-60(marks)***

**Solve any five questions of the following.**  **12x5 = 60**

**Q No1(a):** Use Hero’s formula to calculate the area of triangle whose sides are

 AB = 225m, BC = 125m, AC = 165m

 **(b):**A father is twice as old as his son.20 years before , the father was four times as old as his son. Find their present ages.

**Q No2(a):**Calculate the area of the circular ring, whose internal and external radii are 3cm and 10cm respectively.

 **(b):**Determine the mean of the first eight odd, natural numbers.

**Q No3(a):**Reduced it to its lowest form.

 **(b):** If P= 2q+4, Show that p3-8q3-24pq=64

**Q No4(a):**A number increased by unity is equal to twice the number decreased

by2.

 **(b):**Find the continued product of (a – b)(a2 + ab + b2)(a3 + b3)

**Q No5(a):**Evaluate (a3 - b3) when (a- b) = 2 and a2 + b2 = 4

 **(b):**Resolve into factors 12-12

**Q No6(a):** Simplify

 **(b):**

**Q No7(a):**Find the positive square root of 341.1409 .

 **(b):**Find the power set of the set{a,b,c,d}