**AFSS CENTRAL EVALUATION SYSTEM**

Central Assessment Team (CAT), HO Islamabad

**2nd MidTerm Examination 2016 – 17**

**MATHEMATICS - Class VIII**

**50 marks 2 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.

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

***OBJECTIVE-20(marks)***

**Q No1(a):Tick (✓) at the correct answer. 5**

i. Area of the rectangle = \_\_\_\_\_\_\_\_\_\_.

a) length x breadth b) base x height c) (area of the base) x height

ii. Volume of the right circular cylinder = \_\_\_\_\_\_\_\_\_.

1. b) c) 2

iii. A tangent to the circle is a line which meets the circle at only\_\_\_\_\_\_ point.

a) two b) one c) six

iv. *a*2 - b2 = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a) (a + b)(a2-ab+b2) b) (a-b)(a2+ab+b2) c) (a-b)(a+b)

iv) The line about which a figure is symmetric, is known as the \_\_\_\_\_\_\_\_\_\_\_.

a) axis of symmetry b) point symmetry c) tangent

v) Circumference of the circle is \_\_\_\_\_\_\_.

a) 2 b) 4 c) 2

**Q No2:Solve any five of the following short questions. 3×5=15**

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i) Reduce to its lowest term.

ii) Factorize: a3+27

iii) Find the products of (a-2)(a2+2a+4)

iv) Find the circumference of the circle with radius 2.

v). Find the area of the circle of radius 42cm.

vi. Draw a circle of radius 2.5c

***SUBJECTIVE – 30(marks)***

**Solve any three of the following questions. 3×10=30**

**Q No1(a):**Use hero’s formula to calculate the area of triangle whose sides have the following lengths.

AB= 225m, BC= 125m, AC= 160m

**b):**Find the volume of a right, circular cylinder when the circumference of its circular base is 44cm and its height is 10cm.

**Q No 2(a):** Simplify the following algebraic expression.

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**b):** Solve the equation + =

**Q No 3(a):**A father is twice as old as his son. 20 years before, the father was 4 times as old as his son. Find their percentage.

**b):**If a+b =7, ab = 12 find the value of a3+b3+4ab(a+b).

**Q No 4(a):**Construct a rectangle ABCD with adjacent sides of length 3cm and 4cm. Measure its diagonal AC. Verify that AB2 + BC2 =AC2

**b):**Draw a trapezium ABCD in which AB CD, B = 6cm, BC=4.5cm

AD= 6cm and <B = 600