

# ATOMIC ENERGY CENTRAL SCHOOL NO. 3

## RAWATBHATA

### CLASS 08 - MATHEMATICS

#### Post mid term

Time Allowed: 1 hour and 30 minutes

Maximum Marks: 40

#### Section A

1. A football team won 10 matches out of the total number of matches they played. If their win percentage was 40, then how many matches did they play in all? [1]  
a) 30  
b) 20  
c) 25 matches  
d) None of these
2. The shape of the top surface of a table is a trapezium. Find its area, if its parallel sides are 1 m and 1.2 m and perpendicular distance between them is 0.8 m. [1]
3. Given a cylindrical tank, in which situations will you find surface area and in which situations volume. [1]  
(a) To find how much it can hold.  
(b) Number of cement bags required to plaster it.
4. Find the value of  $(\frac{3}{2}m + \frac{2}{3}n)(\frac{3}{2}m - \frac{2}{3}n)$  using identity. [1]

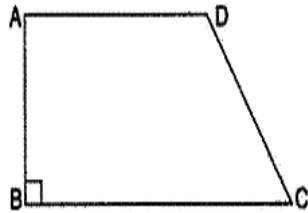
#### Section B

5. Using identity  $a^2 - b^2 = (a + b)(a - b)$ , find  $(1.02)^2 - (0.98)^2$ . [2]  
a) 0.04  
b) 0.08  
c) 0.02  
d) 0.06
6. Find selling price (S.P.) if a profit of 5% is made on a fan bought for Rs 560 and expenses of Rs 40 made on its repairs. [2]  
a) ₹540  
b) ₹500  
c) ₹630  
d) ₹600
7. The curved surface area of a cone is  $3815.10 \text{ mm}^2$  and the radius of the base of the cone is 27 mm. What is its height? [2]  
a) 34 mm  
b) 38 mm  
c) 30 mm  
d) 35.93 mm
8.  $5x \times 4x^2 = ?$  [2]  
a)  $20x^3$   
b)  $20x^2$   
c)  $20x$   
d) 20

#### Section C

9. The price of a TV is Rs. 13000. The sales tax charged on it is at the rate of 12%. Find the amount that Vinod will have to pay if he buys it. [3]
10. Length of the fence of a trapezium-shaped field ABCD is 120 m. If  $BC = 48 \text{ m}$ ,  $CD = 17 \text{ m}$  and  $AD$  [3]

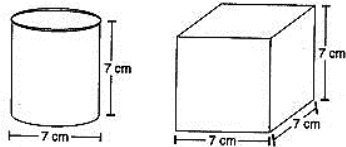
= 40 m, find the area of this field. Side AB is perpendicular to the parallel sides AD and BC.



11. Solve  $25 = \frac{1}{4}n - 3$  [3]
12. A TV was bought at a price of ₹21,000. After one year the value of the TV was depreciated by 5% (Depreciation means reduction of value due to use and age of the item). Find the value of the TV after one year. [3]

#### Section D

13. Describe how the two given figures are alike and how they are different. Which box has larger lateral surface area? [4]



14. The population of a city was 20,000 in the year 1997. It increased at the rate of 5% p.a. Find the population at the end of the year 2000. [4]
15. Simplify:  $(a + b)(2a - 3b + c) - (2a - 3b)c$  [4]
16. A rectangular piece of paper of dimensions 22cm by 10cm is rolled along its length to form a cylinder. Find the volume of cylinder formed. [4]