

# The Brigade School-Unit Test:1 (2020-21)

Total points 12/15 ?

Mathematics

Std: 10

Max.Marks: 15

Email address \*

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0 of 0 points

Name of the Student: \*

Manan Y Mehta ▼

Class / Sec : \*

10 A ▼

Name of the School : \*

TBSG ▼

Choose the correct Answer for the Following

12 of 15 points

Each Question Carries 1 mark



✓ 1) If  $x = \frac{2}{3}$  is a solution of the equation  $3x^2 - kx - 4 = 0$ , then the value of  $\frac{1}{k}$  is \*

☐ + 4

☒ - 4



☐  $\frac{3}{4}$

✓ 2) If the  $n$ th term of an A.P. is  $(13 - 4n)$ , then the sum of first 20 terms of the A.P. is \*

☐ 580

☒ -580



☐ -1160

✓ 3) Renu deposited ₹ 200 per month in a R D account. If the rate interest is 10 % p.a., then the Interest she earned in 2 years is \*

☐ ₹ 5

☐ ₹ 250

☒ ₹ 500



✗ 4) If the roots of a quadratic equation are real and distinct, then the discriminant is \* 0/1

☐ > 0

☒ < 0

☐ = 0

✗

Correct answer

☒ > 0

Feedback

$b^2 - 4ac > 0$ , then roots are real and distinct

✗ 5) Volume of a cone of base diameter 14 cm is 1232 [cu.cm](#), its slant height is \* 0/1

☐ 28 cm

☒ 24 cm

☐ 25 cm

✗

Correct answer

☒ 25 cm

Feedback

$V = \frac{1}{3}\pi r^2 h$   
 $1232 = \frac{1}{3} \times \left(\frac{22}{7}\right) \times 7 \times 7 \times h$   
 $\therefore h = 24 \text{ cm}$   
 $l = \sqrt{h^2 + r^2}$   
 $l = \sqrt{24^2 + 7^2}$   
 $l = 25 \text{ cm}$



✓ 6) The roots of the equation  $x^2 = 5x$  are / is \*

1/1

- ☐ 0
- ☐ 5
- ☒ 0 or 5



✓ 7) Arjun deposits ₹ 75 per month in a cumulative deposit account. He gets ₹ 3116.25 after 3 years as the maturity value. The interest paid by the bank is \*

1/1

- ☒ ₹ 416.25
- ☐ ₹ 614.25
- ☐ ₹ 2700



✓ 8) The altitude of a right triangle is 7 cm less than its base. If the third side is 13 cm, then the length of the sides are \*

1/1

- ☐ 8, 15 and 17
- ☒ 5, 12 and 13
- ☐ 13, 84 and 85



✓ 9) If  $(p + 1)$ ,  $(5p - 2)$  and  $(6p + 1)$  are the three consecutive terms of an A.P., then  $p$  is \*

1/1

☐ 0☒ 2☐ 1

✓ 10) Curved surface area of a cylinder of base perimeter 88 cm and height 6 cm is \*

1/1

☐ 264 sq. cm☒ 528 sq. cm☐ 616 sq. cm

✓ 11) Which term of the A.P. 21, 18, 15, ..... is 0 \*

1/1

☐ 10th term☒ 8th term☐ 9th term

✓ 12) Volume of a cylinder of height 8 cm is 308 cu.cm. What is the diameter of its base? \*

1/1

- ☐ 7/2 cm
- ☒ 7 cm
- ☐ 14 cm



✓ 13) The discriminant of the quadratic equation  $3x^2 + 5x - 9$  is \*

1/1

- ☒ 133
- ☐  $\sqrt{133}$
- ☐ - 83



✓ 14) If the 10th term of an A.P. is 38 and its 16th term is 74, then the A.P. is \*1/1

- ☐ -6, 0, 6, .....
- ☒ -16, -10, -4, .....
- ☐ 16, 10, 4, .....



✗ 15) Total surface area of a hemisphere is 462 sq. cm, its volume is \*

0/1

- ☐ 718.67 cu. cm
- ☒ 1437.67 cu cm
- ☐ 735.67 cu. cm

✗

Correct answer

- ☒ 718.67 cu. cm

Feedback

$$3\pi r^2 = 462$$

$$3 \times \frac{22}{7} \times r^2 = 462$$

$$r^2 = 49$$

$$\therefore r = 7$$

$$V = \frac{2}{3}\pi r^3$$

$$= \frac{2}{3} \times \frac{22}{7} \times 7 \times 7 \times 7$$

$$= 2156 / 3 = 718.6666.....$$

$$V = 718.67 \text{ cu. cm}$$

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