

### APTITUDE

1. First pipe can fill a tank in 12 hours. Second pipe can fill the same tank in 6 hours. Third pipe in 4 hours. How long will it take to fill the tank if all the 3 pipes are opened simultaneously?  
**(A) 2 hrs.** (B) 3 hrs.  
 (C) 4 hrs. (D) 12 hrs.
2. If  $x^2 + 4y^2 = 4xy$ , then  $x : y$  is  
**(A) 2 : 1** (B) 1 : 2  
 (C) 1 : 1 (D) 1 : 4
3. Find out the odd number in the series given  
 25, 36, 49, 81, 121, 169, 225  
**(A) 36** (B) 49  
 (C) 169 (D) 225
4. A can do a certain job in 12 days. B is 60% more efficient than A. How many days does B alone take to do the same job?  
 (A) 6 days **(B) 7 ½ days**  
 (C) 8 days (D) 8 ½ days
5. If  $a : b = 6 : 7$  and  $b : c = 8 : 9$  then  $a : c$  is equal to?  
**(A) 16 : 21** (B) 6 : 9  
 (C) 27 : 28 (D) 1 : 2
6. Mean of 25 observations was found to be 78.4. But later it was found that 96 was mis-read as 69. Then the corrected mean is  
**(A) 79.48** (B) 76.54  
**(C) 81.32** (D) 78.4
7. Find the next alphabet in the sequence B, E, I, N,?  
**(A) U** (B) V  
**(C) T** (D) S
8. A sum of Rs. 1,550 was lent partly at 5% and partly at 8% per annum at simple interest. The total interest received after 3 years was Rs. 300. The ratio of the money lent at 5% to that lent at 8% is  
**(A) 5 : 8** (B) 8 : 5  
**(C) 16 : 15** (D) 31 : 6
9. A sum of Rs. 800 amounts to Rs. 920 in 3 years at a simple interest. If the interest rate is increased by 3%. What would Rs. 800 amount to?  
 (A) 950 (B) 970  
**(C) 992** (D) 1000
10. A sum of Rs. 53 is divided among ABC in such a way that A gets Rs. 7 more than what B gets and B gets Rs. 8 more than what C gets. The ratio of their share is  
 (A) 16 : 9 : 18 **(B) 25 : 18 : 10**  
 (C) 18 : 25 : 10 (D) 15 : 8 : 30
11. A cone, a hemisphere and a cylinder stand on equal bases and have the same height. Find the ratio of their volumes  
 (A) 3 : 2 : 1 **(B) 1 : 2 : 3**  
 (C) 3 : 1 : 2 (D) 1 : 3 : 2
12. If  $\sqrt{784 + x} = 78\%$  of 500, then the value of  $x$  is  
 (A) 342 (B) 352  
**(C) 362** (D) 372
13. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case  
**(A) 4** (B) 7  
 (C) 9 (D) 13
14. Find the missing letters in the series AZ, GT, MN, ??, YB  
**(A) JH** **(B) SH**  
**(C) SK** **(D) TS**
15. At what rate of compound interest per annum will a sum of Rs. 1,200 become Rs. 1348.32 in 2 years  
**(A) 6%** (B) 6.5% (C) 7% (D) 7.5%

# TNPSC – GROUP 2A

## GENERAL STUDIES - 2016 (ENGLISH)

16. Seven men working 9 hours a day can do a piece of work in 30 days. In how many days will 10 men working for 7 hours a day do the same work?  
 (A) 28 days (B) 30 days  
 (C) 32 days (D) 27 days
17. If  $5 \oplus 3 = 34$  and  $6 \oplus 2 = 40$  then, the value of  $7 \oplus 1$  is  
 (A) 54 (B) 34  
 (C) 50 (D) 30
18. How much time will it take for an amount ₹2,000 to double at a simple interest rate 8%  
 (A)  $25\frac{1}{2}$  years  
 (B)  $10\frac{1}{2}$  years  
 (C)  $8\frac{1}{2}$  years  
 (D)  $12\frac{1}{2}$  years
19. The length of a rectangle is increased by 60%. By what percent would the width have to be decreased so as to maintain the same area  
 (A)  $37\frac{1}{2}\%$  (B) 60%  
 (C) 75% (D) 120%
20. Murali's present age is half of his father's age. Before 10 years, his father's age was thrice his age. Find the present age of Murali and his father.  
 (A) 16, 32 years  
 (B) 15, 30 years  
 (C) 20, 40 years  
 (D) 17, 34 years
21. Find the length of the altitude of an equilateral triangle of side  $3\sqrt{3}$  cm  
 (A) 27 cm (B)  $9\sqrt{3}$  cm  
 (C) 9 cm (D) 4.5 cm
22. Find out the values of a, b, c and d in the following equation  

$$10\bar{3} + a\bar{1} + bH^+ \rightarrow cH_2O + dI_2$$
  
 (A) a = 3, b = 2, c = 1, d = 1  
 (B) a = 5, b = 6, c = 3, d = 3  
 (C) a = 5, b = 6, c = 3, d = 6  
 (D) a = 10, b = 12, c = 6, d = 6
23. If  $5^a = 6$  ;  $6^b = 7$  ;  $7^c = 5$ , then find the value of abc.  
 (A) 0 (B) - 1  
 (C) 2 (D) 1
24. The value of  $\sqrt{x\sqrt{y\sqrt{z\sqrt{a}}}}$  is  
 (A)  $\sqrt{a^{xyz}}$  (B)  $\sqrt[xy]{a^z}$   
 (C)  $\sqrt[xyz]{a}$  (D)  $\sqrt[x]{a^{yz}}$
25. Six bells commence tolling together, afterwards they toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?  
 (A) 4 (B) 10  
 (C) 15 (D) 16
26. If  $\frac{a}{b} = \frac{4}{5}$  and  $\frac{b}{c} = \frac{15}{16}$  then, the value of  $\frac{c^2 - a^2}{c^2 + a^2}$  is  
 (A)  $\frac{1}{7}$  (B)  $\frac{7}{25}$   
 (C)  $\frac{3}{4}$  (D)  $\frac{1}{4}$