

# TNPSC - VAO

## GENERAL STUDIES - 2016 (ENGLISH)

### APTITUDE

- If  $TNPC = 5791$  and  $CUP = 169$ . Then  $CPU = ?$   
(A) 159 (B) **196**  
(C) 791 (D) 971
- The H.C.F. of  $x^3 + 1$  and  $x^4 - 1$  is  
(A)  $x^3 - 1$  (B)  $x^3 + 1$   
(C)  **$x + 1$**  (D)  $x - 1$
- If A and B together complete a work in 20 days. If A alone completes the work in 24 days, then B alone completes the work in  
(A) 14 days (B) 44 days  
(C) **120 days** (D) 48 days
- Two numbers are 10% and 15% less than a third number. Find the ratio of the two numbers  
(A) 9 : 16  
(B) 9 : 14  
(C) 13 : 16  
(D) **18 : 17**
- Raman buys a washing machine for Rs. 13,500 and sells it at a loss of 12%. What is the selling price of the washing machine?  
(A) **11,880**  
(B) 11,800  
(C) 13,500  
(D) 11,870
- The total surface area of a cone is  $384 \text{ cm}^2$ , then its volume is  
(A)  $521 \text{ cm}^3$   
(B)  **$512 \text{ cm}^3$**   
(C)  $412 \text{ cm}^3$   
(D)  $421 \text{ cm}^3$
- The LCM and HCF of two numbers are 45 and 3 respectively, their sum is 24, what is their difference?  
(A) 2  
(B) 4  
(C) **6**  
(D) 8
- Find the sum of the first 40 terms of the series  $1^2 - 2^2 + 3^2 - 4^2 + \dots$   
(A) 820  
(B) **- 820**  
(C) 870  
(D) - 870
- If a particular amount distributed to each of 14 students is Rs. 80 more than the amount distributed to each of 18 students, find the amount  
(A) **Rs. 5040**  
(B) Rs. 3150  
(C) Rs. 2520  
(D) Rs. 4200

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- 10.** Find the sum of the following series  $2^2 + 3^2 + \dots + 20^2$
- (A) 2867  
(B) 2868  
**(C) 2869**  
(D) 2870
- 11.** An employee spends on an average Rs. 2,500 for the first 8 months of a year and Rs. 1,500 for the next 4 months. If he saves Rs. 10,000 that year, then his monthly income is Rs.
- (A) 2,500  
**(B) 3,000**  
(C) 2,600  
(D) 3,200
- 12.** A Mother is 20 years older than her daughter, 4 years before she was 5 times of her daughter's age at that time. How old is the daughter now?
- (A) 9**  
(B) 12  
(C) 18  
(D) 16
- 13.** Find the difference between simple interest and compound interest for a sum of Rs. 8,000 lent at 10% p.a. in 2 years
- (A) 90  
(B) 100  
**(C) 80**  
(D) 70
- 14.** If  $A : B = 2 : 3$  and  $B : C = 4 : 5$  then find the ratio of  $C : A$
- (A) 15 : 8**  
(B) 8 : 15  
(C) 5 : 4  
(D) 5 : 20
- 15.** If the height and the base area of a right circular cone are 5 cm and 48 sq.cm respectively, then the volume of the cone is equal to
- (A) 240 cm<sup>3</sup>  
(B) 120 cm<sup>3</sup>  
**(C) 80 cm<sup>3</sup>**  
(D) 480 cm<sup>3</sup>
- 16.** Find the value of  $\left(1 - \frac{1}{3}\right) \left(1 - \frac{1}{4}\right) \left(1 - \frac{1}{5}\right) \dots \left(1 - \frac{1}{100}\right)$
- (A)  $\frac{1}{100}$   
**(B)  $\frac{1}{50}$**   
(C)  $\frac{2}{3}$   
(D)  $\frac{99}{100}$
- 17.** If  $a : b = 2 : 3$ ,  $b : c = 6 : 5$  and  $a + b + c = 30$ , then  $2a + 3b + 4c$  is
- (A) 30  
**(B) 92**  
(C) 100  
(D) 90

18. Find the value of  $(0.98)^3 + 3(0.98)^2(0.02) + 3(0.98)(0.02)^2 + (0.02)^3$

(A) 2

**(B) 1**

(C) 0

(D) 3

19. A tap can fill a tank in 15 minutes. Another tap can empty it in 20 minutes. Initially the tank is empty, if both the taps start functioning at the same time, when will the tank become full?

**(A) 1 hour**

(B) 3 hours

(C) 2 hours

(D) 4 hours

20. If ROAD is coded as URDG than SWAN is coded as

(A) VXDQ

**(B) VZDQ**

(C) VZCP

(D) UXDQ

