



**VMI - Entrance Test for DNS leading to B.Sc.(Applied Nautical Science )**

Name \_\_\_\_\_ Appn No \_\_\_\_\_ Date \_\_\_\_\_ Time – 1 Hr, Marks – 100

Email \_\_\_\_\_ M.No \_\_\_\_\_ Pg 1/1

**Instructions-**

1. There are 40 Questions of two marks each.
2. Essay is for 20 Marks
3. There are four options, Please shade the circle of the Right answer.
4. One negative mark for each wrong answer.

**1. Pa (Pascal) is the unit for**

- Thrust       Pressure       Frequency       Conductivity

**2. Metals are good conductors of electricity because**

- They contain free electrons       The atoms are lightly packed  
 They have high melting point       All of the above

**3. Pick out the scalar quantity**

- Force       Pressure       Velocity       Acceleration

**4. Magnetism at the centre of a bar magnet is**

- Minimum       Maximum       Zero       Minimum or maximum

**5. Lux is the SI unit of**

- Intensity of illumination       Luminous efficiency  
 Luminous flux       Luminous intensity

**6. A particle present in an atomic nucleus which contains proton and neutron is known as**

- X-ray       Alpha particle       Nucleon       Gamma ray

**7. The Bohr model of the atom has \_\_\_ circling the atomic nucleus.**

- Protons       Electrons       Neutrons       Alphans

**8 The rise of a liquid in a capillary tube does not depend upon**

- Angle of contact       Density of the liquid  
 Atmospheric pressure       Radius of the capillary tube

**9. What is the unit of electric current?**

- Ampere       Voltage       Ohm       Meter

**10. Which of these waves have the longest wavelength?**

- Infrared light       Ultraviolet light       Red light       Radio waves

**11. If the formula for potassium chlorate is  $KClO_3$  and the formula for magnesium fluoride is  $MgF_2$ , then what is the formula for magnesium chlorate?**

- $MgClO_3$         $Mg_2ClO_3$         $Mg(ClO_3)_2$         $Mg_2(ClO_3)_3$

**12. Which of the following elements would form an acid oxide with the formula  $XO_2$  and an acidic compound with hydrogen with the formula  $XH_2$ ?**

- Sodium       Magnesium       Aluminum       Sulfur

**13. Solids may be considered to be either crystalline non crystalline. The basic difference between them is that a crystal, in contrast to a non crystal:**

- Has a sharp melting point  Has an irregular array of atoms  
 Exhibits double refraction  Has a completely regular atomic or molecular structure

**14. Which one of the following is a strong acid?**

- HNO<sub>3</sub>  CaSO<sub>4</sub>  NH<sub>3</sub>  NaOH

**15. Which is an example of a polymer?**

- Salt  Oil  Plastic  Glucose

**16. The gas used in the manufacture of vanaspati from vegetable oil is**

- Hydrogen  Oxygen  Nitrogen  Carbon dioxide

**17. The method that cannot be used for removing permanent hardness of water is**

- Adding sodium carbonate  Distillation  Adding caustic soda  Boiling

**18. The major constituent of air is**

- Nitrogen  Carbon dioxide  Oxygen  Hydrogen

**19. The hardest form of carbon is**

- Coke  Graphite  Diamond  Charcoal

**20. The main active constituent of tea and coffee is**

- Nicotine  Chlorophyll  Caffeine  Aspirin

**21. In coordinate geometry, the equation of the x-axis is**

- $y=x$    $y=0$    $x=0$    $y=1$

**22.  $(-2x^2)^3$  is equivalent to:**

- $8x^5$    $-8x^6$    $8x^6$    $8x^5$

**23. A and B finish a job in 12 days, while A,B and C can finish it in 8 days, C alone will finish the job in**

- 14 days  16 days  20 days  24 days

**24. In 1st quadrant ?**

- $X < 0, Y < 0$    $X > 0, Y < 0$    $X < 0, Y > 0$    $X > 0, Y > 0$

**25.  $\sqrt{2}$  is a ..... number**

- Rational  Irrational  Prime  none

**26. Find the zeroes of the quadratic polynomial  $x^2 + 7x + 12$**

- 2, -5  -3, -4  2, 5  3, 4

**27.  $i^2 = \dots\dots\dots$**

- 1  1  0  i

**28. If 5 poles are erected at equal distance between two points 20 meters apart. What is the distance between any two poles?**

- 2 meters  3 meters  4 meters  5 meters

**29.  $1^0$  is equal to .....**

- 1  0  1  None of these.

**30. How many straight lines can be drawn through two points?**

- 1  2  3  Not possible.

**31. I..... tennis every Sunday morning.**

- playing  play  am playing  am play

**32. Sorry, she can't come to the phone. She ..... a bath!**

- is having       having       have       has

**33. .... many times every winter in Frankfurt.**

- It snows       It snowed       It is snowing       It is snow

**34. Babies.....when they are hungry.**

- cry       cries       cried       are crying

**35.Jane: "What ..... in the evenings?"**

**Mary: "Usually I watch TV or read a book."**

- you doing       you do       do you do       are you doing

**36.BD, GI, LN, QS, ..... ?**

- TV       UW       WX       VX

**37.Find the odd one out**

- Debit       Deposit       Deduction       Withdrawal

**38.Pointing to a man in a photograph, a woman said, "His brother's father is the only son of my grandfather." How is the woman related to the man in the photograph?**

- Sister       Aunt       Grandmother       Daughter

**39.Doctor : Patient :: Politician : ?**

- Voter       Chair       Money       Public

**40.Look at this series: 2, 1, (1/2), (1/4), ... .....What number should come next?**

- (1/3)       (1/8)       (2/8)       (1/16)

