

# QUESTION BOOKLET

**TEST (LEET)**

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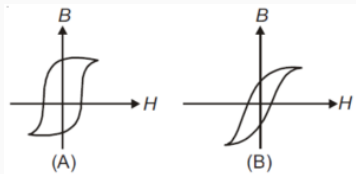
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1. The magnetic susceptibility is negative for

- (A) Ferromagnetic material only
- (B) Paramagnetic and ferromagnetic materials
- (C) Diamagnetic material only
- (D) Paramagnetic material only

2. Hysteresis loops for two magnetic materials A and B are given below:



These materials are used to make magnets for electric generators, transformer core and electromagnet core. Then it is proper to use:

- (A) A for electromagnets and B for electric generators
- (B) A for transformers and B for electric generators
- (C) B for electromagnets and transformers
- (D) A for electric generators and transformers

3. An iron rod is placed parallel to magnetic field of intensity 2000 A/m. The magnetic flux through the rod is  $6 \times 10^{-4}$  Wb and its cross-sectional area is  $3 \text{ cm}^2$ . The magnetic permeability of the rod in Wb/A-m is [MHT CET 2016]

- (A)  $10^{-1}$
- (B)  $10^{-2}$
- (C)  $10^{-3}$
- (D)  $10^{-4}$

4. The magnetic lines of force inside a bar magnet [AIIEE 2003]

- (A) Are from North Pole to South Pole of the magnet.
- (B) Do not exist.
- (C) Depend upon the area of cross-section of the bar magnet.
- (D) Are from South Pole to North Pole of the magnet.

5. Kilowatt-hour unit is used to measure

- (A) Power
- (B) Energy
- (C) Electric charge
- (D) Electric current

6. The magnetic susceptibility of a paramagnetic material at  $-73^\circ\text{C}$  is 0.0075 and its value at  $-173^\circ\text{C}$  will be [Karnataka CET 2015]

- (A) 0.015
- (B) 0.0045
- (C) 0.0075
- (D) 0.0030

7. Electromagnets are made of soft iron because soft iron has [MH CET 2014]

- (A) High susceptibility and low retentivity
- (B) Low susceptibility and high retentivity
- (C) Low susceptibility and low retentivity
- (D) High susceptibility and high retentivity

8. A magnetic needle is kept in a non-uniform magnetic field. It experiences [AIIEE 2005]

- (A) A torque but not a force
- (B) Neither a force nor a torque
- (C) A force and a torque
- (D) A force but not a torque

9. Curie temperature is the temperature above which [AIIEE 2003]

- (A) A ferromagnetic material becomes paramagnetic.
- (B) A paramagnetic material becomes diamagnetic.
- (C) A ferromagnetic material becomes diamagnetic.
- (D) A paramagnetic material becomes ferromagnetic

10. For diamagnetic materials, magnetic susceptibility is [MH CET 2015]

- (A) Small and negative
- (B) Small and positive
- (C) Large and negative

(D) Large and positive

(D) +9 V

11. Core of electromagnets are made of ferromagnetic material which has [Karnataka CET 2015]

- (A) Low permeability and high retentivity
- (B) High permeability and low retentivity
- (C) Low permeability and low retentivity
- (D) High permeability and high retentivity

12. A filament bulb (500 W, 100 V) is to be used in a 230 V main supply. When a resistance  $R$  is connected in series, it works perfectly and the bulb consumes 500 W. The value of  $R$  is [NEET UG 2016]

- (A) 230  $\Omega$
- (B) 46  $\Omega$
- (C) 26  $\Omega$
- (D) 13  $\Omega$

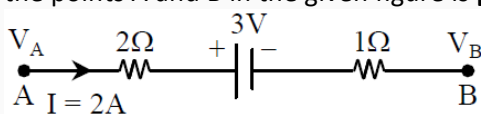
13. The field around a current carrying conductor is:

- (A) electric field
- (B) electro magnetic field
- (C) magnetic field
- (D) electrostatic field

14. The supply voltage to a room is 120 V. The resistance of the lead wires is 6  $\Omega$ . A 60 W bulb is already switched on. What is the decrease of voltage across the bulb, when a 240 W heater is switched on in parallel to the bulb?

- (A) Zero volts
- (B) 2.9 volt
- (C) 13.3 volt
- (D) 10.04 volt

15. The potential difference ( $V_A - V_B$ ) between the points A and B in the given figure is [NEET 2016]

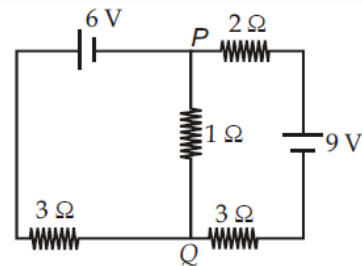


- (A) -3 V
- (B) +3 V
- (C) +6 V

16. If a wire is stretched to make it 0.1% longer, its resistance will: [AIEEE 2011]

- (A) Increase by 0.05%
- (B) Increase by 0.2%
- (C) Decrease by 0.2%
- (D) Decrease by 0.05%

17. In the circuit shown, the current in the 1  $\Omega$  resistor is [JEE Main 2015]



- (A) 0 A
- (B) 1.3 A, from P to Q
- (C) 0.13 A, from Q to P
- (D) 0.13 A, from P to Q

18. Two electric bulbs marked 25 W – 220 V and 100 W – 220 V are connected in series to a 440 V supply. Which of the bulbs will fuse? [AIEEE 2012]

- (A) Both
- (B) 100 W
- (C) 25 W
- (D) Neither

19. Across a metallic conductor of non-uniform cross section a constant potential difference is applied. The quantity, which remains constant along the conductor, is [CBSE AIPMT 2015]

- (A) Current density
- (B) Current
- (C) Drift velocity
- (D) Electric field

20. Three resistances 2  $\Omega$ , 3  $\Omega$  and 4  $\Omega$  are connected in parallel. The ratio of currents passing through them when a potential difference is applied across its ends will be [Karnataka CET 2015]

- (A) 5 : 4 : 3
- (B) 6 : 3 : 2
- (C) 4 : 3 : 2
- (D) 6 : 4 : 3

21. The Kirchhoff's first law ( $\sum i = 0$ ) and second law ( $\sum iR = \sum E$ ), where the symbols have their usual meanings, are respectively based on [AIEEE 2006]

- (A) Conservation of charge, conservation of energy
- (B) Conservation of charge, conservation of momentum
- (C) Conservation of energy, conservation of charge
- (D) Conservation of momentum, conservation of charge

22. A heater coil is cut into two equal parts and only one part is now used in the heater. The heat generated will now be [AIEEE 2005]

- (A) Doubled
- (B) Four times
- (C) One fourth
- (D) Halved

23. The resistance of a bulb filament is  $100 \Omega$  at a temperature of  $100^\circ\text{C}$ . If its temperature coefficient of resistance be  $0.005$  per  $^\circ\text{C}$ , its resistance will become  $200 \Omega$  at a temperature of [AIEEE 2006]

- (A)  $200^\circ\text{C}$
- (B)  $300^\circ\text{C}$
- (C)  $400^\circ\text{C}$
- (D)  $500^\circ\text{C}$

24. A 220 volt, 1000-watt bulb is connected across a 110 -volt mains supply. The power consumed will be [AIEEE 2003]

- (A) 1000 watt
- (B) 750 watt
- (C) 500 watt
- (D) 250 watt

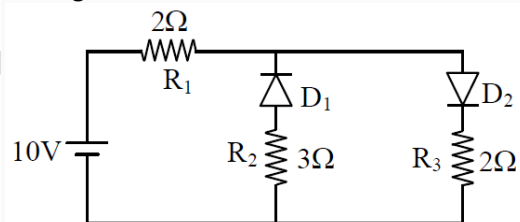
25. Tesla is a standard unit of which of the following?

- (A) Magnetic flux density
- (B) Magnetic induction
- (C) Magnetic field
- (D) Magnetic moment

26. A parallel plate air capacitor of capacitance  $C$  is connected to a cell of emf  $V$  and then disconnected from it. A dielectric slab of dielectric constant  $K$ , which can just fill the air gap of the capacitor, is now inserted in it. Which of the following is incorrect? [AIPMT 2015]

- (A) The potential difference between the plates decreases  $K$  times
- (B) The energy stored in the capacitor decreases  $K$  times
- (C) The change in energy stored is  $\frac{1}{2}CV^2\left(\frac{1}{K}-1\right)$
- (D) The charge on the capacitor is not conserved

27. The given circuit has two ideal diodes connected as shown in the figure below. The current flowing through the resistance  $R_1$  will



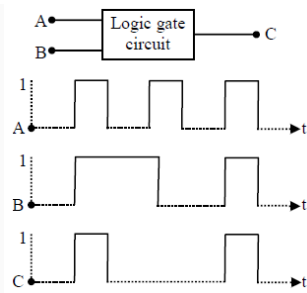
[NEET

2016]

be;

- (A) 2.5 A
- (B) 10.0 A
- (C) 1.43 A
- (D) 3.13 A

28. The following figure shows a logic gate circuit with two inputs  $A$  and  $B$  and the output  $C$ . The voltage waveforms of  $A$ ,  $B$  and  $C$  are as shown below [CBSE AIPMT 2006]



the logic circuit gate is:

- (A) AND gate
- (B) NAND gate
- (C) NOR gate
- (D) OR gate

29. The given truth table is for which logic gate: [CBSE AIPMT 2002]

A	B	Y
1	1	0
0	1	1
1	0	1
0	0	1

- (A) NAND
- (B) XOR
- (C) NOR
- (D) OR

30. One nanometer is equal to

- (A)  $10^{-6}\text{m}$
- (B)  $10^{-8}\text{m}$
- (C)  $10^{-9}\text{m}$
- (D)  $10^{-5}\text{m}$

31. Identify the vector quantity from the following

- (A) Heat
- (B) Angular momentum
- (C) Time
- (D) Work

32. Superconductors are substances which

- (A) Conduct electricity at low temperature
- (B) Offer high resistance to the flow of current
- (C) Offer no resistance to the flow of electricity
- (D) Conduct electricity at high temperatures

33. Magnetism at the center of a bar magnet is

- (A) Minimum
- (B) Maximum
- (C) Zero
- (D) Minimum or maximum

34. Metals are good conductors of electricity because

- (A) They contain free electrons
- (B) The atoms are lightly packed
- (C) They have high melting point
- (D) All of the above

35. Pick out the scalar quantity

- (A) Force
- (B) Pressure
- (C) Velocity
- (D) Acceleration

36. Rectifiers are used to convert

- (A) Direct current to Alternating current
- (B) Alternating current to direct current
- (C) High voltage to low voltage
- (D) Low voltage to high voltage

37. Two electric bulbs marked 25W-200 V and 100W-220 V are connected in series to a 440 V supply. which of the bulbs will fuse?

- (A) 25W
- (B) 100 W
- (C) both
- (D) Neither

38. Which of the following is not a vector quantity

- (A) Speed
- (B) Velocity
- (C) Torque
- (D) Displacement

39. The core of an electromagnet is made of soft iron because soft iron has

- (A) Small susceptibility and small retentivity
- (B) Large susceptibility and small retentivity

- (C) Large density and large retentivity  
(D) Small density and large retentivity

40. A Fuse is used in mains electric supply as safety devices. Which one of the following statements about the fuse is correct?

- (A) It is connected in parallel with the main switch  
(B) It is made mainly from silver alloys  
(C) It must have a low melting point  
(D) It must have a very high resistance

41. The dimension of magnetic field in M, L, T and C (Coulomb) is given as

- (A) MLT<sup>-1</sup>C<sup>-1</sup>  
(B) MT<sup>2</sup>C<sup>-2</sup>  
(C) MT<sup>-1</sup>C<sup>-1</sup>  
(D) MT<sup>-2</sup>C<sup>-1</sup>

42. When a dielectric is introduced in between a parallel plate capacitor the capacitance of the capacitor:

- (A) Decreases  
(B) Increase  
(C) Remains the same  
(D) None of these

43. A bar magnet is equivalent to \_\_\_\_\_.

- (A) Solenoid carrying current  
(B) Circular coil carrying current  
(C) Toroid carrying current  
(D) Straight conductor carrying current

44. A current flows in a conductor from east to west. The direction of the magnetic field at a point above the conductor is \_\_\_\_\_.

- (A) Towards north  
(B) Towards south  
(C) Towards east  
(D) Towards west

45. Basically domestic wiring is a

- (A) Parallel operation  
(B) Series operation  
(C) Combination of series and parallel connections  
(D) None

46. If both the roots of the quadratic equation  $x^2 - 2kx + k^2 + k - 5 = 0$  are less than 5, then k lies in the interval

Here 2 read as Square

- (A) (5, 6]  
(B) (6, ∞)  
(C) (-∞, 4)  
(D) [4, 5]

47. Which of the following is the indefinite integral of  $x^2 + 7$ ?

- (A)  $\int (x^2 + 7) dx = 2x + c$ .  
(B)  $\int (x^2 + 7) dx = x^3 + 7x$ .  
(C)  $\int (x^2 + 7) dx = \frac{1}{2}x^3 + 7x$ .  
(D)  $\int (x^2 + 7) dx = \frac{1}{3}x^3 + 7x + c$ .

48. What does du equal in  $\int 2x(x^2 + 1)^5 dx$ ?

- (A) 2x  
(B) 2u du  
(C) 2x dx  
(D) 5u<sup>4</sup>

49. Which of the following is the best integration technique to use for  $\int 2x(x^2 + 1)^5 dx$ ?

- (A) The product rule  
(B) The chain rule  
(C) The power rule  
(D) The substitution rule

50.  $\int 1/x dx = ?$

- (A) Undefined because you cannot divide by zero.  
(B)  $\log_e(x)$   
(C)  $\ln(x)$   
(D)  $\ln(x) + C$

51. If  $\theta$  approaches zero, then limit of  $\sin(\theta)/\theta$  is

- (A)  $\cos(\theta)$   
(B) 0  
(C) 1



(D) This is indeterminate

52. Given that  $y = ax^n$ . Select the correct form

for the differential  $\frac{dy}{dx}$  from the list below:

(A)  $\frac{dy}{dx} = n \times x^{n-1}$

(B)  $\frac{dy}{dx} = a \times x^{n-1}$

(C)  $\frac{dy}{dx} = a \times n \times x^{n-1}$

(D)  $\frac{dy}{dx} = a \times n \times x^{n+1}$

53. Differentiate the following equation using the standard rules:  $y = x^9$

(A)  $\frac{dy}{dx} = x^8$

(B)  $\frac{dy}{dx} = 9x^8$

(C)  $\frac{dy}{dx} = \frac{x^{10}}{10}$

(D)  $\frac{dy}{dx} = 8x^9$

54. Differentiate the following equation:

$$m = \frac{-8}{v^6} + \frac{v^4}{5} + \frac{1}{7}$$

(A)  $\frac{dm}{dv} = \frac{48}{v^5} + \frac{4v^3}{5}$

(B)  $\frac{dm}{dv} = \frac{48}{v^7} + \frac{v^3}{20}$

(C)  $\frac{dm}{dv} = \frac{48}{v^7} + \frac{4v^3}{5}$

(D)  $\frac{dm}{dv} = \frac{48}{v^7} + \frac{4v^3}{5} + \frac{v}{7}$

55. Differentiate the following equation:

$$y = 6x^{-3}$$

(A)  $\frac{dy}{dx} = -18x^{-4}$

(B)  $\frac{dy}{dx} = -18x^{-2}$

(C)  $\frac{dy}{dx} = -12x^{-3}$

(D)  $\frac{dy}{dx} = -3x^{-2}$

56. Differentiate the following equation:

$$p = 4q^{3.2}$$

(A)  $\frac{dp}{dq} = 12.8x^{4.2}$

(B)  $\frac{dp}{dq} = 3x^{3.2}$

(C)  $\frac{dp}{dq} = 4x^{2.2}$

(D)  $\frac{dp}{dq} = 12.8x^{2.2}$

57. Separate the variables and integrate the

$$\frac{dy}{dx} = y^2 x^3$$

following:

(A)  $\frac{1}{3y^2} = \frac{-x^4}{4} + c$

(B)  $\frac{1}{y} = \frac{-x^4}{4} + c$

(C)  $y = \frac{y^2 x^4}{4} + c$

(D)  $y = \frac{y^3 x^4}{12} + c$

58. Separate the variables and integrate the

following:

$$\frac{dp}{dq} = p \sin q$$

(A)  $-2 = p \cos q + c$

(B)  $1 = p^2 \cos q + c$

(C)  $p = -\cos q + c$

(D)  $\ln p = -\cos q + c$

59. Separate the variables and integrate the

following:

$$\frac{\sqrt{y^3}}{6x^{23}} \frac{dy}{dx} = 5$$

(A)  $6.6y^{2.5} = 150x^{33} + c$

(B)  $6.6y^{2.5} = 30x^{33} + c$

(C)  $0.4y^{2.5} = 150x^{33} + c$

(D)  $0.4y^{2.5} = 30x^{33} + c$

60. Evaluate the following integral:

$$y = \int_{\frac{\pi}{4}}^{\frac{\pi}{2}} \frac{\sin 4x}{8} dx$$

(A)  $y = \frac{-1}{16}$

(B)  $y = \frac{1}{16}$

(C)  $y = \frac{-1}{32}$

(D)  $y = 0$

61. If  $\mathbf{A} = \begin{pmatrix} 1 & 4 & 1 \\ 2 & 7 & 3 \\ 4 & 2 & 5 \end{pmatrix}$  and  $\mathbf{B} = \begin{pmatrix} 2 & 0 & 9 \\ 4 & 3 & 9 \\ 5 & 7 & 8 \end{pmatrix}$  then calculate:  $\mathbf{B} - \mathbf{A}$

(A)  $\begin{pmatrix} 3 & 4 & 10 \\ 6 & 10 & 12 \\ 9 & 9 & 13 \end{pmatrix}$

(B)  $\begin{pmatrix} 1 & -4 & 8 \\ 2 & -4 & 6 \\ 1 & 5 & 3 \end{pmatrix}$

(C)  $\begin{pmatrix} -1 & 4 & -8 \\ -2 & 4 & -6 \\ -1 & -5 & -3 \end{pmatrix}$

(D)  $\begin{pmatrix} 1 & 4 & 8 \\ 2 & 4 & 6 \\ 1 & 5 & 3 \end{pmatrix}$

62. If  $\mathbf{A} = \begin{pmatrix} -2 & 5 & 1 \\ 0 & 3 & 2 \end{pmatrix}$  and  $\mathbf{B} = \begin{pmatrix} 1 & 4 \\ 3b & 2a \\ 2 & b \end{pmatrix}$ , then calculate:  $\mathbf{AB}$

(A)  $\begin{pmatrix} 15b+2 & -8+10a+2b \\ 5+9b & 4+6a+2b \end{pmatrix}$

(B)  $\begin{pmatrix} 5b & 10a+b \\ 9b-4 & 2+6a+2b \end{pmatrix}$

(C)  $\begin{pmatrix} -2 & 15b \\ 0 & 9b \end{pmatrix}$



(D)  $\begin{pmatrix} 15b & -8+10a+b \\ 4+9b & 6a+2b \end{pmatrix}$

63. Find the determinant of  $\begin{pmatrix} 2 & 5 & 8 \\ 5 & 3 & 7 \\ 4 & 6 & 9 \end{pmatrix}$ .

- (A) 29  
(B) 199  
(C) 259  
(D) -89

64. Write down the transpose of the following matrix:

$$\begin{pmatrix} 2 & 0 & 9 \\ 1 & 9 & 7 \\ 3 & 3 & 6 \end{pmatrix}$$

(A)  $\begin{pmatrix} 0 & 2 & 9 \\ 9 & 1 & 7 \\ 3 & 3 & 6 \end{pmatrix}$

(B)  $\begin{pmatrix} 3 & 3 & 6 \\ 1 & 9 & 7 \\ 2 & 0 & 9 \end{pmatrix}$

(C)  $\begin{pmatrix} 9 & 7 & 6 \\ 0 & 9 & 3 \\ 2 & 1 & 3 \end{pmatrix}$

(D)  $\begin{pmatrix} 2 & 1 & 3 \\ 0 & 9 & 3 \\ 9 & 7 & 6 \end{pmatrix}$

65. Write down the inverse of the following matrix:

$$\mathbf{P} = \begin{pmatrix} -2 & -3 \\ 7 & 6 \end{pmatrix}$$

(A)  $\mathbf{P}^{-1} = \begin{pmatrix} \frac{-2}{9} & \frac{-1}{3} \\ \frac{7}{9} & \frac{2}{3} \end{pmatrix}$

(B)  $\mathbf{P}^{-1} = \begin{pmatrix} \frac{2}{3} & \frac{1}{3} \\ \frac{-7}{9} & \frac{-2}{9} \end{pmatrix}$

(C)  $\mathbf{P}^{-1} = \begin{pmatrix} \frac{2}{9} & \frac{1}{3} \\ \frac{-7}{9} & \frac{-2}{3} \end{pmatrix}$

(D)  $\mathbf{P}^{-1} = \begin{pmatrix} \frac{-2}{3} & \frac{-1}{3} \\ \frac{7}{9} & \frac{2}{9} \end{pmatrix}$

66. Write the following complex number in the form  $a + bi$ :

$$18 - \sqrt{-81}$$

- (A) 18+9i  
(B) 18-9i  
(C) 27+0i  
(D) 0+9i

67. Simplify the following expression:

$$(20 - 4i) - (6 - 5i) + (2i - 3a)$$

- (A) 6-3a+23i  
(B) 14-3a+3i  
(C) -3a+18i  
(D) 26-3a-7i

68. Multiply the following complex numbers:

$$(7-5i)(6+4i)$$

- (A) 62+2i  
(B) 21-2i  
(C) 21+2i  
(D) 62-2i

69. Multiply the following complex numbers:

$$(2c^3 + 9pi)(5mc - 4p^3i)$$

- (A)  $10c^4p - 36p^4 + cp^2(45 - 8c^2p)i$   
(B)  $10c^4p - 36p^4 + cp^2(45 + 8c^2p)i$   
(C)  $2p(5c^4 + 18p^3) + cp^2(45 - 8c^2p)i$   
(D)  $2p(5c^4 + 18p^3) + cp^2(8c^2p - 45)i$

70. Multiply the following complex numbers:

$$2(\cos 4a + i \sin 4a) \times 7(\cos 3c + i \sin 3c)$$

- (A)  $14(\cos 4a \cos 3c + i \sin 4a \sin 3c)$   
 (B)  $14(\cos(4a+3c) + i \sin(4a+3c))$   
 (C)  $14(\cos 4a \sin 3c + i \cos 4a \sin 3c)$   
 (D)  $14(\cos 4a \sin 3c + i \sin 4a \cos 3c)$

71. Write the complex conjugate of  $3c - 4di$

- (A)  $3c + 4di$   
 (B)  $-4di + 3c$   
 (C)  $3ci - 4d$   
 (D)  $3ci + 4d$

72. Simplify the following expression:

$$\frac{12 - 6i}{4 + 3i}$$

- (A)  $1.2 + 2.4i$   
 $\frac{30}{7} + \frac{60}{7}i$   
 (B)  $\frac{30}{7} + \frac{60}{7}i$   
 (C)  $\frac{30}{7} - \frac{60}{7}i$   
 (D)  $1.2 - 2.4i$

73. Simplify the following expression:

$$\frac{5 - 3zi}{9 - 4i}$$

- (A)  $\frac{1}{65}(45 + 12z + (20 - 27z)i)$   
 (B)  $\frac{1}{65}(45 + 12z - (20 - 27z)i)$   
 (C)  $\frac{1}{97}(45 + 12z + (20 - 27z)i)$   
 (D)  $\frac{1}{97}(45 + 12z - (20 - 27z)i)$

74. Rewrite the following expression:

$$h \cos 3a\theta + i h \sin 3a\theta$$

- (A)  $he^{3a\theta i}$

- (B)  $he^{3a\theta}$   
 (C)  $3he^{3a\theta i}$   
 (D)  $ahe^{3\theta}$

75. Calculate  $(\cos 3\theta + i \sin 3\theta)^5$

- (A)  $\cos(5\theta) + i \sin(5\theta)$   
 (B)  $\cos(15\theta) + i \sin(15\theta)$   
 (C)  $\cos^5 3\theta + i \sin^5 3\theta$   
 (D)  $3(\cos^5 \theta + i \sin^5 \theta)$

76. AZ, GT, MN, ?, YB

- (A) KF  
 (B) RX  
 (C) SH  
 (D) TS

77. DKY, FJW, HIU, JHS, ?

- (A) KGR  
 (B) LFQ  
 (C) KFR  
 (D) LGQ

78. ?, SIY, OEU, KAQ, GWM, CSI

- (A) WNE  
 (B) WNB  
 (C) WNE  
 (D) WMC

79. Poles: Magnet :: ? : Battery

- (A) Energy  
 (B) Power  
 (C) Terminals  
 (D) Cells

80. Architect: Building :: Sculptor: ?

- (A) Museum  
 (B) Statue  
 (C) Chisel  
 (D) Stone

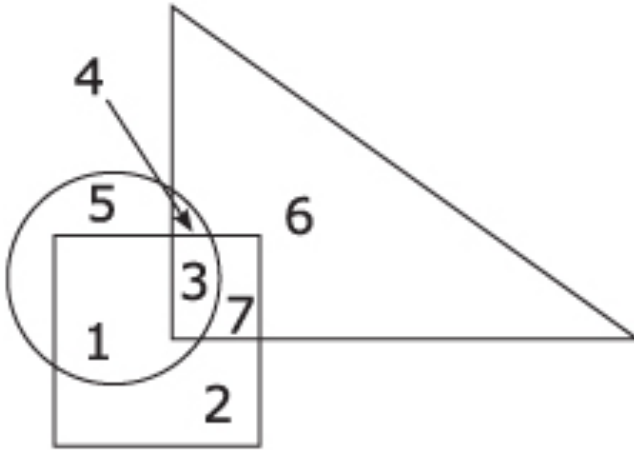
81. Oceans : Deserts :: Waves : ?

- (A) Dust  
 (B) Sand Dunes

- (C) Ripples  
(D) Sea
82. Cube is related to Square in the same way as Square is related to  
(A) Plane  
(B) Triangle  
(C) Line  
(D) Point
83. Find the odd one out  
(A) Crusade  
(B) Expedition  
(C) Cruise  
(D) Campaign
84. Find the odd one out  
(A) Ball  
(B) Specter  
(C) Globe  
(D) Sphere
85. If FRIEND is coded as HUMJTK, how can CANDLE be written in that code?  
(A) DEQJQM  
(B) DCQHQB  
(C) EDRIRL  
(D) ESJFME
86. If FRAGRANCE is written as SBHSBODFG, how can IMPOSING be written?  
(A) NQPTJHOJ  
(B) NQPTJOHJ  
(C) NQTPJOHJ  
(D) NQPTJOHI
87. If PALE is coded as 2134, EARTH is coded as 41590, how can is PEARL be coded in that language?  
(A) 25430  
(B) 29530  
(C) 25413  
(D) 24153
88. If ROBUST is coded as QNATRS in a certain language, which word would be coded as ZXCMP?  
(A) AWDLQ  
(B) AYDNQ  
(C) BZEOR  
(D) YYBNO
89. 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?  
(A) Sister  
(B) Aunt  
(C) Grandmother  
(D) Daughter
90. A man pointing to a photograph says. "The lady in the photograph is my nephew's maternal grandmother." How is the lady in the photograph related to the man's sister who has no other sister?  
(A) Mother in law  
(B) Cousin  
(C) Sister in law  
(D) Mother
91. Doctor: Patient :: Politician : ?  
(A) Voter  
(B) Chair  
(C) Money  
(D) Public
92. Man : Biography :: Nation : ?  
(A) History  
(B) Geography  
(C) People  
(D) Leader
93. Of the following two statements, both of which cannot be true, but both can also be false. Which are these two statements?  
I. All machines make noise  
II. Some machines are noisy  
III. No machine makes noise  
IV. Some machines are not noisy  
(A) 1 & 2  
(B) 3 and 4

- (C) 1 & 3  
(D) 2 & 4

94.

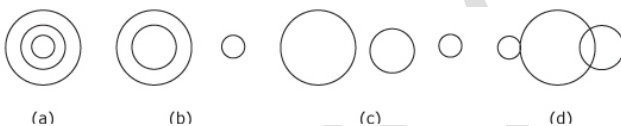


Circle indicates 'strong', square indicates 'tall' and triangle 'army officers'. The strong army officers

who are not tall are shown

- (A) 4  
(B) 3  
(C) 5  
(D) 6

95.



Which of the following figures best depicts the relationship among criminals, thieves and judges?

- (A) a  
(B) b  
(C) c  
(D) d

96. Find the odd one out

- (A) Crime: Punishment  
(B) Judgment: Advocacy  
(C) Enterprise: Success  
(D) Exercise: Health

97. Find the odd one out

- (A) Flower: Petal  
(B) Chair: Leg  
(C) Circle: Arc

(D) Cover: Page

98. ba\_ba\_bac\_acb\_cbac

- (A) aacb  
(B) bbca  
(C) ccba  
(D) cbac

99. m\_nm\_n\_an\_a\_ma\_

- (A) aamnan  
(B) ammanm  
(C) aammnn  
(D) amammn

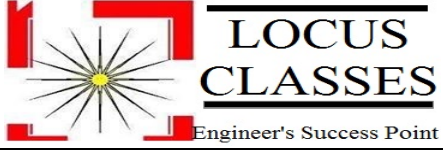
100. Statement: No man is a lion.

Somu is a man.

Conclusions: I. Somu is not a lion.

II. All men are not Somu.

- (A) Only I follows  
(B) if only conclusion II follows  
(C) if either I or II follows  
(D) if both I and II follow



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