

1. The relation between diameter of rivet (d) and the thickness of plate (t) is:
- $d = 3\sqrt{t}$
 - $d = 4\sqrt{t}$
 - $d = 5\sqrt{t}$
 - $d = 6\sqrt{t}$
2. The example of a dead weight governor is:
- Whatt governor
 - Hart nell governor
 - Porter Governor
 - Pickerning governor
3. The most suitable metal for taking electro-magnets and transformer cores is:
- Steel
 - Iron
 - Zero
 - Aluminium
4. The relative permeability of iron is of the order of:
- 1
 - 10^4
 - Zero
 - 10^{-4}
5. Modulus of elasticity is defined as the ratio of:
- Shear stress to shear strain
 - Linear stress to linear strain
 - Linear stress to lateral strain
 - Lateral stress to linear strain
6. The smallest planet of solar system is:
- Mars
 - Mercury
 - Venus
 - Pluto
7. In a certain code SHOVE is written as VKRYH, then PISTOL will be written as:
- SLVWRO
 - SVLWRO
 - SVLURO
 - VLSWRO
8. A lunar eclipse happens when:
- Moon comes between earth and sun
 - Sun comes between earth and moon
 - Earth comes between earth and moon
 - None of these
9. The currency of Italy is called:
- Lira
 - Euro
 - Franc
 - Corona
10. The richter scale is used to record:
- Velocity of air
 - Earthquake
 - Intensity of earthquake
 - Pressure
11. What is the kinetic energy of rotation, when a body of mass moment of inertia I about a given axis is rotated about that axis with an angular velocity ω ?
- $1. \omega$
 - $\frac{1}{2}I\omega^2$
 - $I\omega^2$
 - $\frac{1}{2}I\omega$
12. The highest score in a cricket test match in an innings was $\frac{5}{21}$ of the total, and the next highest was $\frac{5}{24}$ of the remainder. Difference between the scores was 254 runs. What was the total score?
- 260
 - 275
 - 300
 - 315
13. A prize money is divided between A, B and C. A receives $\frac{2}{5}$ of the prize, B receives $\frac{1}{9}$ of the remainder. If C's share is Rs. 80, find the value of the prize.
- Rs. 130
 - Rs. 150
 - Rs. 180
 - Rs. 220
14. The cost of manufacturing a car, is made up of three items: cost of materials, labour and overheads. In 2002, the cost of these items was in the ratio of 5:4:3. In 2003, the cost of materials rose by 16%, the cost of labour increased by 10% but the overheads reduced by 8%. What is the percentage increase in the price of car?
- 6%
 - 7%
 - 8%
 - 12%
15. If the rainfall on a certain day was 3.5 cm, how many liters of water fell on 1 hectare land on that day?
- 350000 litres
 - 35000 litres
 - 3500 litres
 - 350 litres
16. Two equal sums were lent out at 7% and 5% simple interest respectively. The interest earned on the two loans add up to Rs. 960 for 4 years. Find the total sum lent out:
- Rs. 3,860
 - Rs. 4,000
 - Rs. 4,100
 - Rs. 4,230
17. A man sells two tables at equal price. He sells one at 10% gain and other at 10% loss. What is the gain/loss per cent in this transaction?
- 1.1% loss
 - 1% loss
 - 1% gain
 - 1.1% gain

18. A photographer allows a discount of 16% at the marked price. At what price should he mark the camera of cost Rs. 600 so that he gains 20% after allowing discount?
1. Rs. 760
 2. Rs. 780
 3. Rs. 1000
 4. Rs. 820
19. The amount of water (in ml) that should be added to reduce 9ml lotion, containing 50% alcohol to a lotion containing 30% alcohol, is:
1. 3
 2. 4
 3. 5
 4. 6
20. What will come in place of question mark (?)?
- 1, 2, 5, 10, 13, 26, 29, 58, ?
1. 61
 2. 63
 3. 69
 4. 71
21. Which of the following has the smallest wavelength?
1. Red
 2. Blue
 3. Green
 4. Violet
22. A light year is nearest to:
1. 10^8 m
 2. 10^{12} m
 3. 10^{16} m
 4. 10^{20} m
23. A dimensionless quantity:
1. May have a unit
 2. Never has a unit
 3. Always has a unit
 4. Doesn't exist
24. The largest producer of pulses in India is:
1. Uttar Pradesh
 2. Rajasthan
 3. Madhya Pradesh
 4. Maharashtra
25. The minimum annual temperature difference is found in:
1. Tiruvananthapuram
 2. Mumbai
 3. Panaji
 4. Patna
26. 'Land of the Morning Calm' refers to:
1. Japan
 2. Taiwan
 3. Tibet
 4. Korea
27. The Russian Revolution took place in the year:
1. 1905
 2. 1909
 3. 1917
 4. 1927
28. The Head quarters of FAO is located in:
1. New York
 2. Washington
 3. Rome
 4. France
29. Who is the author of the book titled 'Discovery of India'?
1. J.L. Nehru
 2. Indira Gandhi
 3. M.K. Gandhi
 4. C. Rajagopalachari
30. Santosh trophy is associated with:
1. Cricket
 2. Football
 3. Hockey
 4. Tennis
31. Who is the recipient of Nobel Prize 2004 for Literature?
1. Nancy Jelinek
 2. J.M. Coetzee
 3. P.C. Paul
 4. Elfride Jelinek
32. Year 2005 is celebrated as 125th Birth Anniversary of which literary personality?
1. Gurudev Rabindranath Tagore
 2. Munshi Premchand
 3. Dr. S. Radhakrishnan
 4. Sarojini Naidu
33. Pandit Jawaharlal Nehru, the first Prime Minister of India, was born in the year:
1. 1859
 2. 1869
 3. 1879
 4. 1889
34. What is the main purpose of white blood corpuscles?
1. To carry nutrients
 2. To carry oxygen
 3. To combat infection
 4. To help in clotting
35. Night-blindness is caused by lack of which vitamin?
1. Vitamin D
 2. Vitamin B
 3. Vitamin A
 4. Vitamin C
36. The ratio of specific weight of liquid to specific weight of a standard liquid is:
1. Specific volume
 2. Weight density
 3. Specific
 4. Density
37. B.C.G vaccine protects against:
1. Polio
 2. TB
 3. Typhoid
 4. Smallpox
38. The largest oil producing region of Gujarat is:
1. Sanand
 2. Kalol
 3. Ankleshwar
 4. Kari
39. Periyar hydro-electric project is situated in:
1. Karnataka
 2. Kerala
 3. Tamil Nadu
 4. Andhra Pradesh
40. The Brahmo Samaj was founded in the year:
1. 1826
 2. 1828
 3. 1823
 4. 1825
41. The Greek ambassador Megasthenes visited India during the reign of:
1. Chandragupta Maurya
 2. Samudragupta
 3. Ashoka
 4. Harshavardhan
42. The Tughlaq Dynasty was founded in 1320 by
1. Ghiyasuddin Tughlaq
 2. Mohammad Bin Tughlaq
 3. Feroze Taghlaq
 4. None of these
43. Who was the Viceroy when Jallianwalabagh tragedy took place on April 13, 1919?
1. Lord Reading
 2. Lord Irwin
 3. Lord Chelmsford
 4. Lord Minto
44. Which of the following is an example of chemical reaction:
1. Magnetising an iron bar
 2. Burning of a candle
 3. Melting of ice
 4. None of these

45. Davis Cup is related to:
1. Lawn Tennis
 2. Cricket
 3. Golf
 4. Hockey
46. Enron electric project is situated in state of:
1. Maharashtra
 2. Kerala
 3. Assam
 4. Bihar
47. Mahatma Gandhi started Dandi March to break salt law on:
1. April 6, 1930
 2. March 12, 1930
 3. March 12, 1931
 4. April 6, 1931
48. The Constituent Assembly adopted the Indian Constitution on:
1. January 26, 1950
 2. August 15, 1947
 3. January 30, 1950
 4. November 26, 1949
49. Radha Reddy and Raja Reddy are the pro-pounders of which classical dance ?
1. Kuchipudi
 2. Odissi
 3. Kathak
 4. Kathakali
50. Home Rule League Movement was started by:
1. Bal Gangadhar Tilak
 2. Raja Ram Mohan Roy
 3. Gopal Krishna Gokhale
 4. None of these
51. Voltmeter is used to measure:
1. Power
 2. Displacement
 3. Current
 4. Potential difference
52. Which of the following is the most industrialised state ?
1. West Bengal
 2. Bihar
 3. Maharashtra
 4. Rajasthan
53. Which of the following is a vector ?
1. Power
 2. Displacement
 3. Work
 4. Potential
54. In which state the folk dance 'Ghoomar' is performed ?
1. Gujarat
 2. Rajasthan
 3. Orissa
 4. Nagaland
55. The electoral college to elect President consist of the elected members of:
1. Lok Sabha
 2. Lok Sabha and Rajya Sabha
 3. Lok Sabha, Rajya Sabha and Legislative Assemblies
 4. Rajya Sabha
56. Tipu Sultan was killed in:
1. 1799
 2. 1798
 3. 1797
 4. 1796
57. Isobars are produced as a result of the emission of:
1. alpha particles
 2. beta particles
 3. gamma-rays
 4. X-rays
58. The least energy is radiated by:
1. X-rays
 2. gamma-rays
 3. electric waves
 4. alpha-rays
59. A charged capacitor processes — energy.
1. kinetic
 2. potential
 3. electrostatic
 4. magnetic
60. Which of the following is the source of solar energy ?
1. Magnetic radiation
 2. Burning hydrogen
 3. Chemical energy
 4. Nuclear fission/fusion
61. Woollen clothes keep us warm in winter because:
1. they give heat to body
 2. they protect the heat of body from escaping
 3. they protect the cold from entering the body
 4. None of these
62. The Hygrometer is an instrument used to measure:
1. rainfall
 2. altitude
 3. relative humidity
 4. temperature
63. Which is the source of copper ?
1. Aragonite
 2. Cassiterite
 3. Cerussite
 4. Calamine
64. An alloy of copper and tin is called:
1. Bronze
 2. Brass
 3. Gunmetal
 4. Y-alloy
65. What is the chemical name of Bleaching Powder?
1. Copper sulphate
 2. Sodium hydroxide
 3. Potassium hydroxide
 4. Calcium hydrochlorite
66. Highest percentage of carbon is available in:
1. mild steel
 2. high carbon steel
 3. cast iron
 4. stainless steel
67. Radio carbon dating is associated with which of the following ?
1. Soils
 2. Fossils
 3. Rocks
 4. Buildings
68. Bauschinger effect is associated with which of the following ?
1. Hardness
 2. Fatigue
 3. Creep
 4. None of these
69. To check the growth of algae in water reservoirs which of the following chemicals is used ?
1. Brine
 2. Alum
 3. Copper sulphate
 4. Bleaching powder
70. At very high pressure a real gas, as compared to an ideal gas, occupies :
1. same volume
 2. less volume
 3. more volume
 4. Any of these
71. Capacity of a dry cell is :
1. more when it is supplying current for intermittent periods
 2. more when it is supplying current for continuous periods
 3. unaffected by the type of discharge
 4. None of these

72. For the same maximum pressure and heat input, the most efficient cycle is :

1. Otto cycle
2. Diesel cycle
3. Brayton cycle
4. Dual combustion cycle

73. The property by which an amount of energy is absorbed by a material without plastic deformation is called :

1. toughness
2. impact strength
3. ductility
4. resilience

74. A Carnot engine receiving heat at 400 K has an efficiency of 25%. The C.O.P. of a Carnot refrigerator working between the same temperature limit is:

1. 1
2. 2
3. 3
4. 4

75. Second law of thermodynamics defines :

1. heat
2. work
3. enthalpy
4. entropy

76. Why are oil rings slotted ?

1. To provide an escape for the oil that the slot edges cut from the cylinder wall
2. To minimize friction
3. To remove oil from cylinder
4. To reduce the bulk

77. Maximum torque is generated by an engine when :

1. it runs at lowest speed
2. it develops maximum power
3. it consumes maximum fuel
4. it runs at maximum speed

78. In a boiler maximum energy loss occurs due to:

1. radiant losses
2. flue gases
3. incomplete combustion
4. unburnt carbon in ash

79. The ratio of indicated power to shaft power is known as ——— efficiency.

1. adiabatic
2. mechanical
3. isothermal
4. volumetric

80. The performance of reciprocating compressor is compared on the basis of ——— efficiency.

1. volumetric
2. mechanical
3. overall
4. isothermal

81. Which of the following features improves the fatigue strength of a metallic material ?

1. increasing the temperature
2. Scratching the surface
3. Overstressing
4. Under-stressing

82. Which of the following statement is correct ?

1. Energy and work are scalars
2. Energy, momentum and velocity are vectors
3. Force, momentum and velocity are scalars
4. Force and work are vectors

83. Throttling process is:

1. reversible
2. irreversible
3. theoretical
4. None of these

84. Natural frequency is independent of:

1. amplitude of oscillation
2. mass of the system
3. stiffness of the system
4. All of these

85. Regenerative cycle efficiency:

1. is same as simple Rankine cycle thermal efficiency
2. is always less than simple Rankine cycle thermal efficiency
3. is always greater than simple Rankine cycle thermal efficiency
4. None of these

86. Which of the following modes of heat transfer would take place predominantly, from boiler furnace to water wall ?

1. Convection
2. Conduction
3. Radiation
4. Conduction and Convection

87. As warm air cools, its relative humidity:

1. decreases
2. increases
3. remains unchanged
4. unpredictable

88. The property of a fluid which determines its resistance to shearing stresses is called:

1. viscosity
2. surface tension
3. compressibility
4. None of these

89. The unit of stress in S.I. unit is:

1. N/m^2
2. kN/mm^2
3. N/mm^2
4. All of these

90. In an automobile, the power is transmitted from the gear box to the differential through:

1. Knuckle joint
2. Bevel gears
3. Hooke's joint
4. Oldham's coupling

91. For fatigue loading factor of safety is the ratio of:

1. endurance limit to the working stress
2. elastic limit to the working stress
3. elastic limit to the yielding point
4. Young's modulus to the ultimate tensile strength

92. Bending moment on a section is maximum when shear force is:

1. zero
2. maximum
3. minimum
4. changing sign

93. Fuel used for blast furnace is:

1. coal
2. coke
3. wood
4. producer gas

94. The included angle between V-belt is usually between

1. $10^\circ - 20^\circ$
2. $30^\circ - 40^\circ$
3. $60^\circ - 80^\circ$
4. $20^\circ - 30^\circ$

95. In screw jack, effort required to lift a load is given by:

1. $P = w \tan(\alpha + \phi)$
2. $P = w \tan(\alpha - \phi)$
3. $P = w \tan(\phi - \alpha)$
4. None of these

96. The separation between two points in space is called:

1. Volume
2. Width
3. Area
4. Length

97. Electrodes used in spot welding have a tip of:

1. Aluminium
2. Brass
3. Carbon
4. Copper

98. Damping current can be produced by:

1. Eddy currents
2. Resistance
3. Potential
4. Magnetic

99. If $6 \times 6 = 33$, $8 \times 2 = 41$ and $4 \times 5 = 22.5$ then $8 \times 6 = ?$

1. 24
2. 43
3. 38
4. 2.66

100. What will come in place of question mark (?) in the following question?



1. 10
2. 11
3. 12
4. 13

ANSWERS

1.4	2.3	3.2	4.2	5.2	6.4	7.1	8.3	9.2	10.3	11.2	12.4	13.2	14.3	15.3	16.2
17.2	18.3	19.4	20.1	21.4	22.3	23.1	24.3	25.1	26.4	27.3	28.3	29.1	30.2	31.4	32.2
33.4	34.3	35.3	36.3	37.2	38.3	39.2	40.2	41.1	42.1	43.3	44.2	45.1	46.1	47.1	48.4
49.1	50.1	51.4	52.3	53.2	54.2	55.3	56.1	57.2	58.1	59.3	60.4	61.2	62.3	63.2	64.1
65.4	66.3	67.2	68.1	69.4	70.2	71.1	72.4	73.4	74.4	75.4	76.1	77.1	78.1	79.2	80.1
81.4	82.1	83.2	84.1	85.2	86.4	87.1	88.3	89.1	90.1	91.2	92.4	93.2	94.2	95.1	96.3
97.4	98.1	99.2	100.2												

