PHYSICS

BOOKS - BEIITIANS

MEASUREMENT

Formative Worksheet

1. Amount of work done is 10 Joule, here 10 standard for

A. Unit

B. Numerical value

C. Both (1) and (2)

D. None of these

Answer:

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2. Which physical quantity unit is same in all systems

A. length

B. mass

C. time

D. temperature

Answer: time

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3. 1 cm^2 = _____

A. $10^4 m^2$

B. $10^1 m^2$

C. $10^2 m^2$

D. $10^2 mm^2$

Answer:

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4. 10 kg m^{-3} =_____ 8 cm^{-3}

A. 1000

B. 1

C. 10^{-2}

D. 100

Answer:

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5. Which of the following are the examples for physical quantity?

A. length

B. area

C. force

D. energy

Answer:

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6. Convert 100 quintal into nano grams (ng).

A. 10^5 ng

B. 10^{16} ng

C. 10^{17} ng

D. 10^{18} ng

Answer:

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7. Convert 1 second into day.

A. $\frac{1}{86400}$ Day

B. 24 day

C. $\frac{1}{24}$ day

D. $\frac{1}{3600}$ day

Answer: A

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8. I hectare=_____

A. $10^1 cm^2$

B. $10^4 cm^2$

C. $10^6 cm^2$

D. $10^8 cm^2$

Answer:

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9. 16 kg/m^2=____g/cm^3

A. $16x \times 10^{-3}$

B. 26×10^{-6}

C. 36×10^{-3}

D. 46×10^{-6}

Answer:

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10. If 1 nano gram= 10^{x} milligram, then x=

A. 6

B. -6

C. 9

D. -9

Answer:

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11. How many of the prefixes are correctly matched with their multiples :

(i)pico $(p) - 10^{-12}$ (ii) tera $(T) - 10^{12}$ (iii)giga $(G) - 10^{9}$

(iv) nano $(n) - 10^{-9}$ (v) mega $(M) - 10^{6}$ (vi)micro$(\mu) - 10^{-6}$

(vii) centi$(cm) - 10^{-1}$ (vii) deci $(D) - 10$ (ix) milli$(m) - 10^{-3}$

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12. Choose the correct statement.

A. Number of fundamental quantities are limited.

B. In M.K.S System, there are 7 fundamental quantities

C. Number of fundamental quantities are unlimited.

D. Units of fundamental quantities in M.K.S is same as in SL.

Answer:

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13. Choose the correct options

A. nm is not same as mN.

B. Inm=10^{-9} m and 1 mN=10^{-3} N.

C. When we change the unit of measurement of a quantity, its numerical value changes.

D. Smaller the unit of measurement, smaller is its numerical value

Answer: B, C

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14. Statement-I: Meter is the standard by which we can measure length.

Statement-II: Second is the standard by which we can measure time.

A. Both Statements are true, Statement - II is the correct explanation of Statement - 1.

B. Both Statements are true, Statement-II is not correct explanation of Statement - L

C. Statement -I is true, Statement - II is false.

D. Statement-I is false, Statement II is true.

Answer:

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15. Statement I: Fundamental units are the units for measuring fundamental quantities.

Statement II: Metre is the unit of length.

A. Both Statements are true, Statement-II is the correct explanation of Statement - I

B. Both Statements are true, Statement - II is notcorrect explanation of Statement - I

C. Statement-I is true, Statement II is false.

D. Statement -I is false, Statement II is true.

Answer:

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16. Match the following

Column-I	Column-II
(A) unit of length in F.P.S	(p) m
(B) unit of mass in C.G.S	(q) foot
(C) unit of time	(r) metre
	(s) gm
	(t) second

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17. Match the following

Column-I	Column-II
(A) Derived unit	(p) Height
(B) Fundamental unit	(q) Thickness
(C) Derived quantity	(r) Area
(D) Fundamental quantity	(s) Newton
	(t) Kilogram

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18. In decreasing magnitude which of the following is correct ?

A. km, cm, m, mm

B. km, m, cm, mm

C. m, km, cm, mm

D. km, cm, mm, m

Answer: B

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19. The number of rounds of a wire around a pencil are 24 and the length of the coil is 4.8cm then what is the diameter of wire ?

A. 24cm

B. 2.4 cm

C. 20cm

D. 0.2 cm

Answer:

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20. The distance between Radha's home and her school is 3250 m. Express this distance into km.

A. 32.5 km

B. 3.25 km

C. 0.325 km

D. 0.0325 km

Answer:

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21. The height of a person is 1.65 m. Express this value in mm.

A. 16.5 mm

B. 165 mm

C. 1650 mm

D. 16500 mm

Answer:

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22. While measuring the diameter of the ball, the inner edges of the wooden block stood at

3.4cm and 4.7cm on a scale. Calculate the diameter of the ball?

A. 1.3 cm

B. 7.7 cm

C. 0.13 cm

D. 0.77 cm

Answer:

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23. Fill in the blanks

A. 1 cm=__mm.

B. 1 dm=__metre.

C. 1 kilometre =__metre.

D. 1 metre=__centimetre.

Answer:

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24. Fill in the blanks with sign.

A. 1 decametre___1 decimetre.

B. 1 millimetre___1 centimetre.

C. I hectometre___1 kilometre.

D. 1 decimetre___1 centimetre.

Answer: >, <, <, >

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25. one quintal = ____ ton

A. 10

B. 100

C. 0.1

D. 0.01

Answer:

Watch Video Solution

26. 1 metric tonne=_____milligram.

A. 10^3

B. 10^6

C. 10^9

D. 10^{12}

Answer:

Watch Video Solution

27. 1 micro second $= 10^x$ milliseconds. Find x.

A. $+1$

B. $+3$

C. -1

D. -3

Answer:

Watch Video Solution

28. 1 kg =_____tonne

A. 100

B. 1000

C. 10

D. 0.001

Answer: D

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29. A truck of weigh 4.4tonnes. Its value in kg?

A. 4400 kg

B. 440 kg

C. 44 kg

D. 4.4 kg

Answer: A

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30. How many seconds are equal to 6hours 8min?

A. 86400 sec

B. 43200 sec

C. 22080 sec

D. 648240 sec

Answer:

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31. Match the following

Column-I	Column-II
(A) 1 minute	(p) 100 years
(B) 1 day	(q) 365 days
(C) 1 year	(r) 24 hours
(D) 1 century	(s) 60 s

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32. Match the following

Column-I	Column-II
(A) 1 hour	(p) 1440 min
(B) 1 day	(q) 60 min
(C) 1 year	(r) 36500 days
(D) 1 century	(s) 8760 hours

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33. x is the number of years in a decade. y is the number of decades in a century and z is the number of centuries in a millenium. Find x:y:z

A. $1:1:1$

B. $1:2:1$

C. $1:2:3$

D. $2:3:4$

Answer:

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34. $\frac{1\text{minute}}{60s} + \frac{60\text{minutes}}{1\text{hours}} = x$ and $\frac{1\text{decade}}{10\text{years}} + \frac{10\text{decades}}{1\text{century}} = y$ find x+y

A. 2

B. 4

C. 8

D. 16

Answer:

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35. Imagine this hypothetical situation. The wealth possessed by the richest person of this world is Avogadro number $\left(6.023 \times 10^{23}\right)$ of dollars. He thought of donating his entire wealth to the needy. and make their living healthy. His life span is assumed to be 90 years and he is now 45. The rate of donation is 5000 dollars per second and from now, every second of his existence is only used for donation. Can

he empty all his wealth in this life? Justify your answer.

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36. An unusual running race was organised between a rabbit and an ant. By the time rabbit moves 1 m in one second, ant moves Imm (millimetre) in the same time. How much time will ant takes to cover the distance covered by the rabbit in 1 second?

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37. The average lifespan of a lion in the wild is up to 16 years. If average number of days in a year is 365 days. Express this age in hours.

A. 1600

B. 5840

C. 140160

D. 8409600

Answer:

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38. In physics, the Planck time, (t_p), is the unit of time in the system of natural units known as Planck units. It is the time required for light to travel, in a vacuum, distance of 1 Planck length a $\left(1.6 \times 10^{-35} m\right)$.The unit is named after Max Planck, who was the first to propose it. The value of Planck time is approximately equal to 5.32×10^{-44} s. And Century is one of the larger units of time and is equal to 100 years. Find approximately how many Planck

time's make one century. (Take one year = 365 days)

A. 1 Century $=5.89x10^{52}t_p$

B. 1 Century $=5.89x10^{62}t_p$

C. 1 Century $=5.89x10^{72}t_p$

D. None of these

Answer:

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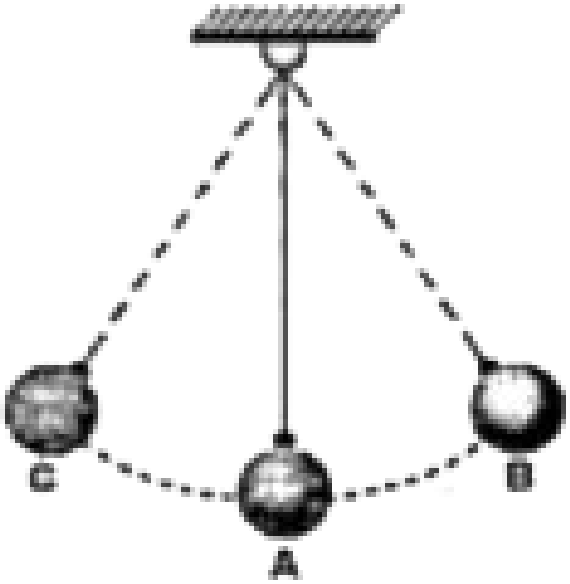
39. In the figure, if the time taken by the bob to move from A to B is 0.5 second, the time period of the pendulum is____



A. 0.5sec

B. 1 sec

C. 1.5sec

D. 2sec

Answer:

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40. The time period of a simple pendulum is 1 second. The time taken by it to complete $\frac{1}{2}$ oscillation, is____

A. 0.5 sec

B. 2sec

C. 4sec

D. 8sec

Answer:

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41. The time period of a simple pendulum is 5 seconds. If mass of the bob is increased to 4 times the original, the new time period of it is

____

A. 20sec

B. 15sec

C. 10sec

D. 5sec

Answer:

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42. 1 cm^2 -___

A. $1/10000m^2$

B. $10^{-5}m^2$

C. $1/100000m^2$

D. $10^{-4}m^2$

Answer:

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43. 1 km^2 =____hectares.

A. 10000

B. 1000

C. 100

D. 10

Answer:

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44. Statement 1: 1 km^2=1,000,000 m^2

Statement II: 1 hectare 100 Acres

A. Statement -I is true, Statement - II is false.

B. Statement -I is false, Statement - II is true.

C. Both Statements I & II are true.

D. Both Statements I & II are false.

Answer:

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45. The area of a square surface, whose each side is equal to one metre is

A. square millimetre

B. square centimetre

C. square cube metre

D. square metre

Answer:

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46. A school hall measures 20 m in length and 12 m in breadth. Find the area of the school hall.

A. 1200 m^2

B. 120 m^2

C. 240 m^2

D. 2400 m^2

Answer:

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47. The length of the school play ground is 400 m and breadth is 100 m. The area of the play ground is ____hectares.

A. 3hectares

B. 2hectares

C. 4hectares

D. 5hectares

Answer:

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48. What is the area of rectangular graph paper having 6cm length and 5cm width?

A. 11 cm^2

B. 1 cm^2

C. 30 cm^2

D. 60 cm^2

Answer:

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49. $1m^2 =$ _____ hectare

1 hectare = _____ km^2

$1mm^2 =$ _____ km^2

A. $x = 10^{-6}, y = 10^{-4}, z = 10^{-2}$

B. $x = 10^{-4}, y = 10^{-2}, z = 10^{-6}$

C. $x = 10^{-2}, y = 10^{-4}, z = 10^{-6}$

D. $x = 10^{-4}, y = 10^{-4}, z = 10^{-2}$

Answer:

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50. Statement I: The smaller unit for measuring volume of liquids is millilitre.

Statement II: In standard international system volume is measured in cubic metre

A. volume of liquids is millilitre. Statement II: In standard international system volume is measured in cubic metre

B. Statement -I is false, Statement - II is true.

C. Both Statements I & II are true.

D. Both Statements I & II are false.

Answer:

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51. If length, breadth and height of cuboid are 20 cm, 18 cm and 15 cm, then it volume in M.K.S system is

A. 540 cubic metre

B. 540000 cubic metre

C. 640 cubic metre

D. 640000 cubic metre

Answer:

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52. If length breadth and height of cuboid are 30 m, 28 m and 12 m then it volume in C.G.S system is

A. 1008.00 cubic m

B. 10080000 cubic m

C. 1008000 cubic m

D. 10080 cubic m

Answer:

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53. Find the volume of cuboid of dimensions 5cm, 4cm and 3cm.

A. 60 cm^3

B. 120 cm^3

C. 240 cm^3

D. 480 cm^3

Answer: A

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54. A measuring cylinder has water of volume $75cm^3$ ' A stone is dropped in water and the level rises to $125cm^3$. What is the volume of stone ?

A. 25 cm^3

B. 50 cm^3

C. 75 cm^3

D. 100 cm^3

Answer: B

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55. A stone of volume 50 cm^3 immersed into $80cm^3$ of water in a measuring jar. Then what will be the new reading in measuring jar?

A. 15 cm^3

B. 130 cm^3

C. 45 cm^3

D. 60 cm^3

Answer:

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56. The volume of a rectangular slab is $12cm^3$. The length and breadth of the slab are 3 cm and 2 cm respectively. Find its height.

A. 10cm

B. 8cm

C. 4cm

D. 2cm

Answer:

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57. A boy has purchased a toy, which is in the form of a cuboid. The cuboid has the followign dimensionis. $0.003km \times 0.03m \times 3cm$. Now the boy pours 1 litre of water into the cuboid. Will the cuboid hold 1 litre of water?

A. 900 cm^3

B. 1800 cm^3

C. 2700 cm^3

D. 3600 cm^3

Answer:

Watch Video Solution

58. When a stone is lowered into a measuring cylinder the volume is 9.3 ml. The volume of the stone is 5.8 ml. Find the initial volume of water in the measuring cylinder.

A. 3.5 ml

B. 5 ml

C. 6.5 ml

D. 8.5 ml

Answer:

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59. Express $5cm^3$ in terms of cubic millimetres.

A. 500 mm^3

B. 5000 mm^3

C. 50 mm^3

D. 0.5 mm^3

Answer:

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60. Statement I: The density of liquids and gases changes with change in temperature.

Statement II: The substances having a density less than 1 g/cm^3 will flow in water.

A. Statement -I is true, Statement - II is false.

B. Statement -I is false, Statement - II is true.

C. Both Statements I & II are true.

D. Both Statements I & II are false.

Answer:

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61. A piece of lead weight 232 g and has a volume of 20 cm^3 , then the density of lead

A. 11.6 g/cm^3

B. 21.6 g/cm^3

C. 31.6 g/cm^3

D. 41.6 g/cm^3

Answer:

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62. 5 litres of alcohol has a mass of 4 kg. Calculate the density of alcohol in g/cm^3

A. 0.6 g/cm^3

B. 0.10 g/cm^3

C. 0.8 g/cm^3

D. 0.18 g/cm^3

Answer:

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63. Find the mass of $555cm^3$ of iron in kg when density of iron is $7.6g/cm^3$.

A. 2.218 kg

B. 4.218 kg

C. 6.218 kg

D. 8.218 kg

Answer:

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64. If density of wood is 500 kg/m^3, then what will be the value in g/cm^3 ?

A. 0.5 g/cm^3

B. 5 g/cm^3

C. 0.6 g/cm^3

D. 4 g/cm^3

Answer:

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65. Density in S.I system=____x density in CGS system.

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66. If one litre (1000 cm^3) of water weighs 1000 g Hence the density of water is

A. 0.1 g/cm^3

B. 2 g/cm^3

C. 0.2 g/cm^3

D. 1 g/cm^3

Answer:

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67. Choose the correct option, which defines Relative density.

A. R.D=Density of substance/Density of water at 4° C

B. R.D= mass of substance + mass of an equal volume of water at 4°C

C. R.D=Density of substance + Density of water at 4°C

D. R.D = Density of substance + Mass of water at 4°C

Answer:

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68. Statement I: The CGS unit of relative density is gm/cm^2

Statement II: 1 g/cm^3= 1000 kg/m^3

A. Statement =I is true, Statement-11 is talse.

B. Statement -I is false, Statement - II is true.

C. Both Statements I & II are true.

D. Both Statements I & II are false.

Answer:

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69. If relative density of a substance is K then the density of that substance is

A. K kg/m^3

B. 100K kg/m^3

C. 1000K kg/m^3

D. k/1000 kg/m^3

Answer:

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70. What is the mass of air in a room of dimensions $3m \times 4m \times 5m$, when the density of air is 1.3 kg m^{-3}?

A. 23.7 kg

B. 39 kg

C. 46.15 kg

D. 78 kg

Answer:

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71. The length of an iron cylinder is 0.8 m and the area of cross sectionis $0.45m^2$. Find the mass of the cylinder if its density is $7800kg/m^3$.

A. 1404 kg

B. 2808 kg

C. 5616 kg

D. 702 kg

Answer:

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72. $30cm^3$ of iron weighs 234g. Find its density in kg m^{-3}.

A. 3600 kgm^{-3}

B. 78 kg m^{-3}

C. 7800 kgm^{-3}

D. 780 kgm^{-3}

Answer:

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73. If the mass of 2 litres of water is 2 kg, find its density in S.I. system.

A. 1 kg/m^3

B. 10 kg/m^3

C. 100 kg/m^3

D. 1000 kg/m^3

Answer:

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74. A sphere of radius 7 cm weights 490 g. Calculate its density in S.I. system.

A. 341 kg/m^3

B. 170.5 kg/m^3

C. 70 kg/m^3

D. 35 kg/m^3

Answer:

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Conceptive Worksheet

1. Physical quantity = Numerical value x____

A. Standard number

B. Standard Unit

C. standard value

D. none of these

Answer:

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2. To measure any physical quantity.____should be required.

A. Time

B. mass

C. unit

D. Length

Answer:

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3. The S.I. system has how many basic units?

A. 15

B. 7

C. 10

D. 8

Answer:

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4. 60 kilogram in short form is written as

A. 60 kg

B. 60 kg

C. Both (A) and (B)

D. none

Answer:

Watch Video Solution

5. Which among the following is the international system of units ?

A. S.I.

B. F.P.S

C. C.G. S

D. M.K.S

Answer:

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6. A physical quantities which are independent of other physical quantities are

A. fundamental quantities

B. derived quantities

C. Both (A) and (B)

D. neither fundamental nor derivered

Answer:

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7. Unit of area is a

A. Derived unit

B. Fundamental unit

C. Both (A) and (B)

D. none of these

Answer:

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8. The basic unit of speed is:

A. Fundamental unit

B. Derived unit

C. Neither of above

D. cannot say

Answer:

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9. Which of the following quantities are used to derive the quantity density

A. mass

B. area

C. volume

D. Both (A) and (C)

Answer:

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10. बल का मात्रक न्यूटन है।

A. n

B. N

C. nN

D. none of these

Answer:

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11. How many quintals are there in one metric ton ?

A. 10000

B. 1000

C. 100

D. 10

Answer:

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12. How many centimetres make 1 fermi?

A. 10^{-15} cm

B. 10^{-13} cm

C. 10^{-12} cm

D. 10^{-10} cm

Answer:

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13. How many centimetre make I nano metre

A. 10^{-7} cm

B. 10^{-5} cm

C. 10^{-15} cm

D. 10^{-10} cm

Answer:

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14. 1 km^2 =____

A. 1hectares

B. 10hectares

C. 100hectares

D. 1000hectares

Answer:

 Watch Video Solution

15. 1 litre = _____ millilitres.

A. 1000 ml

B. 1000 cc

C. both (A) and (B)

D. none of these

Answer:

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16. 1 cm^2=____

A. $10^{-10} km^2$

B. 10^{-8} hectares

C. $10^{-4} m^2$

D. all of these

Answer:

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17. The acceleration of a car is 51840 km/h^2.

The same in m/s^2 is____

A. 4

B. 8

C. 12

D. none

Answer:

Watch Video Solution

18. 0.4 sq.cm is___sq. km

A. 4×10^{-10}

B. 4×10^{-11}

C. $0.4x \times 10^{-11}$

D. 4×10^{-9}

Answer: B

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19. 1 μ g (micro gram) =____

A. 10^{-10}

B. 10^{-8}

C. 10^{-6}

D. 10^{-4}

Answer: C

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20. What is the SI base unit for length?

A. meter

B. centimetre

C. Kilometre

D. All of these

Answer:

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21. 4 kilometre are equal to

A. 4, 00, 000 metre

B. 40,000 metre

C. 4,000 metre

D. 400 metre

Answer: C

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22. 15 cm is equal to

A. 150 mm

B. 15 mm

C. 1.5 mm

D. 0.15 mm

Answer: A

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23. Which is a correct relationship?

A. 1m=100 cm

B. 1 cm =10 mm

C. 1 km=1000 m

D. all the correct

Answer:

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24. 1 cm=___ kilometre.

A. 100

B. 10^5

C. 10^{-5}

D. 10^{-2}

Answer: C

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25. Arrange the following lengths in their increasing magnitude:

1 metre, 1 centimetre, 1 kilometre, 1 millimetre.

A. 1 centimetre $<$ 1 millimetre $<$ 1 kilometre $<$ 1 metre

B. 1 millimetre $<$ 1 centimetre $<$ 1 metre $<$ 1 kilometre

C. 1 kilometre $<$ 1 metre $<$ 1 centimetre $<$ 1 millimetre

D. none

Answer:

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26. One Angstrom is.....

A. 10^{-10} m

B. 10^{-8} m

C. 10^{-6} mm

D. 10^{-10} cm

Answer:

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27. 1 AU. is equal to

A. 1.496×10^{11}m

B. 1.496×10^{9}cm

C. 1.496×10^{8}m

D. 1.444×10^{6}m

Answer:

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28. The size of bacteria is generally measuredin microns. The micrometer (μm), isoften called the micron. How many micorns make up 1 kilometer?

A. 10^3

B. 10^6

C. 10^9

D. 10^{12}

Answer:

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29. Least count of a metre scale is

A. 1cm

B. 0.1mm

C. 0.1cm

D. 0.01 mm

Answer:

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30. 1 quintal is equal to

A. 100kg

B. 1000kg

C. 10kg

D. 500kg

Answer:

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31. 1 mean solar day=____

A. 365days

B. 10years

C. 24hours

D. 60minutes

Answer:

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32. Match the following:

Column-I	Column-II
(A) Water clock	(p) Sand
(b) Sun dial	(q) flow of water
(c) Hour glass	(r) Shadow

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33. Which one is not a unit of time?

A. second

B. light year

C. hour

D. Century

Answer:

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34. Which of these is a type of clock?

A. Hourglass

B. Sundial

C. Pendulum clock

D. all

Answer:

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35. Which of these clocks would you expect to be the most accurate?

A. Pendulum clock

B. Atomic clock

C. Sundial

D. Water clock

Answer:

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36. The time period of the seconds pendulum is 2 seconds. Now, match the following with respect to seconds pendulum.

Column-I	Column-II
$(A)1$ oscillation	$(p)8$ seconds
$(b)1/2$ oscillation	$(q)2$ seconds
$(c)1/4$ oscillation	$(r)1$ second
$(D)4$ oscillation	$(r)0.5$ second

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37. If the Charminar superfast express staying 00 hours in Warangal, then the time is 12 hour clock is _____

A. 12 O'clock at night

B. 12 O'clock at noon

C. 18 O'clock at night

D. 18 O'clock at noon

Answer:

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38. A passenger goes to Secunderabad railway station. He asked the enquiry counter, When did Tirumala express come? The enquiry counter person replied 18 hour 15 minutes. Then the time in his 12-hour clock was_____

A. 5 hour-45 minutes AM

B. 5 hour-45 minutes PM

C. 6 hour 15 minutes AM

D. 6 hour 15 minutes PM

Answer:

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39. Fill in the following blanks:

A. _____(century / minute) is a very large unit of time

B. one _____is equal to 10 centures

C. _____made the first pendulum colock

D. _____is the SI unit of time

Answer:

Watch Video Solution

40. The time period of a simple pendulum depends on its_____

A. the length of the string used

B. the mass of the bob

C. the extent to which the bob is displaced

D. none of these

Answer:

Watch Video Solution

41. The amount of surface occupied by an object or a plane is

A. length

B. temperature

C. area

D. time

Answer:

Watch Video Solution

42. Unit of area is a

A. fundamental unit

B. derived unit

C. both (1) and (2)

D. none

Answer:

Watch Video Solution

43. In C.GS system the unit of area is

A. s^2

B. kg^2

C. cm^2

D. m^2

Answer:

Watch Video Solution

44. Area of 1 sqcm is equal to

A. 100 mm^2

B. 1000 mm^2

C. 10 mm^2

D. 10000 mm^2

Answer:

Watch Video Solution

45. How many small squares are there in 1sq.cm?

A. 1000

B. 100

C. 10

D. 1

Answer:

 Watch Video Solution

46. The area of the land is $100m^2$ here m^2 stands for

A. (A) Numerical value of area

B. Unit of area

C. Both (A) and (B)

D. none of these

Answer:

Watch Video Solution

47. 1 km^2=____

A. 1 hectare

B. 10 hectare

C. 100 hectare

D. 1000 hectare

Answer:

Watch Video Solution

48. 1 hectare=_____

A. $1000m^2$

B. 10000 m^2

C. 100000 m^2

D. 100 m^2

Answer:

Watch Video Solution

49. 1 litre=____

A. 1000 millilitre

B. 1000 cc

C. Both (A) and (B)

D. none

Answer: C

Watch Video Solution

50. The volume occupied by a cube whose each side is equal to 1 cm is called

A. cubic centimetre

B. cubic millimetre

C. cubic metre

D. none of these

Answer:

 Watch Video Solution

51. Volume of rectangular glass of a regular body is____

A. length + breadth + height

B. length-breadth + height

C. (length x breadth) x height

D. length/breadth x height

Answer:

Watch Video Solution

52. The unit for the volume of solids in MKS system is

A. cm^3

B. m^3

C. ml^3

D. I^3

Answer:

Watch Video Solution

53. One cubic metre is equal to _____

A. 10^6 cc

B. 10^4 cc

C. 10^3 cc

D. 10^9 cc

Answer:

Watch Video Solution

54. The vessel used in laboratories to measure the volume of a liquid accurately .....

A. Pipette

B. Burette

C. Measuring jar

D. Measuring vessel

Answer:

Watch Video Solution

55. 1 litre=_____

A. 1000cc

B. 1000cm

C. 100ml

D. 100cm

Answer:

Watch Video Solution

56. The space occupied by a substance is called_____

A. area

B. length

C. volume

D. None of these

Answer:

Watch Video Solution

57. The CGS unit of volume is____.

A. cubic centimetre

B. cubic millimetre

C. cubic metre

D. cubic litre

Answer:

Watch Video Solution

58. One cubic metre is equal to _____

A. 10^6 cc

B. 10^4 cc

C. 10^3 cc

D. 10^9 cc

Answer:

Watch Video Solution

59. The volume occupied by a cube whose each side is equal to 1 cm is called

A. cubic centimetre

B. cubic millimetre

C. cubic metre

D. none of these

Answer:

Watch Video Solution

60. The C.GS unit of density is

A. g cm^{-3}

B. g cm^{-2}

C. g/cm

D. g/cm^2

Answer:

Watch Video Solution

61. In order to find the density of a solid we have to find its :

A. Mass and area

B. weight and area

C. area and volume

D. mass and volume

Answer:

Watch Video Solution

62. The density of a body is represented by the expression

A. D=V/M

B. D=M x V

C. D= 1/MxV

D. D=M/V

Answer:

Watch Video Solution

63. What are the units of density in S.I. system?

A. kg/m^2

B. kg/m^3

C. kg m^{-2}

D. kg m^{-3}

Answer:

Watch Video Solution

64. The relative density of mercury is ?

A. 13.6 g/cm^3

B. 0.8 g/cm^3

C. 2.5 g/cm^3

D. none of these

Answer:

Watch Video Solution

65. The C.GS unit of. relative density is

A. gm / cm^3

B. gm / cm^2

C. gm/cm

D. no unit

Answer:

Watch Video Solution

66. Relative density is also known as

A. lighter density

B. numerical density

C. specific gravity

D. none of these

Answer:

Watch Video Solution

67. If M is the mass of an object of volume V, such that D is its density, then we can say

A. V= DM

B. MVD=1

C. M=VD

D. D=MV

Answer:

Watch Video Solution

68. C.G.S unit of density of is _____

A. kg/m^2

B. m/kg

C. g/cm^3

D. cm/g

Answer:

Watch Video Solution

69. The density of alcohol is $800kg/m^3$. Then the density in g/cm^3 is _____

A. 800000

B. 0.8

C. 0.008

D. 80000

Answer:

Watch Video Solution

70. 20 cm^3 of aluminium has mass 54g. Then I cm^3 of aluminium mass has____

A. 74g

B. 2.7g

C. 7.2g

D. 5.4g

Answer:

Watch Video Solution

71. A piece of lead weighs 232 g and has a volume of $20cm^3$. Find the density of lead.

A. 0.0862 g/cm^3

B. 0.0862 cm^3/g

C. 11.6 cm^3/g

D. 11.6 g/cm^3

Answer:

Watch Video Solution

Summative Worksheet

1. A piece of lead weighs 232 g and has a volume of $20cm^3$. Find the density of lead.

A. 5.8 g/ce

B. 23.2 g/cc

C. 11.6 g/cc

D. 17.4 g/cc

Answer:

Watch Video Solution

2. Find the mass of $555cm^3$ of iron in kg when density of iron is $7.6g/cm^3$.

A. 42.18 kg

B. 4.218 kg

C. 421.8 kg

D. 4218 kg

Answer:

Watch Video Solution

3. The length of a school compound is 500m and breadth is 120m. Find the area of compound in hectares

A. 3hectare

B. 6hectare

C. 12hectare

D. 24hectare

Answer: B

Watch Video Solution

4. Find the weight of a body of mass 1 tonn

A. 1 kg.wt

B. 10 kg.wt

C. 100 kg.wt

D. 1000 kg.wt

Answer: D

Watch Video Solution

5. The relative density of mercury is 13.6. State its density in S.I. unit.

A. 13.6 g/cc

B. 1.36 g/cc

C. 1360 g/cc

D. 13600 g/cc

Answer:

Watch Video Solution

6. If the density of copper is $8.9 \times 10^3 kg/m^3$, find its relative density.

A. 8900

B. 890

C. 89

D. 8.9

Answer:

Watch Video Solution

7. The time taken to complete 10 oscillations by a seconds pendulum is

A. 5sec

B. 10sec

C. 15sec

D. 20sec

Answer: D

 Watch Video Solution

8. The density of a cuboid of mass 100g with dimenssions 2 cm x 4cm x 5cm is

A. 7.5 g/ce

B. 5.0 g/cc

C. 2.5 g/cc

D. 1.25 g/cc

Answer:

Watch Video Solution

9. The total mass of two object of mass 2130 kg and 16 tones is

A. 18130 kg

B. 18.13 tone

C. Both (A) and (B)

D. 16213 kg

Answer: C

Watch Video Solution

10. Density of a body is two fifth of the density of water. Find the R.D of that body

A. 0.4

B. 2.5

C. 0.2

D. 0.6

Answer:

Watch Video Solution

Hots Worksheet

1. Statement I: Derived unit is independent unit.

Statement II: It is derived from fundamental units.

A. Statement -I is true, Statement - II is false.

B. Statement-I is false, Statement - II is true.

C. Both Statements I & II are true.

D. Both Statements I & II are false.

Answer:

Watch Video Solution

2. Derived units are the units of

A. derived physical quantities

B. fundamental physical quantities

C. both (A) and (B)

D. none of these

Answer:

Watch Video Solution

3. Which of the following are fundamental quantities?

A. mass

B. length

C. time

D. all

Answer: D

Watch Video Solution

4. $1cm^2 = \_\_\_\_\_ \ mm^2$

A. $10^4 m^2$

B. $10^3 m^2$

C. $10^2 m^2$

D. $10^2 mm^2$

Answer:

Watch Video Solution

5. 10 kg m^{-3} =____g cm^{-3}

A. 1000

B. 1

C. 10^{-2}

D. 100

Answer:

Watch Video Solution

6. How many centimetres make a kilometre?

A. 10^{-7} cm

B. 10^{-5} cm

C. 10^{-15} cm

D. 10^{-10} cm

Answer:

Watch Video Solution

7. 1 milligram=___

A. 10^{-6} kg

B. 10^{-3} g

C. 10^{6} kg

D. 10^{3} g

Answer: A, B

Watch Video Solution

8. 15 mm^2 is equal to

A. $15 \times 10^{-2} cm^2$

B. $15 \times 10^{-6} m^2$

C. 15×10^{-12} km

D. all the above

Answer:

Watch Video Solution

9. The velocity of a body is 10^2 mm/nano second, it is also equivalent to km/h

Watch Video Solution

10. If $1\,\mathrm{g\,cm\,s^{-1}} = x$ newton- second, then the number x is equal to:

A. 1×10^{-1}

B. 3.1×10^{-3}

C. 1×10^{-5}

D. 6×10^{-4}

Answer:

Watch Video Solution

11. 1 kg m / s^2 =___gm-mm / s^2

A. 10^5

B. 10^6

C. 10^4

D. 10^3

Answer:

Watch Video Solution

12. The S.I. unit of momentum is

A. n.s

B. N+s

C. N-s

D. none of these

Answer:

Watch Video Solution

13. I decade=____millennium

A. $\frac{1}{100}$

B. $\frac{1}{10}$

C. 100

D. 1000

Answer: A

Watch Video Solution

14. 1 m^3=____cm^3 .

A. 10^6

B. 10^8

C. 10^{10}

D. 10^{12}

Answer: A

Watch Video Solution

15. 1 litre = _____ millilitres.

A. 500

B. 1000

C. 1250

D. 1500

Answer:

Watch Video Solution

16. The volume of a rectangular glass slab of length= 3 cm, breadth 2 cm and height 2 cm is____cm^3

A. 10

B. 12

C. 14

D. 14

Answer:

Watch Video Solution

17. A book of length 25 cm, breadth 18 cm and height 2 cm. Then the volume of the book is

A. 900 cm^3

B. 45 cm^3

C. 900 m^3

D. 45 m^3

Answer:

Watch Video Solution

18. Mass of a wooden piece of length 20 cm breadth 10 cm and thickness 0.5 cm is 50g. What is the density of wood ?

A. 0.1 g/cm^3

B. 5.0 g/cm^3

C. 0.5 g/cm^3

D. 5.1 g/cm^3

Answer:

Watch Video Solution

19. A silk cloth of density 'D' units, is cut into 2009 equal parts. The density of each part is

A. $\frac{2009D}{2}$ units

B. D units

C. $\frac{2009D}{100}$ units

D. $\frac{D}{2009}$ units

Answer:

Watch Video Solution

20. From the following sets choose the correct representations.

(i) K.G for kilogram

(ii) C for degree Celsius

(iii) m for metre

(iv) s for second

A. Odd options

B. First two options

C. Even options

D. Last two options

Answer:

Watch Video Solution

21. Find the mass of $555cm^3$ of iron in kg when density of iron is $7.6g/cm^3$.

A. 4218 kg

B. 4.218 kg

C. 42.18 kg

D. 421.8 kg

Answer:

Watch Video Solution

22. An iron cylinder of radius 1.4cm and length 8 cm is found to weigh 369.6g. Calculate the density of iron.

A. 7.2

B. 7.5

C. 8

D. 8.2

Answer:

Watch Video Solution

23. The length of a cloth measured is 200 cm.

Match the following from

List-A	List-B
(i)Length	(a)Numerical value
$(ii)200$	(b)unit
(iii)cm	(c)physical quantity

A. i-a, ii-b, iii-c

B. i-c, ii-a, iii-b

C. i-c, ii-b, iii-a

D. i-b, ii-a, iii-c

Answer: C

Watch Video Solution

24. 1 kg =____tonne

A. 10^{-6}

B. 10^{-3}

C. 10^{-6}

D. 10^6

Answer:

Watch Video Solution

25. 1 micrometre (mm)=_____cm

A. 10^4

B. 10^6

C. 10^{-6}

D. 10^{-4}

Answer:

Watch Video Solution

26. Match the following:

List-A	List-B
(i) Gram	$(a) 10^{-3}\mathrm{g}$
(ii) *Microgram*	$(b) 10^{-3}\mathrm{kg}$
(iii) Milligram	$(c) 10^{-6}\mathrm{g}$

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27. A syringe has a capacity of 5 ml. Its capacity in cm^3 and m^3 is respectively are

A. $5 \times 10^{-8} m^3, 5cm^3$

B. $5cm^3, 5 \times 10^{-6} m^3$

C. $5 \times 10^{-3} m^3, 5cm^3$

D. $5cm^3, 5 \times 10^3 m^3$

Answer:

Watch Video Solution

28. A water tank has a capacity of 10,000 litre.

Its value in m^3 is

A. 100 m^3

B. 1000 m^3

C. 1 m^3

D. 10 m^3

Answer:

Watch Video Solution

29. The water level of a measuring cylinder is 26ml. A piece of concrete having a volume of 6 cm^3 is immersed in it. The new level of water is

A. 20ml

B. 26ml

C. 32ml

D. 6ml

Answer:

Watch Video Solution

30. The mass of an electron is $9.11 \times 10^{-31} kg$.

How many elecrons would make 1kg?

A. 1.1×10^{30}

B. 1.1×10^{31}

C. 1.1×10^{-30}

D. 1.1×10^{-31}

Answer:

Watch Video Solution

31. A vessel of 200 gm weight is filled with some kerosene. If weight of the vessel with the keroseine is 270 g, then how much kerosene is filled in the vessel?

A. 70ml

B. 80ml

C. 87.5ml

D. 70ml

Answer:

Watch Video Solution

32. If 10 copper pieces, each of mass 20g, are placed in the vessel with water, the level of water increases to 300 ml in the vessel. Find the initial level of water in the vessel

A. 100ml

B. 1000ml

C. 10ml

D. 280ml

Answer:

Watch Video Solution

33. If $\frac{1kg}{m^3} = 10^x \frac{gm}{cm^3}$ then find the value of x.

A. -2

B. 2

C. -3

D. 3

Answer:

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34. If m_1, m_2, m_3 and m_4 are masses of four bodies 0.3 kg, 0.3 mg, $0.3 \times 10^{-6} g$ nad 3000 g respectively. The above in increasing order of masses are as sollows

A. $m_1, > m_2, > m_3, > m_4$

B. $m_4, > m_2, > m_3, > m_4$

C. $m_4, > m_1, > m_2, > m_3$

D. $m_3, > m_2, > m_4, > m_1$

Answer:

Watch Video Solution

Iit Jee Worksheet

1. Mass per unit volume of a substance is called_____

A. weight

B. force

C. density

D. time

Answer:

Watch Video Solution

2. The density is CGS system =___SI system.

A. $\frac{1}{10000}$

B. 1000

C. 100

D. $\frac{1}{100}$

Answer:

Watch Video Solution

3. A piece of lead weighs 232 g and has a volume of $20cm^3$. Find the density of lead.

A. $11.6/cm^3$

B. 11.2 gm/cm^3

C. 12 gm/cm^3

D. 11.6 kg/cm^3

Answer:

Watch Video Solution

4. An iron needle sinks in water as its density is ..... than $1gmc^{-3}$

A. Greater than

B. Lesser than

C. equal to

D. none

Answer:

Watch Video Solution

5. The weight is found by___balance

A. Physical balance

B. Spring balance

C. Sensitive balance

D. all the above

Answer:

 Watch Video Solution

6. Explain density and relative density and write their formulae.

A. $d = \frac{v}{m}$

B. $d = \frac{m}{v}$

C. $d = Mv$

D. $d = \frac{1}{mv}$

Answer:

Watch Video Solution

7. The density of wood is 0.65 g/cm^3 . The density in SI system is

A. 65 kg/m^3

B. 650 kg/m^3

C. 6.5 kg/m^3

D. 0.65 kg/m^3

Answer:

Watch Video Solution

8. Substance which have density more than 1g cm^{-3} will

A. sink

B. flot

C. Submerge

D. none

Answer:

Watch Video Solution

Iit Jee Worksheet Multiple Correct Answer Type Ii

1. The CGS unit of volume is____.

A. cm^3

B. cc

C. cm^2

D. m^3

Answer:

Watch Video Solution

2. Which of the following is not the unit of length?

A. meter

B. centimetre

C. foot

D. second

Answer:

 Watch Video Solution

3. Which of the following is the unit of area?

A. cm^2

B. mm^2

C. m^2

D. m / s^2

Answer:

Watch Video Solution

4. Which one of the following is not a unit of mass?

A. pound

B. meter

C. gram

D. ton

Answer:

Watch Video Solution

5. Which of the following is not the unit of volume?

A. cubic metre

B. mm^2

C. cm^3

D. $(\text{foot})^3$

Answer:

Watch Video Solution

Iit Jee Worksheet Iii Paragraph Type Paragraph Ii

1. Calculate the mass of a body whose volume is 2 m^3 and relative density is 0.52.

A. 1040 kg

B. 1004 kg

C. 4001 kg

D. 1400 kg

Answer:

Watch Video Solution

Iit Jee Worksheet Iv Integer Type

1. The length of a blackboard is 240 cm. Rakesh tries to measure this length using a small wooden stick of length 40 cm. The number of times that the stick must be revolved over the blackboard to completely cover the length is

A. 6

B. 12

C. 28

D. 24

Answer:

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