

**BALABHADRA SKILL DEVELOPMENT ACADEMY**  
**SCIENCE QUESTION BANK – 36**  
**UNITS OF MEASUREMENT AND CONVERSION FACTORS**

Time: 1 Hour

Full marks: 64

Pass marks: 50

1. Write down units and SI units of measurement for following

Sl. No.	Entity	Units	SI units
(a)	Length	-----	-----
(b)	Time	-----	-----
(c)	Amount of substance	-----	-----
(d)	Electric current	-----	-----
(e)	Temperature	-----	-----
(f)	Luminous intensity	-----	-----
(g)	Mass	-----	-----
(h)	Capacity/volume	-----	-----

2. Write down imperial units of measurement for following

Sl. No.	Entity	Imperial units
(a)	Length	-----
(b)	Mass	-----
(c)	Capacity	-----

3. Fill up following (Conversion factors)

- (a) 1 foot = ----- inch
- (b) 1 inch = ----- feet
- (c) 1 mile = ----- feet
- (d) 1 yard = ----- feet = ----- inch
- (e) 1 cm = ----- mm
- (f) 1 m = ----- cm
- (g) 1 km = ----- m
- (h) 1 mm = ----- m
- (i) 1 mg = ----- g
- (j) 1 g = ----- mg
- (k) 1 kg = ----- g
- (l) 1 oz = ----- lb
- (m) 1 lb = ----- oz
- (n) 1 ton = ----- lbs
- (o) 1 ml = ----- l

- (p) 1 l = ----- ml
- (q) 1 kl = ----- l
- (r) 1 l = ----- cm<sup>3</sup>
- (s) 1 fl. oz. = ----- pt
- (t) 1gal = ----- fl. oz.
- (u) 1 pt = ----- fl. oz.
- (v) 0°C = ----- K = ----- F
- (w) 0 K = ----- C = ----- F
- (x) 0°F = ----- C = ----- K

4. Fill up following (Conversion factors)

- (a) 1 s = ----- min
- (b) 1 min = ----- s
- (c) 1 hr = ----- min = ----- s
- (d) 1 day = ----- hr
- (e) 1 week = ----- days
- (f) 1 month = ----- weeks
- (g) 1 year = ----- months

5. Write formula for conversion of temperature.

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6. Write meaning of following.

SI. No.	Prefix	Symbol	Meaning	Exponent
(a)	Tera	-----	-----	-----
(b)	Giga	-----	-----	-----
(c)	Mega	-----	-----	-----
(d)	Kilo	-----	-----	-----
(e)	Hecto	-----	-----	-----
(f)	Deca	-----	-----	-----
(g)	deci	-----	-----	-----
(h)	centi	-----	-----	-----
(i)	milli	-----	-----	-----
(j)	micro	-----	-----	-----
(k)	nano	-----	-----	-----
(l)	pico	-----	-----	-----
(m)	femto	-----	-----	-----
(n)	atto	-----	-----	-----

7. Write meaning of followings

- (a) 1 hundred = -----
- (b) 1 thousand = -----
- (c) 1 lakh = -----
- (d) 1 million = -----
- (e) 1 billion = -----
- (f) 1 trillion = -----
- (g) 1 quadrillion = -----

**BALABHADRA SKILL DEVELOPMENT ACADEMY**  
**SCIENCE QUESTION BANK – 36 (ANSWERS)**  
**UNITS OF MEASUREMENT AND CONVERSION FACTORS**

1. Units and SI units of measurement

SI. No.	Entity	Units	SI units
(a)	Length	Kilometer, meter (m), centimeter, millimeter	meter (m)
(b)	Time	Second, Minute, Hour, Days, Week, Month, Year	Second
(c)	Amount of substance	Mole (mol)	Mole(mol)
(d)	Electric current	Ampere (A)	Ampere (A)
(e)	Temperature	Kelvin (K), Celsius (C), Fahrenheit (F)	Kelvin (K)
(f)	Luminous intensity	Candela(cd)	Candela(cd)
(g)	Mass	kilogram, gram, milligram	Gram (gm)
(h)	Capacity/volume	kilolitre, litre, milliliter, centilitre	Litre (L)

2. Imperial units of measurement

SI. No.	Entity	Imperial units
(a)	Length	foot, inch, yard, mile
(b)	Mass	Ounce (oz), pound, stone, ton
(c)	Capacity	Gallon (gal), pint (pt), quart, fluid ounce (fl. oz)

3. Conversion factors

- (a) 1 foot = 12 inch
- (b) 1 inch = 0.083333 feet
- (c) 1 mile = 5280 feet
- (d) 1 yard = 3 feet = 36 inch
- (e) 1 cm = 10 mm
- (f) 1 m = 100 cm
- (g) 1 km = 1000 m
- (h) 1 mm = 0.001 m
- (i) 1 mg = 0.001 g
- (j) 1 g = 1000 mg
- (k) 1 kg = 1000 g
- (l) 1 oz = 0.0625 lb
- (m) 1lb = 16 oz

- (n) 1 ton = 2000 lbs
- (o) 1 ml = 0.001 l
- (p) 1 l = 1000 ml
- (p) 1 kl = 1000 l
- (r) 1 l = 1000 cm<sup>3</sup>
- (s) 1 fl. oz. = 1/20 pt
- (t) 1gal = 128 fl. oz.
- (u) 1 pt = 16 fl. oz.
- (v) 0°C = 273.15 K = 32°F
- (w) 0 K = -273.15°C = -459.57 °F
- (k) 0°F = -17.778°C = 255.372 K

4. Conversion factors

- (a) 1 s = 1/60 min
- (b) 1 min = 60 s
- (c) 1 hr = 60 min = 3600 s
- (d) 1 day = 24 hr
- (e) 1 week = 7 days
- (f) 1 month = 4 weeks
- (g) 1 year = 12 months

5. Formula for conversion of temperature.

$C/5 = (F - 32) / 9 = (K - 273.15) / 5$ , where C - Celsius, F - Fahrenheit, K - Kelvin

6. Meaning

Sl. No.	Prefix	Symbol	Meaning	Exponent
(a)	Tera	T	1,000,000,000,000	10 <sup>12</sup>
(b)	Giga	G	1,000,000,000	10 <sup>9</sup>
(c)	Mega	M	1, 000,000	10 <sup>6</sup>
(d)	Kilo	K	1000	10 <sup>3</sup>
(e)	Hecto	H	100	10 <sup>2</sup>
(f)	Deca	da	10	10 <sup>1</sup>
(g)	deci	d	0.1	10 <sup>-1</sup>
(h)	centi	c	0.01	10 <sup>-2</sup>
(i)	milli	m	0.001	10 <sup>-3</sup>
(j)	micro	μ	0.000001	10 <sup>-6</sup>
(k)	nano	n	0.000000001	10 <sup>-9</sup>
(l)	pico	p	0.000000000001	10 <sup>-12</sup>
(m)	femto	f	0.000000000000001	10 <sup>-15</sup>
(n)	atto	a	0.000000000000000001	10 <sup>-18</sup>

7. Meaning

- (a) 1 hundred =  $10^2$
- (b) 1 thousand =  $10^3$
- (c) 1 lakh =  $10^5$
- (d) 1 million =  $10^6$
- (e) 1 billion =  $10^9$
- (f) 1 trillion =  $10^{12}$
- (g) 1 quadrillion =  $10^{15}$