

**IMPORTANT INSTRUCTIONS :**

All Questions are compulsory. Each correct answer carries 4 marks. No negative marks,

No mark is deducted if not attempted. All are single correct answers only.

---

**Syllabus:**

---

MATHEMATICS :Number

---

PHYSICS :Kine

---

CHEMISTRY :Chemic

---

IIT – JEE - 2009 (PAPER – 1, CODE – 1)

**MATHEMATICS**  
**SECTION - I (SINGLE CORRECT)**

1. **The cardinal number of the set of letters of the word “IITJEE” is**  
A) 4                      B) 2                      C) 3                      D) 6
2. **Which of the following is true.**  
A) every finite set is empty set.                      B) every empty set is finite set  
C)  $\{\{\}\}$  is an empty set                      D) finite set always empty set
3. **The predecessor -1 in integers is**  
A) -1                      B) -2                      C) 0                      D) 1
4.  **$A = \{x^3 / x^2 + 1 = 0 \mid x \in \mathbf{R}\}$  is -- Set**  
A) Single - ton set                      B) empty set  
C) Infinite set                      D) None of these
5. **Successor of 0 is Rational number.**  
A) -1                      B) 1                      C) 0.0001                      D) does not exists
6. **A well defined set in the following**  
A) All good books in your library                      B) Three good persons in India  
C) All planets in the solar system  
D) All beautiful flowers in your garden
7. **Which of the following is incorrect.**  
A) A represents as a set                      B) A represents as a element of a set  
C)  $A = \{x \neq x \mid x \in \mathbf{N}\}$  is an empty set.  
D) ‘e’ is a rational number.

**SECTION - II (MULTI CURRECT)**

8.

9.  
10.

**SECTION -III (COMPREHENSION)**

- I.  
11.  
12.  
13.

**SECTION - IV (MATRIC MATCHING)**

14.  
15.  
16.  
17.

**PHYSICS**  
**SECTION - I(SINGLE CURRECT)**

18. **CGS Unit of density is\_\_**  
A)  $g / cm^3$       B)  $kg / m^3$       C)  $m / kg$       D)  $g / cm^2$
19. **1 kmph =**  
A)  $\frac{5}{18} mm / sec$       B)  $\frac{5}{18} m / sec$       C)  $\frac{18}{5} m / sec$       D)  $\frac{18}{5} km / sec$
20. **Which of the following physical quantities are measured in M.K.S. system ?**  
A) Length      B) Mass      C) Time      D) All of these
21. **CGS Unit of power is .....**  
A)  $J / sec$       B) watt      C) erg/sec      D) Joule
22. **1 Fermi =**  
A)  $10^{-15} m$       B)  $10^{-12} m$       C)  $10^{-13} m$       D)  $10^{-8} m$

23. How many picometre are contained in one gigametre ?

A)  $10^{20}$

B)  $10^{10}$

C)  $10^{15}$

D)  $10^{21}$

24. Litre measure capacity ranges from \_\_\_\_\_

A) 50 ml to 1 litre

B) 50ml to 3 litres

C) 10 litres to 100 litres

D) None of these

**SECTION - II(MULTI CURRECT)**

25.

26.

27.

**SECTION -III (COMPREHENSION)**

I.

28.

29.

30.

**SECTION - IV (MATRIC MATCHING)**

31. Match the following

**Physical quantity Units**

a) Temperature

(j)  $^{\circ}\text{K}$

b) Length

(k)  $^{\circ}\text{C}$

(l) M

(m) m

A) a – j, b – l

B) a – k, b – m

C) a – j,k ; b – l, m

D) a – l,m ; b – j,k

32.

33.

34.

**CHEMISTRY**  
**SECTION - I(SINGLE CORRECT)**

- 35.
- 36.
- 37.
- 38.
- 39.
- 40.
- 41.

**SECTION - II(MULTI CORRECT)**

- 42.
- 43.
- 44.

**SECTION -III (COMPREHENSION)**

- I.**
- 45.
  - 46.
  - 47.

**SECTION - IV (MATRIC MATCHING)**

- 48.
- 49.
- 50.
- 51.



