

1. **The sum of the first 20 natural numbers is:**

- a) 210
- b) 220
- c) 190
- d) 200

Answer: b) 220

2. **The distance formula in a 2D plane is:**

- a) $(x_2+x_1)^2+(y_2+y_1)^2\sqrt{(x_2+x_1)^2+(y_2+y_1)^2}$
- b) $(x_2-x_1)^2+(y_2-y_1)^2\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$
- c) $(x_2-x_1)+(y_2-y_1)(x_2-x_1)+(y_2-y_1)(x_2-x_1)+(y_2-y_1)$
- d) None of the above

Answer: b) $(x_2-x_1)^2+(y_2-y_1)^2\sqrt{(x_2-x_1)^2+(y_2-y_1)^2}$

3. **The roots of $x^2-9=0$ are:**

- a) 3, -3
- b) 9, -9
- c) 3, 9
- d) -3, 9

Answer: a) 3, -3

4. **The value of $\tan^{-1}(\tan 45^\circ)$ is:**

- a) 0
- b) 1
- c) $3\sqrt{3}$
- d) $\frac{1}{\sqrt{3}}$

Answer: b) 1

5. **The perimeter of a semicircle of radius 7 cm is:**

- a) 22 cm
- b) 44 cm
- c) 36 cm
- d) 11 cm

Answer: c) 36 cm

6. **In an AP, if the first term is 5 and the common difference is 3, the 10th term is:**

- a) 30
- b) 35
- c) 32
- d) 33

Answer: d) 33

7. **The volume of a cylinder is given by:**

- a) $\pi r^2 h$
- b) $\frac{1}{3}\pi r^2 h$
- c) $2\pi r h$
- d) $\pi r h$

Answer: a) $\pi r^2 h$

8. **The median of 1, 3, 3, 6, 7, 8, 9 is:**

- a) 6
- b) 7
- c) 3
- d) 9

Answer: a) 6

9. If $a^2 + b^2 = c^2$, then the triangle is:
- Isosceles
 - Right-angled
 - Equilateral
 - Scalene
- Answer:** b) Right-angled
10. The probability of getting a head when tossing a coin is:
- 1
 - 0.5
 - 0.75
 - 2
- Answer:** b) 0.5
11. What is the zero of $x^2 + 4x + 4$?
- 0
 - 4
 - 4
 - None
- Answer:** b) -4
12. The value of 2^3 is:
- 6
 - 8
 - 16
 - 12
- Answer:** b) 8
13. The sum of the angles in a quadrilateral is:
- 180°
 - 360°
 - 270°
 - 90°
- Answer:** b) 360°
14. If $\sin A = \frac{3}{5}$, then $\cos A$ is:
- $\frac{4}{5}$
 - $\frac{3}{4}$
 - $\frac{1}{5}$
 - $\frac{5}{3}$
- Answer:** a) $\frac{4}{5}$
15. The slope of a line parallel to the x-axis is:
- 0
 - 1
 - Undefined
 - Infinite
- Answer:** a) 0

Science (15 Questions)

16. The chemical symbol of sodium is:
- Na
 - So

- c) S
- d) N

Answer: a) Na

17. **Photosynthesis occurs in:**

- a) Roots
- b) Leaves
- c) Stems
- d) Flowers

Answer: b) Leaves

18. **The functional unit of the kidney is:**

- a) Neuron
- b) Nephron
- c) Alveoli
- d) Glomerulus

Answer: b) Nephron

19. **The force that opposes motion is called:**

- a) Friction
- b) Tension
- c) Gravity
- d) Inertia

Answer: a) Friction

20. **An example of a renewable source of energy is:**

- a) Coal
- b) Solar energy
- c) Natural gas
- d) Petroleum

Answer: b) Solar energy

21. **The formula for methane is:**

- a) CH₄
- b) CO₂
- c) H₂O
- d) C₂H₆

Answer: a) CH₄

22. **The device used to measure electric current is called:**

- a) Voltmeter
- b) Ammeter
- c) Galvanometer
- d) Ohmmeter

Answer: b) Ammeter

23. **Which vitamin helps in clotting of blood?**

- a) Vitamin A
- b) Vitamin K
- c) Vitamin C
- d) Vitamin D

Answer: b) Vitamin K

24. **Which gas is released during respiration?**

- a) Oxygen
- b) Carbon dioxide
- c) Hydrogen

- d) Nitrogen
Answer: b) Carbon dioxide
25. **Which acid is present in vinegar?**
a) Hydrochloric acid
b) Sulfuric acid
c) Acetic acid
d) Nitric acid
Answer: c) Acetic acid
26. **The SI unit of pressure is:**
a) Newton
b) Pascal
c) Joule
d) Kelvin
Answer: b) Pascal
27. **Sound cannot travel through:**
a) Solids
b) Liquids
c) Vacuum
d) Air
Answer: c) Vacuum
28. **The part of the eye that controls the amount of light entering is:**
a) Cornea
b) Lens
c) Iris
d) Retina
Answer: c) Iris
29. **Which planet is known as the "Red Planet"?**
a) Venus
b) Jupiter
c) Mars
d) Mercury
Answer: c) Mars
30. **The splitting of light into its component colors is called:**
a) Reflection
b) Dispersion
c) Refraction
d) Diffusion
Answer: b) Dispersion
-

Social Science (10 Questions)

31. **Who is known as the Father of the Indian Constitution?**
a) Mahatma Gandhi
b) Jawaharlal Nehru
c) B.R. Ambedkar
d) Subhash Chandra Bose
Answer: c) B.R. Ambedkar

32. **What is the capital of France?**
a) Berlin
b) Paris
c) Madrid
d) Rome
Answer: b) Paris
33. **The Tropic of Cancer does not pass through:**
a) India
b) Mexico
c) China
d) Australia
Answer: d) Australia
34. **The First World War began in:**
a) 1914
b) 1918
c) 1939
d) 1945
Answer: a) 1914
35. **The highest peak in the world is:**
a) K2
b) Mount Everest
c) Kanchenjunga
d) Nanga Parbat
Answer: b) Mount Everest
36. ****Which river is known as the "Sorrow**