Section : 1 - Aptitude and Logical Reasoning

1. If '×' is called '+', '÷' is called '−', '−' is called '×' and '+' is called '÷', then $12 \times 7 \div 5 - 8 + 12 = $ ___.

    (a) $14\dfrac{3}{8}$ (b) $2\dfrac{1}{2}$ (c) $15\dfrac{2}{3}$ (d) 5

2. In a certain code language, '256' means 'you are beautiful'; '637' means 'they are bad' and '358' means 'beautiful and bad'. Which of the following numbers represents 'they' in that code language ?
    (a) 2   (b) 7   (c) 8   (d) 3

3. Find the mirror-image of the given combination of letters, if the mirror is placed vertically to the right.
    COMPARING

    (a) ɔOMҏAяIᴎϽ   (b) COWᑭARIᴎC   (c) ƆᴎIЯAᑫMOƆ   (d) ƆᴎIЯAᑫMOƆ

4. There is a certain relationship between the numbers on the either side of : : . Establish the same relationship in the other pair and find the missing number.
    25 : 216 : 16 : ?
    (a) 25   (b) 64   (c) 125   (d) 36

5. If the following words are arranged in the alphabetical order, then which word will appear at the end?
    Amplify, Amperes, Amplitude, Amassment

    (a) Amplify   (b) Amperes   (c) Amplitude   (d) Amassment

Section : 2 - Mathematics

6. A number which is divisible by 9 is also divisible by :
    (a) 3   (b) 6   (c) 11   (d) None of these

7. Which of the following numbers are divisible by 3?
    (a) 269714   (b) 992630   (c) 179781   (d) 552092

8. What is the LCM of 72 and 108?
    (a) 144   (b) 36   (c) 256   (d) 216

——————————— **ROUGH SPACE** ———————————

9. Which of the following is divisible by 99?
(a) 4797   (b) 6273   (c) 7011   (d) None of these

10. $\left(21^2 - 15^2\right)^{1/3} = ?$
(a) 5   (b) 7   (c) 6   (d) 8

11. $3^5 + 3^5 + 3^5 + 3^5 + 3^5 + 3^5 + 3^5 + 3^5 + 3^5$
(a) 3^7 (b) 3^6 (c) 3^{30} (d) None of these

12. The value of $1^0 + 2^0 + 3^0 = ?$
(a) $2^2 - 1^2$ (b) $2^2 + 1^2$ (c) $2^2 \div 1^2$ (d) $2^2 \times 1^2$

13. $2^{3^{70^{5^2}}} = ?$
(a) 32   (b) 1024   (c) 8   (d) 512

Section : 3 - Science

14. $1\dfrac{g}{cm^3} = \text{'x'}\dfrac{kg}{m^3}$ Find the value of 'x'.
(a) 10   (b) 100   (c) 1000   (d) 10000

15. A solid silver piece is immersed in water contained in a measuring cylinder. The level of water rises from 50 mL to 62 mL. Find the volume of silver piece.
(a) 12 cm^3 (b) 12 m^3 (c) 12 L   (d) 1.2 L

16. Which of the following is an example of derived quantity?
(a) Mass   (b) Length   (c) Temperature   (d) Velocity

17. A thin layer of water is transparent but a very thick layer of water is
(a) Translucent   (b) Opaque   (c) Most transparent   (d) None of these

18. When a light wave enters into a medium of different optical density.
(a) its speed and frequency change   (b) its speed and wavelength change
(c) its frequency and wavelength change   (d) its speed and wavelength change

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19. an object placed 3.2 m from a plane mirror is shifted by 0.8 m away from the mirror. What is the new distance between the object and its image?
(a) 4 m   (b) 8 m   (c) 8. 2 m   (d) 8. 1 m

20. The image formed by slide projector on the screen is
(a) real, inverted, diminished   (b) virtual, upright, diminished
(c) virtual, upright, magnified   (d) real, inverted, magnified

21. Match column I with column II and select the correct option from the codes given below.

    Column I   **Column II**
    (a) Ions   (i) Same mass number, different atomic numbers
    (b) Isobars   (ii) Same number of neutrons, different atomic numbers and mass numbers
    (c) Isotopes   (iii) Formed by loss or gain of electrons
    (d) Isotones   (iv) Combining capacity of an atom
    (e) Valency   (v) Same atomic number, different mass numbers.

    (a) (a)-(i), (b)-(iii), (c)-(v), (d)-(ii), (e)-(iv)   (b) (a)-(iii), (b)-(i), (c)-(v), (d)-(ii), (e)-(iv)
    (c) (a)-(iii), (b)-(v), (c)-(i), (d)-(ii), (e)-(iv)   (d) (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv), (e)-(v)

22. The atomic number of an element is 11 and its mass number is 23. The perspective number of electrons, protons and neutrons in this atom will be
(a) 11, 11, 12   (b) 11, 12, 11   (c) 12, 11, 11   (d) 23, 11, 23

23. Nucleons comprises of _____.
(a) Protons and electrons   (b) Neutrons and electrons
(c) Protons and neutrons   (d) Neutrons and Positron

24. _____ method is used to separate two miscible liquids.
(a) Fractional distillation   (b) Magnetic separation
(c) Separating funnel   (d) Threshing

25. What is the smallest constituent of matter that retains its chemical identity?
(a) Compound   (b) Molecule   (c) Ion   (d) Atom

26. People normally put some Naphthalene balls in the box in which they keep clothes and winter blankets. After some weeks they find that there is no Naphthalene ball left in the box. Why does the Naphthalene ball disappear with time, without leaving any residue?
(a) Condensation   (b) Sublimation   (c) Evaporation   (d) Diffusion

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27. Identify a pure substance from the following?
    (a) Steel   (b) Magnalium   (c) Ammonia   (d) Gun powder

28. Muscles found in intestine and stomach
    (a) Skeletal   (b) Cardiac   (c) Smooth   (d) Both a and b

29. Chloroplast is found only in _____ cell
    (a) Animal   (b) Plant   (c) Fungi   (d) Both a and b

30. Identify the animal which is not an Arthropoda
    (a) Prawn   (b) Butterfly   (c) Earthworm   (d) Spider

31. Pore bearing simple animal belong to phylum _____.
    (a) Porifera   (b) Cnidaria   (c) Molluscs   (d) Arthropoda

32. Suicidal bag of cell
    (a) Lysosome   (b) Mitochondria   (c) Chloroplast   (d) None of these

33. Tissue increases the length of plant.
    (a) Apical meristem   (b) Lateral meristem   (c) Parenchyma   (d) Sclerenchyma

34. Building block of life is ___.
    (a) Organ   (b) Organism   (c) Tissue   (d) Cell

35. Which tissue transports water and mineral in plants?
    (a) Phloem   (b) Xylem   (c) Sclerenchyma   (d) Meristem

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