Section – I

MATHEMATICS

1. The value of $\frac{4}{9}+\left(\frac{-7}{11}\right)+\left(\frac{-8}{27}\right)$ is

   (a) $\frac{145}{297}$ (b) $\frac{-145}{297}$ (c) $\frac{-152}{297}$ (d) $\frac{-135}{617}$

2. There are three poles A, B and C. The height of pole C is $\frac{2}{3}$ of pole B, the height of pole B is $\frac{4}{3}$ of pole A. find height of pole C, if the height of pole A is $\frac{97}{3}$ m.

   (a) $15\frac{10}{63}$ m (b) $3\frac{17}{27}$ m (c) $28\frac{20}{27}$ m (d) $4\frac{20}{62}$ m

3. What number should be added to $\frac{7}{12}$ to get $\frac{4}{15}$?

   (a) $\frac{-19}{60}$ (b) $\frac{-11}{30}$ (c) $\frac{51}{60}$ (d) $\frac{1}{20}$

4. The value of $\frac{(5)^{0.25}\times(125)^{0.25}}{(256)^{0.10}\times(256)^{0.15}}$ is

   (a) $\sqrt{5}/2$ (b) $\frac{5}{4}$ (c) $\frac{25}{2}$ (d) $\frac{25}{16}$

5. If $x=\left(\frac{3}{2}\right)^{2}\times\left(\frac{2}{3}\right)^{-4}$, then find the value of x^{-2}

   (a) $\left(\frac{1}{12}\right)^{2}$ (b) $\left(\frac{1}{2}\right)^{-2}$ (c) $\left(\frac{2}{3}\right)^{-12}$ (d) $\left(\frac{2}{3}\right)^{12}$

6. If $64^{a}=\frac{1}{256^{b}}$ then 3a + 4b equals

   (a) 2 (b) 4 (c) 8 (d) 0

7. Which of the following is a proper fraction?

   (a) 5/3 (B) 17/11 (c)5/8 (d) 13/9

8. Which of the following is true?

   (a) Two adjacent angles can be complimentary

   (b) Two adjacent angles cannot be supplementary

   (c) An acute angle cannot be adjacent to an obtuse angle

   (d) Two right angles cannot be adjacent angles

9. If a transversal Introverts two parallel lines, then the interior angles on the same side of the transversal are

   (a) Vertically opposite angles (b) supplementary angles

   (c) complimentary angles (d) alternate angles

10. $\frac{3}{4}+\left(\frac{-3}{5}\right)+\left(\frac{-2}{3}\right)+\frac{5}{8}+\left(\frac{-4}{15}\right)=$

(a) $\frac{149}{120}$ (b) $\frac{-19}{120}$ (c) $\frac{-37}{110}$ (D) $\frac{43}{110}$

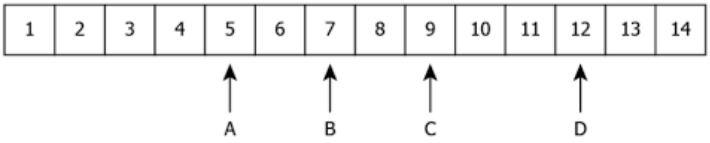
Section – II
PHYSICS

11. The distance travelled by the vehicles is recorded by
    (a) monometer (b) odometer
    (c) speedometer (d) motometer
12. The clocks and watches which are used for measuring time are based on
    (a) rectilinear motion (b) circular motion
    (c) periodic motion (d) rotational motion
13. A bus travels 54 km in 90 minutes. The speed of the bus is
    (a) 0.6 m/s (b) 10 m/s
    (c) 5.4 m/s (d) 3.6 m/s
14. Which of the following is a good conductor of heat?
    (a) Iron (b) Steel
    (c) Aluminium (d) All of these
15. What is the range of the temperature reading of a clinical thermometer?
    (a) 35°C – 42°C (b) -10°C – 110°C
    (c) 0°C – 100°C (d) 32°C – 42°C
16. Which one is filled in the bulb of a thermometer?
    (a) Mercury (b) Lead
    (c) Copper (d) Silver
17. Land breeze blows from
    (a) lower surface to upper surface (b) sea to land
    (c) upper surface to lower surface (d) land to sea
18. In an electric circuit, the bulb glows only when the switch is in the
    (a) 'ON' position (b) 'OFF' position
    (c) (a) or (b) (d) none of these
19. The amount of heat produced in a wire depends on its
    (a) material (b) length
    (c) thickness (d) all of these
20. Who discovered magnetic effect of current?
    (a) H.C. Oersted (b) Michael Faraday
    (c) Ohm (d) Flemming

Section – III

CHEMISTRY

21. What is the pH of a neutral solution?
    (a) 7 (b) 1
    (c) 14 (d)0
22. Which Acid is present in Tomato?
    (a) Citric Acid (b) Oxalic Acid
    (c) Lactic Acid (d) HCl
23. Lactic Acid is present in
    (a) Orange (b) Tea
    (c) Curd (d) Vinegar
24. The image shows the pH values of four solutions on a pH scale



    Which solutions are alkaline in nature?
    (a) A and b (b) B and C
    (c) C and D (d) A and D
25. In terms of acidic strength, which one of the following is the correct increasing order?
    (a) Water < Acetic acid < Hydrochloric acid
    (b) Water < Hydrochloric acid < Acetic acid
    (c) Acetic acid < Water < Hydrochloric acid
    (d) Hydrochloric acid < Water < Acetic acid
26. Which of the following is not physical change?
    (a) Boiling of water to give water vapor
    (b) Melting of ice to give water
    (c) Dissolution of salt in water
    (d) Combustion of liquefied petroleum Gas (LPG)
27. From the following, which one is an example of a chemical reaction?
    (a) Grapes get fermented (b) Breakdown of food
    (c) Formation of curd (d) All of the above
28. One of the following processes does not involve a chemical reaction, that is
    (a) Melting of candle wax when heated
    (b) Burning of candle wax when heated
    (c) Digestion of food in your stomach
    (d) Ripening of banana
29. Which one of the following will turn blue litmus red?
    (a) Vinegar (b) Lime water
    (c) Baking soda solution (D) Washing soda

30. Which one of the following will turn red litmus blue?
    (a) Vinegar (b) Baking soda solution
    (c) Lemon juice (D) Soft drinks

Section – IV

Biology

31. The mode of nutrition in which organisms make their food themselves from simple substances is called ……
    (a) Nucleus (b) Cytoplasm
    (c) Heterotrophs (d) Autotrophs
32. Major components of food which are necessary for our body are called ……..
    (a) Minerals (b) Nutrients
    (c) Vitamin (d) None of the above
33. The breakdown of complex components of food into simpler substance is called ……..
    (a) Juice (b) Ingestion
    (c) Digestion (d) None of the above
34. Buccal cavity, esophagus, Stomach, Large intestine and Small Intestine anus together form the ……..
    (a) Salivary Canal (b) Alimentary canal
    (c) Pancreas (d) Liver
35. Teeth that grow at the infancy and falls at the age between six to eight years are termed as
    (a) Milk teeth (b) Incisor
    (c) Molar (d) None of the above
36. Cellular respiration is carried out in the
    (a) cells (b) organs
    (c) tissues (d) muscles
37. Name the type of respiration which causes muscle cramps.
    (a) Aerobic respiration (b) Anaerobic respiration
    (c) Both (a) and (b) (d) None of these
38. Yeast are used to make
    (a) curd (b) wine and beer
    (c) bakery items (d) both (b) and (c)
39. During inspiration or inhalation, in lungs
    (a) volume decreases, pressure increases
    (b) volume increases, pressure decreases
    (c) volume decreases, pressure decreases
    (d) volume increases, pressure increases
40. Insects have a special network of tubes called
    (a) tracheae (b) gills (c) spiracles (d) lungs

Section – V
Aptitude

41. Find the missing number/letter.
65, 91, 143, 169?
(a) 231 (b) 241
(c) 221 (d) 233

42. Find the missing number/letter.
16, 48, 52, 260, 266, ?
(a) 1896 (b) 1826
(c) 1862 (d) 1962

43. Find the missing number/letter.
7, 15, 22, 37, 59, 96, ?
(a) 165 (b) 125
(c) 123 (d) 155

44. Find the missing number/letter.
– qr – rp – p q p – r – r p r p q
(a) p q r q q (b) q q q r r
(c) q p r q p (d) p q q r r

45. Find the missing number/letter.
m m n – m m – n nn – m mm – n nn
(a) m n n m (b) n m m n
(c) m mm n (d) m n m n

46. Find the missing number/letter.
a b c a – b c a a b – c a – b b c –
(a) c c a a (b) b b a a
(c) a b a c (d) a b b a

47. Find the missing number/letter.
J2Z, K4X, I7V, ?, H16R, M22P
(a) I11T (b) L 11S
(c) L 12 T (d) L 11 T

48. Find the odd-number.
(a) 1345 (b) 5675
(c) 3675 (d) 4578

49. Find the odd-number.
(a) 1234 (b) 5678
(c) 4567 (d) 4272

50. Find the odd-number.
(a) 216 (b) 343
(c) 960 (d) 125

ANSWER KEY

1. B	2. C	3. A	4. B	5. D	6. D	7. C	8. A	9. B	10. B
11. B	12. C	13. B	14. D	15. A	16. A	17. D	18. A	19. D	20. A
21. A	22. B	23. C	24. C	25. A	26. D	27. D	28. A	29. C	30. B
31. D	32. B	33. C	34. B	35. A	36. A	37. B	38. D	39. B	40. A
41. C	42. C	43. D	44. A	45. B	46. C	47. D	48. D	49. D	50. C