Section : I - Aptitude and Logical Reasoning

1. In a certain code, TELEPHONE is written as ENOHPELET. How is ALIGATOR written in that code?
    (a) ROTAGILA   (b) ROTAGILE   (c) ROTAGAIL   (d) ROTEGILA

2. In a joint family, there are father, mother, 4 married sons and three unmarried daughters. Of the sons, two have 2 daughters each, and two have a son and a daughter each. How many female members are there in the family?
    (a) 12   (b) 15   (c) 11   (d) 14

3. Statements All mangoes are golden in color. No golden-colored things are cheap.
    Conclusions: 1. All mangoes are cheap
                  2. Golden-colored mangoes are not cheap.

    (a) Either 1 or 2 follows   (b) Both 1 and 2 follow
    (c) The only conclusion 1 follow   (d) Only conclusion 2 follows

4. Which of the following will be the last digit of the second highest number after the positions of the digits in each number is reversed?
    738 429 156 273 894
    (a) 2   (b) 1   (c) 7   (d) 4

5. FBG, GBF, HBI, IBH, _____?
    (a) JBI   (b) HBL   (c) JBK   (d) HBK

Section : II - Mathematics

6. A 4-digit number is divisible by both 3 and 11 and ends in 27. What is the smallest such number?
    (a) 1927   (b) 4027   (c) 3927   (d) 4927

7. A number leaves a remainder of 1 when divided by 2, 3, 4, and 6. What is the smallest two-digit number that satisfies this condition?
    (a) 11   (b) 13   (c) 21   (d) 31

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8.   Arrange the following in descending order : $\frac{11}{14}$, 0.78, $\frac{4}{5}$

(a) $\frac{4}{5} > 0.78 > \frac{11}{14}$ (b) $0.78 > \frac{11}{14} > \frac{4}{5}$ (c) $\frac{4}{5} > \frac{11}{14} > 0.78$ (d) $\frac{11}{14} > \frac{4}{5} > 0.78$

9.   A number is the product of three distinct prime numbers whose sum is 15. What is the number?
      (a) 15   (b) 105   (c) 751   (d) 273

10.   What is the value of $4\frac{2}{3} + 3\frac{1}{4}$?

(a) $7\frac{5}{7}$ (b) $8\frac{11}{12}$ (c) $7\frac{11}{12}$ (d) $8\frac{5}{7}$

11.   A submarine starts at 500m below sea level. It ascends 180m, then descends 220m, ascends 70m, and finally descends 130m. What is its final depth?
      (a) 600m below   (b) 620m below   (c) 640m below   (d) 660m below

12.   The numerator of a fraction is 8 less than the denominator. If 4 is added to the numerator, the fraction is equal to $\frac{2}{3}$. What is the original fraction equal to?

(a) $\frac{1}{3}$ (b) $\frac{2}{3}$ (c) $\frac{1}{4}$ (d) $\frac{3}{4}$

13.   What is the product of the smallest 3- digit negative integer and the largest 2 digit negative integer?
      (a) 9702   (b) 9990   (c) – 9702   (d) – 9990

14.   Solve : $\left[\frac{(-8)^2 \times (-3)^3}{(-6)^2}\right] + \left[(-5)\right]$

      (a) –50   (b) –53   (c) –43   (d) –48

15.   Solve : $\frac{2x+3}{5} + 7 = 0$
      (a) x = 19   (b) x = – 19   (c) x = 17   (d) x = – 17

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Section : III - Science

16.   Mrs. Teshin screamed when she saw a snake that was 50 millimeters long. How many centimeters is the snake?
(a) 5,000 cm   (b) 5 cm   (c) 500 cm   (d) 50 cm

17.   The VOLUME of an object is reported as
(a) Meter^3 (b) Km^2 (c) Grams^3 (d) inches

18.   If we observe closely, we will find that the Moon changes in its appearance everyday, this is due to
(a) the Earth's shadow that falls on the Moon   (c) the Sun light that falls on the Moon
(b) the Sun's Shadow that falls on the Moon   (d) The Moon's own light

19.   "Image that is created in plane mirror is virtual for a real object", statement is
(a) Right   (b) Wrong
(c) May be right or may be wrong   (d) Neither right nor wrong

20.   Opaque means _____.
(a) No light passes through it   (b) All light passes through it
(c) Some light passes through it   (d) none of these.

21.   _____ light can be separated into a rainbow of colors.
(a) Ultraviolet   (b) Fluorescent   (c) White   (d) Polarized

22.   If a car travels 100 km in 2 hours, its average speed is:
(a) 25 km/h   (b) 50 km/h   (c) 100 km/h   (d) 200 km/h

23.   A train travels at a speed of 60 km/h. How much time will it take to cover 120 km?
(a) 1 hour   (b) 2 hours   (c) 3 hours   (d) 4 hours

24.   Which of the following units is not for time?
(a) Second   (b) Minute   (c) Hour   (d) Lightyear

25.   A simple pendulum takes 32 seconds to complete 20 oscillations. What is the time period of the pendulum?
(a) 1.6 seconds   (b) 16 seconds   (c) 0.625 seconds   (d) 640 seconds

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26. The process by which butter can be separated from milk is
(a) Sedimentation   (b) Decantation   (c) Filtration   (d) Churning

27. Which of the following processes can be used to separate impurities from wheat?
(a) Magnetic separation (b) Winnowing   (c) Hand picking   (d) Threshing

28. Components of a mixture separated by sieving are done based on difference in the
(a) weight   (b) colour   (c) shape   (d) size

29. Why is water important for living things?
(a) helps in digestion of food   (b) helps to regulate body temperature
(c) essential for all life processes   (d) all of the above

30. The process of water changing from a gaseous state (water vapor) to a liquid state is called
(a) evaporation   (b) Condensation   (c) Precipitation   (d) Sublimation

31. Which of the following is a natural indicator used to test acids and bases?
(a) Methyl Orange   (b) Phenolphthalein   (c) Turmeric   (d) All of these

32. A substance that tastes bitter and feels soapy to the touch is generally a:
(a) Acid   (b) Base   (c) Salt   (d) Indicator

33. The reaction between an acid and a base to form salt and water is known as:
(a) Crystallisation   (b) Sublimation   (c) Neutralisation   (d) Evaporation

34. The process of separates the cotton fibre from cotton seeds.
(a) Threshing   (b) Sieving   (c) Ginning   (d) Boiling

35. What is the water cycle?
(a) The process of water being used by plants.
(b) The continuous movement of water on, above, and below the surface of the Earth.
(c) The process of water being purified.
(d) The process of water being stored in reservoirs.

36. Release of energy to perform body functions by giving out water and carbon dioxide as by-product is called
(a) Excretion   (b) Breathing   (c) Respiration   (d) None of these

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37. Which one of the following is a function of leaves?
(a) Photosynthesis   (b) Transpiration   (c) Both (a) and (b)   (d) Support fruits

38. Which of the following is not a characteristic of living things?
(a) Perform cellular respiration   (b) Regulate their internal environment
(c) Reproduce   (d) Change their external environment

39. In cactus leaf are modified into
(a) Tendrils   (b) Spines   (c) Fleshy for storage   (d) None of these

40. Which plant has fibrous root?
(a) Tulsi   (b) Mango   (c) Wheat   (d) Orange

41. Which is a biotic component in aquatic habitat.
(a) Water   (b) Sand   (c) Fish   (d) Rock

42. The point on the stem from where the leaf arises is
(a) petiole   (b) lamina   (c) node   (d) trunk

43. Night blindness is caused by the deficiency of
(a) vitamin A   (b) vitamin C   (c) vitamin D   (d) vitamin Bl

44. Which of the following is a protein source of plant origin?
(a) egg   (b) soyabean   (c) cheese   (d) milk

45. The mineral we get from fish is
(a) iodine   (b) magnesium   (c) iron   (d) none of these

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