PHYSICS

1. Conduction is possible-

    (A) When the bodies are apart from each other

    (B) When the bodies have some temperature and in thermal contact

    (C) When they have different temperature maintaining distance between them

    (D) Bodies should be in contact and should have different temperatures

2. A body is moving with uniform velocity of 10 ms^{-1}. The velocity of the body after 10 s is-

    (A) 100 ms^{-1} (B) 50 ms^{-1}

    (C) 10 ms^{-1} (D) 5 ms^{-1}

3. Electric bell works on the principle of -

    (A) Chemical effect of current   (B) magnetic effect of current

    (C) Heating effect of current   (D) all of the above

4. Which of the following statement is true?

    (A) The angle of incidence is twice the angle of reflection

    (B) The incident ray, the reflected ray and the normal drawn at the same point of incidence lie in the same plane

    (C) Some types of virtual images can be caught on the screen.

    (D) A plane mirror forms a real image

5. Near the earth's surface …………… air rises up whereas …………… air comes down:
    (A) Hot, cold   (B) Cold, hot
    (C) Cold, cold   (D) Hot, hot

CHEMISTRY

6. Silkworms secrets fibre made of:
    (A) Fat   (B) Cellulose
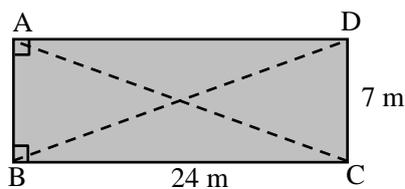   (C) Protein   (D) Nylon

7. Selective breeding is a process of:
    (A) Selecting the offsprings with desired properties
    (B) Selecting the parents with desired properties
    (C) Selecting an area for breeding
    (D) Selecting fine hair for good quality wool

8. Magnesium Hydroxide is found in:
    (A) Milk of Magnesia   (B) Magnesium chloride
    (C) Magnesium hydroxide   (D) Magnesium ribbon

9. Effect of Acid on red litmus:
    (A) Colour changes to blue   (B) Colour changes to pink
    (C) Colour changes to orange   (D) No change in colour

10. The term sericulture is used for:
    (A) Culture of bacteria   (B) Production of sarees
    (C) Making silk fabric from silk yarn   (D) Rearing of silkworm

BIOLOGY

11. Which of the following in not a forest product?
    (A) Gum   (B) Ply wood
    (C) Sealing wax   (D) Kerosene

12. Conversion of complex food is called as
    (A) Respiration   (B) excretion
    (C) Locomotion   (D) digestion

13. Transfer of pollen from anther to stigma in plants is known as
    (A) Transformation   (B) reproduction
    (C) Pollination   (D) regeneration

14. Soils with highest water holding capacity is
    (A) Sandy   (B) clayey
    (C) Loamy   (D) alluvial

15. Who carries blood from lungs to hearts?
    (A) Arteries   (B) veins
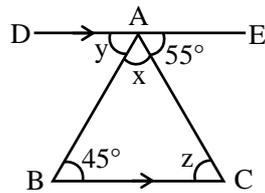   (C) Cappilaries   (D) none of these

MATHEMATICS

16.   The sum of two integers is always

  (A) a natural number   (B) a whole number

  (C) an integer   (D) none of these

17. $\dfrac{5}{7}$ of a week is ___ days

  (A) 5 days   (B) 7 days

  (C) 2 days   (D) none of these

18. In the given figure, ABCD is a rectangle with sides 24 cm and 7 cm. Find the area of ▢ABD

  (A) 72   (B) 84   (C) 96   (D) 168

19   The age of 10 students are given as:

  12.5, 13.5, 19, 13.5, 19, 16.5, 19, 18.5, 19, 17.5 Calculate mode.

  (A) 13.5   (B) 17.5   (C) 19   (D) none

20.   Find x -: $\dfrac{x}{2} = \dfrac{x}{3} + 1$

  (A) 2   (B) 3   (C) 5   (D) 6

21. If p : q = 2 : 3 find the ratio 6p : 2q.

  (A) 3   (B) 2   (C) 6   (D) 12

22. In figure, DE || BC find the values of x
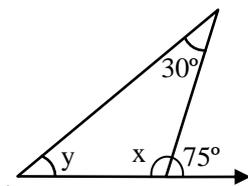

(A) 100   (B) 55   (C) 80   D) 45

23. Find the circumference of a circle whose diameter is 28 cm.

(A) 22   (B) 88   (C) 44   (D) 14

24. In figure, find the measures of y

(A) 90   (B) 75   (C) 45   (D) 30

25. Write the coefficient of: y^2 in $\frac{7}{8} x^2 y^2 z^3$

(A) 7   (B) 0   (C) 8   (D) none

MENTAL ABILITY TEST

26. If RAVE is coded as SXWB then how will SCAW be coded?
(A) TDBO   (B) TZBK
(C) PZXK   (D) TVXK
(E) None of these

27. If the second half of the series is written in the reverse order then which will be the 9th letter to the right of 7th letter from your left ?
ABCDEFGHIJKLMNOPQRSTUVWXYZ.
(A) Y   (B) Z
(C) PA   (D) X
(E) None of these

28. Directions—In each of the following questions one word is different from the rest. Find out the word which does not belong to the group—

(A) GTSH   (B) BYXC
(C) ETUF   (D) LONM
(E) KPIR

29. As 'Plateau' is related a 'Mountain', similarly 'Bush' is related to what?

(A) Plants   (B) Field
(C) Forest   (D) Trees
(E) Stem

30. Directions—In each of the following questions a series is given. Which one of the alternatives will replace the question-mark (?) ?

JD, KF, ?, PM, TR

(A) MI   (B) NJ
(C) NI   (D) OJ
(E) None of these

31. The position of Shyamal is 13th from the last. If there are 21 students in all in his class, what is his position from the beginning?

(A) 8th (B) 9th
(C) 7th (D) 10th
(E) None of these

32. Sonalika goes 12 km towards North from a fixed point and then she goes 8 km towards South from there. In the end she goes 3 km towards east. How far and in what direction is she from her starting point?

(A) 7 km East   (B) 5 km West
(C) 7 km West   (D) 5 km North-East
(E) None of these

33. How many 7's are there in the following number series; which are preceded by an even number but not followed by any odd?

437523721367542742712276572

(A) One   (B) Two
(C) Three   (D) Four
(E) More than four

34. In each question of the following two statements are given and four conclusions I, II, III and IV are given under them. The given statements may be contrary to the universal opinion, even then you have to assume them as true. Then decide which conclusion on the basis of given statements is logically valid.

1. Statements: All kings are beggars.

All beggars are monks.

Conclusions :
I. All beggars are kings.
II. All kings are monks.
III. Some monks are beggars.
IV. No monk is beggar.
(A) Only I comes   (B) All come
(C) Only II and III come   (D) Only III and IV come
(E) None of these comes

35. Pointing to a picture of a child Narendra says, "The brother of this child's mother, is the only son of my mother's father." How is Narendra related to the mother of the child?
(A) Daughter   (B) Sister
(C) Maternal grand mother   (D) Aunt
(E) None of these

36. If x means –, – means x, + means ÷ and ÷ means + then—
13 – 12 ÷ 400 + 20 x 100 = ?
(A) 1/1760   (B) 76
(C) 176   (D) 186
(E) None of these

37. Directions—In each of the following questions one statement or advertisement is followed by two or three assumptions. On the basis of the statement choose which is/are implicit.

 Statement—Saroj made an application to the bank for a loan of Rs. 1,80,000 by mortgaging his house to the bank and promised to repay it within five years.
Assumptions :
I. The bank has a practice of granting loans for Rs. 1,00,000/- and above.
II. The bank accepts house as collateral security against such loans.
III. The bank may grant loan to Saroj.
(A) All are implicit   (B) None is implicit
(C) Only I and II are implicit   (D) Only II and III are implicit

38. In newspaper it is necessary—
(A) Advertisement   (B) Date
(C) News   (D) Editor
(E) Article

39. Directions—In each of the questions from 1 to 5 a statement followed by two arguments is given. You have to decide which of the given statements is a strong argument and which is weak argument. Give answer

(A) if only first argument is strong, give answer

(B) if only second argument is strong, give answer

(C) if either first or second argument is strong, give answer

(D) if neither first nor second argument is strong and given answer

(E) if both first and second arguments are strong.

40. Statement—Should military training be made compulsory in our country like other countries?
Arguments :
I. Yes, every citizen has right to protect his country.
II. No, it is against the policy of non-violence.
. (A) FLOK   (B) CROWD
 (C) HERD   (D) SWARM
 (E) TEAM