F-CAT 05

FORTNIGHTLY CHILD ASSESSMENT TEST

Class 10th

READ THE FOLLOWING INSTRUCTIONS:

1. All questions are compulsory.
2. Submit this Sheet today at 6:00 pm

    Question from 1 to 10 are of 1 mark

    1. Graphically, the pair of equations
       $6x – 3y + 10 = 0$
       $2x – y + 9 = 0$
       represents two lines which are
       (A) intersecting at exactly one point.
       (B) intersecting at exactly two points.
       (C) coincident.
       (D) parallel
    2. The pair of equations $x + 2y + 5 = 0$ and $–3x – 6y + 1 = 0$ have
       (A) a unique solution
       (B) exactly two solutions
       (C) infinitely many solutions
       (D) no solution
    3. If a pair of linear equations is consistent, then the lines will be
       (A) parallel
       (B) always coincident
       (C) intersecting or coincident
       (D) always intersecting
    4. If the common difference of an AP is 5, then what is $18\ 13\ a\ a –$?
       (A)   5   (B) 20   (C) 25   (D) 30
    5. What is the common difference of an AP in which $a18 – a14 = 32$?
       (A) 8   (B) – 8   (C) – 4   (D) 4
    6. Two APs have the same common difference. The first term of one of these is –1 and that of the other is – 8. Then the difference between their 4th terms is
       (A) –1   (B) – 8   (C) 7   (D) –9

7. If 7 times the 7th term of an AP is equal to 11 times its 11th term, then its 18th term will be

(A) 7   (B) 11   (C) 18   (D) 0

8. For some integer m, every even integer is of the form

(A) m   (B) m + 1   (C) 2m   (D) 2m + 1

9. For some integer q, every odd integer is of the form

(A) q   (B) q + 1   (C) 2q   (D) 2q + 1

10. The least number that is divisible by all the numbers from 1 to 10 (both inclusive) is

(A) 10   (B) 100   (C) 504   (D) 2520

11. A natural number, when increased by 12, equals 160 times its reciprocal. Find the number.(2)

12. A train, travelling at a uniform speed for 360 km, would have taken 48 minutes less to travel the same distance if its speed were 5 km/h more. Find the original speed of the train.(3)

13. Find the value of the middle most term (s) of the AP : –11, –7, –3,..., 49.(3)

14. Solve the following pair of linear equations:

$21x + 47y = 110; \quad 47x + 21y = 162.$(2)

15. The correct sequence of reproductive stages seen in flowering plants is

     a. Gametes, zygote, embryo, seedling
     b. Zygote, gametes, embryo, zygote, gametes
     c. Gametes, embryo, zygote, seedling
     d. Seedling, embryo, zygote, gametes

16. Characters transmitted from parents to offsprings are present in

     a. Cytoplasm
     b. Ribosome
     c. Golgi bodies
     d. Genes

17. Under which of the following conditions a concave mirror can form an image larger than the actual object?

 (a) When the object is kept at a distance equal to its radius of curvature
 (b) When object is kept at a distance less than its focal length
 (c) When object is placed between the focus and centre of curvature
 (d) When object is kept at a distance greater than its radius of curvature

18. You are given water, mustard oil, glycerine and kerosene. In which of these media a ray of light incident obliquely at same angle would bend the most?

 (a) Kerosene   (b) Water   (c) Mustard oil   (d) Glycerine

19.1. Before burning in air, the magnesium ribbon is cleaned by rubbing with a sand paper to:

a. Make the ribbon surface shinier

b. Remove the layer of magnesium oxide from the ribbon surface

c. Remove the layer of magnesium carbonate from the ribbon surface

d. Remove the moisture from the ribbon surface

20. In a chemical reaction between sulphuric acid and barium chloride solution the white precipitates formed are of:

a. Hydrochloric acid

b. Barium sulphate

c. Chlorine

d. Sulphur

21. The respiration process during which glucose undergoes slow combustion by combining with oxygen in the cells of our body to produce energy, is a kind of:

a. Exothermic process

b. Endothermic process

c. Reversible process

d. Physical process

22. A chemical reaction does not involve:

a. Formation of new substances having entirely different properties than that of the reactants

b. Breaking of old chemical bonds and formation of new chemical bonds

c. Rearrangement of the atoms of reactants to form new products

d. Changing of the atoms of on element into those of another element to form new products

23. It is necessary to balance a chemical equation in order to satisfy the law of:

a. Conservation of motion

b. Conservation of momentum

c. Conservation of energy

d. Conservation of mass

24. Which of the following phenomena occur, when a small amount of acid is added to water?

i. Ionisation

ii. Neutralisation

iii. Dilution

iv. Salt formation

25. In the following reaction, identify the salt formed

NH_4OH (aq) + H_2SO_4 (aq) → _____ + $2H_2O$ (l)

a. NH_4NO_3

b. $(NH_4)_2SO_4$

c. $(NH_4)_3PO_4$

d. $(NH_4)_2S$

26. Which of the following salt will give acidic solution when dissolved in water?

a. NH_4Cl

b. $NaCl$

c. Na_2CO_3

d. CH_3COONa

27. Which among the following represents the chemical formula for 'Plaster of Paris'?

a. $CaSO_4.2H_2O$

b. $CaSO_4.\dfrac{1}{2}H_2O$

c. $CaSO_4.H_2O$

d. $CaSO_4.10H_2O$

28.. Which one of the following salts will dissolve in water to form an alkaline solution?
a. Potassium carbonate
b. Sodium chloride
c. Sodium carbonate
d. Potassium sulphate

29. What are the advantages of sexual reproduction over asexual reproduction? (3)

30. Refractive index of diamond with respect to glass is 1.6 and absolute refractive index of glass is 1.5. Find out the absolute refractive index of diamond. (2)

31. Name any two types of tropism.   1 mark

32. What is the synonym of word "Admire"?
   a. Loving
   b. Praise
   c. Change
   d. Declare

33. What is the synonym of word "Beautiful"?
   a. Brilliant
   b. Lovely
   c. Loving
   d. Kind

34. Which punctuation marks is missing in this sentence: Have you downloaded the information
    a. Full stop (.)
    b. Question mark (?)
    c. Coma (,)
    d. Exclamation mark (!)

35. Which punctuation marks is missing in this sentence: How recklessly he drove
    a. Full stop (.)
    b. Question mark (?)
    c. Exclamation mark (!)
    d. Coma (,)

36. A _____ is a joining word such as and, but, yet, or etc. it joins the words or group of words.
    a. Adverb
    b. Preposition
    c. Conjunction
    d. Interjection

37. While walking in a park in your neighbourhood you found a small plastic bag containing some documents and some cash. Write a notice in about 50 words to be put on the park notice board asking the owner to identify and collect it from you. You are Amar/Amrita 9399123456
    5 marks

38. Look at the words and phrases below and rearrange them to form meaningful
sentences to make readable passes.(5)
   I) to prepare / I have / test tomorrow / for the
   II) such a good student / well always / you are / and score
   III) but / I convince / how can / them
   IV) so / some fun / and have / stop worrying.

ROHAN : Would you like to go to the cinema today ?
HARI : (I)_____

ROHAN : You'll still have time to do it after the film.
HARI : My parents would be angry with me.

ROHAN : (II)_____
HARI : They think I'm becoming over confident.

ROHAN : You don't look too good these days.
HARI : I am really stressed out and anxious these days.

ROHAN : I'm sure they'll understand you need to relax.
HARI : (III)_____

ROHAN : I'll talk to them if you like. (IV)_____

39.More and more minors are hitting the roads on motor bikes, scooters and in cars. This is dangerous not only for them but also for others using the road.Moreover, it is illegal. Write an article making a case for banning driving by minors. (5)

40.Which are the different provisions the Indian constitution that makes India a federal country?   (3)

41.What is federalism? Explain its key features.   (3)

42.What are the dual objectives of a federal system? Explain them.   (4)

43.Explain the role of the judiciary in a federal country?   (5)

44.What makes India a federal country?   (5)