

# SCIENCE

- Which of the following statements is wrong?
  - Convex mirror is used as rear view mirror in the vehicle.
  - Image formed by a plane mirror is upside down.
  - Working of pinhole camera is based on rectilinear motion of light.
  - All are wrong
- Motion of an object that repeats itself after regular interval of time is called
  - Circular motion
  - Periodic motion
  - Rectilinear motion
  - Rotatory motion
- Which of the following does not disappear when added to water?
  - Sugar
  - Common salt
  - Chalk powder
  - Glucon D
- Read the following statements about diseases:
  - They are caused by germs.
  - They are caused due to lack of nutrients in our diet.
  - They can be passed on to another person through contact.
  - They can be prevented by taking a balanced diet.

Which pair of statements best describe a deficiency disease?

  - (i) and (ii)
  - (ii) and (iii)
  - (ii) and (iv)
  - (i) and (iii)
- Which of these fibres is non-biodegradable?
  - Cotton
  - Jute
  - Wool
  - Nylon
- How many small ring-like vertebrae are there in the human vertebrae?
  - 10
  - 22
  - 33
  - 25
- Which of the following is a natural magnet?
  - Magnetite
  - Nickel
  - Cobalt
  - All of these
- Which of the following plant develops tendrils?
  - Pea plant
  - Rose plant
  - Mustard plant
  - Guava plant
- A train covers the first half of the distance between two stations at a speed of 40 km/h and the other half at 60 km/h. Then its average speed is
  - 50 km/h
  - 48 km/h
  - 52 km/h
  - 100 km/h
- Evaporation of water is an example for
  - Endothermic change
  - Exothermic change
  - Reversible change
  - Both (1) and (3)

11. The branches of plants like banyan give out roots which grow downwards towards the soil. These roots are called
- (1) Prop roots           (2) Stilt roots  
(3) Pneumatophores   (4) Adventitious roots
12. Which cell organelle contains the pigment chlorophyll?
- (1) Mitochondria       (2) Golgi bodies  
(3) Nucleus             (4) Plastids
13. Mineral in body which helps in absorption of nutrients and maintain balance of fluid in body is
- (1) sodium              (2) iodine  
(3) chromium          (4) boron
14. Part of the plant which conducts water to all parts of the plant is called as \_\_\_\_\_.
- (1) Leaf  
(2) Root  
(3) Flower  
(4) Stem
15. More thick wire which is passing current flow will be
- (1) higher  
(2) lower  
(3) constant  
(4) medium
16. If a bar magnet is cut lengthwise into two parts, how many number of poles will form?
- (1) Four  
(2) Three  
(3) Two  
(4) One
17. There are \_\_\_\_\_ stages of water cycle.
- (1) 2                      (2) 3  
(3) 4                      (4) 6
18. Water freezes at what temperature?
- (1) 28°F                 (2) 30°F  
(3) 32°F                 (4) 34°F
19. Redworm grows in \_\_\_\_\_ surrounding.
- (1) dry  
(2) moist  
(3) wet  
(4) all of these
20. Name the scientist who suggested MKS (metre, kilogram, second) system which later became SI (International System of Units)?
- (1) Isaac Newton  
(2) Giovanni Giorgi  
(3) Napoleon Bonaparte  
(4) Galileo Galilei

## MATHEMATICS

21. The sum of 1<sup>st</sup> 200 natural numbers = \_\_\_\_\_
- (1) 20100  
(2) 10100  
(3) 20500  
(4) 10300
22. The number of prime numbers between 60 to 100 is \_\_\_\_\_
- (1) 7  
(2) 8  
(3) 9  
(4) 10

23. A flask contains 250 ml of acid. How many litres of acid is there in 20 such flasks?

- (1) 2l
- (2) 3l
- (3) 4l
- (4) 5l

24. If  $0.75 : x :: 5 : 8$ , then  $x =$  \_\_\_\_\_

- (1) 1.12
- (2) 1.2
- (3) 1.25
- (4) 1.3

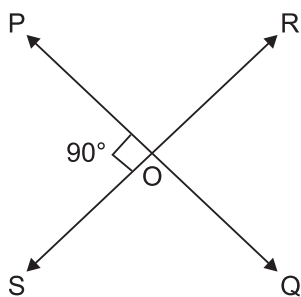
25. A car needs 12 litres of petrol to cover a distance of 156 km. How much petrol will be required for the car to cover a distance of 1300 km?

- (1) 150l
- (2) 120l
- (3) 130l
- (4) 100l

26. Two or more lines passing through one point is called \_\_\_\_\_

- (1) centroid
- (2) end points
- (3) midpoints
- (4) concurrent

27. In the given figure,  $\angle POS = 90^\circ$  what is the measure of  $\angle ROQ =$  \_\_\_\_\_



- (1)  $30^\circ$
- (2)  $45^\circ$
- (3)  $60^\circ$
- (4)  $90^\circ$

28. 10,000 centimetres = \_\_\_\_\_ kilometres.

- (1)  $\frac{1}{2}$
- (2)  $\frac{3}{4}$
- (3) 1
- (4) 2

29. If three seventh of two fifth of a number is 198. Then the number is \_\_\_\_\_

- (1) 1122
- (2) 1133
- (3) 1144
- (4) 1155

30.  $\frac{128352}{238368}$  when reduced to its lowest term is \_\_\_\_\_

- (1)  $\frac{3}{4}$
- (2)  $\frac{7}{13}$
- (3)  $\frac{9}{13}$
- (4)  $\frac{5}{13}$

31. The H.C.F of 42, 63, 140 is \_\_\_\_\_

- (1) 14
- (2) 9
- (3) 21
- (4) 7

32. If  $A = \frac{1}{3}B$  and  $B = \frac{1}{2}C$  then  $A : B : C =$

- (1) 1 : 3 : 6
- (2) 2 : 3 : 6
- (3) 3 : 2 : 6
- (4) 3 : 1 : 2

33. If an angle is its own complementary angle, then its measure is \_\_\_\_\_

- (1)  $30^\circ$
- (2)  $45^\circ$
- (3)  $60^\circ$
- (4)  $90^\circ$

34. The two consecutive natural numbers will always be

- (1) odd numbers
- (2) composite numbers
- (3) co-primes
- (4) even numbers

35. The difference between the place value and the face value of 6 in the numeral 856973 is

- (1) 973
- (2) 6973
- (3) 5994
- (4) 8734

36. I am the smallest number, having four different prime factors. Can you find me?

- (1) 210
- (2) 220
- (3) 230
- (4) 240

37. What fraction of 1 hour is 50 minutes?

- (1)  $\frac{1}{50}$
- (2)  $\frac{6}{5}$
- (3)  $\frac{5}{6}$
- (4)  $\frac{50}{1}$

38. Reduce

$$\frac{368}{575}$$

to the lowest terms.

- (1)  $\frac{30}{25}$
- (2)  $\frac{28}{29}$
- (3)  $\frac{38}{49}$
- (4)  $\frac{16}{25}$

39. A water tank can be filled in 7 hours by 5 equal sized pumps working together. How much time will 7 pumps take to fill it up?

- (1) 7 hours
- (2) 6 hours
- (3) 5 hours
- (4) 3 hours

40. If  $x : y = 1 : 3$ , then find the value of  $(7x + 3y) : (2x + y)$

- (1) 14 : 5
- (2) 15 : 5
- (3) 16 : 5
- (4) 17 : 5



**END OF THE EXAM**