

**Section 1: English**

- A board of directors refused a new proposal. (Which word is a collective noun?)  
(A) refused (B) board of directors  
(C) new (D) proposal
- Choose the correct pronoun from the options to fill up the blank:  
It is really kind of ..... to help me.  
(A) you (B) your  
(C) yours (D) None of the above
- Fill in the blanks with correct present tense forms of the verb from the given options:  
At the moment, the child .....(play) in the garden.  
(A) playing (B) plays  
(C) is playing (D) has been playing
- Choose the best preposition to fill in the blank in the following sentence:  
The Chief told them to divide the money..... the four volunteers.  
(A) between (B) among  
(C) to (D) for
- Ancient India had ..... university named Nalanda. (Choose the correct article to fill up the blank)  
(A) a (B) an  
(C) the (D) No article
- There are 12 ..... (sheep) in this farm. (Choose the correct plural form of the Noun to fill up the blank)  
(A) sheeps (B) sheepes  
(C) sheep (D) sheepies
- Find the compound word that can be formed from these four words:  
GREEN, HOPPER, GRASS, GROUND  
(A) groundgrass (B) grasshopper  
(C) greenhopper (D) greenground
- The word 'internet' is a word formed by blending two words. Which of the following are they?  
(A) inter + net  
(B) interpersonal + network  
(C) interconnected + network  
(D) international + network
- The clipped word "auto" is the shortened form of ..... (Choose from the options below to fill up the blank with the correct answer)  
(A) autocrat (B) automaton  
(C) autopsy (D) automobile
- In the following sentence, find out which part of the sentence has an error. If there is no mistake, the answer is 'No error'  
The Cabinet Ministers and the Prime Minister (A) / was at the airport (B) / to receive the foreign dignitary. (C) / no error (D)  
(A) The Cabinet Ministers and the Prime Minister  
(B) was at the airport  
(C) to receive the foreign dignitary.  
(D) No error

**Section 2: Mathematics**

11. All students in a class are grouped into two houses, Green and Yellow. The Green house collected  $5\frac{7}{20}$  kg of used newspaper this week. The Yellow house collected  $\frac{3}{4}$  kg more. How many kilograms of used newspaper did they collect altogether this week?
- (A)  $11\frac{9}{20}$  kg                      (B)  $6\frac{9}{20}$  kg  
(C)  $8\frac{9}{20}$  kg                        (D)  $13\frac{9}{20}$  kg
12. How many rational numbers are there between  $\frac{8}{80}$  and  $\frac{30}{60}$  with 20 as their denominator?
- (A) 2                                      (B) 10  
(C) 9                                        (D) 11
13. Write the Pythagorean triplet whose one member is 14.
- (A) (14, 48, 50)                      (B) (6, 10, 14)  
(C) (12, 13, 14)                      (D) (14, 84, 85)
14. What is the sum of  $19 + 21 + 23 + \dots + 49$ ?
- (A) 540                                    (B) 576  
(C) 544                                    (D) 625
15. If  $a - b = 3$  and  $ab = 5$ , find the value of  $a^3 - b^3$ .
- (A) 155                                    (B) 14  
(C) 15                                        (D) 72
16. Find the volume of a cuboid whose length, breadth and height are  $9ab$  units,  $7ab$  units and  $7a^3b^3$  units respectively.
- (A)  $23a^5b^4$                             (B)  $23a^5b^5$   
(C)  $441a^5b^5$                             (D)  $441a^5b^4$
17. John bought a second-hand car for Rs 3,50,000. Repairing it cost him Rs 87,500. If he wants to sell it and make a profit of 24% on his investment, what should be the selling price of the car?
- (A) Rs 5,42,500                        (B) Rs 2,66,000  
(C) Rs 3,32,000                        (D) Rs 5,42,950
18. The value of a bike depreciates every year by 10%. If its present value is Rs 58,000, then what will be its value after 3 years?
- (A) Rs 40,354                            (B) Rs 42,282  
(C) Rs 39,282                            (D) Rs 43,354
19. Tap A can fill a cistern in 4 hours and tap B can empty the full cistern in 6 hours. If both the taps are opened together in an empty cistern, then in how much time will the cistern be filled?
- (A) 12 hours                              (B) 2 hours  
(C) 24 hours                              (D) 4 hours
20. A train covers a distance of 75 km in  $3\frac{1}{5}$  hours. How much distance will it cover in  $5\frac{1}{3}$  hours.
- (A) 125 km                                (B) 100 km  
(C) 150 km                                (D) 200 km

**Section 3: Science**

21. Refractive index of glass with respect to refractive index of water is  $\frac{9}{8}$ . The refractive index of water is  $\frac{4}{3}$ . What is the speed of light in glass?
- (A)  $3 \times 10^8$  m/s                      (B)  $2 \times 10^8$  m/s  
(C)  $2.5 \times 10^8$  m/s                      (D)  $1.5 \times 10^8$  m/s
22. If a body rotates with a speed of 96 RPM (revolutions per minute) its angular speed in rad/s is
- (A)  $9.6\pi$  rad/s                        (B) 10 rad/s  
(C) 19.2 rad/s                        (D)  $19.2\pi$  rad/s
23. When a body is heated by  $10^\circ\text{C}$ , its temperature changes by..... $^\circ\text{F}$
- (A) 10                                        (B) 20  
(C) 40                                        (D) 50
24. A correct statement among the following is
- (A) Nitric acid present in our stomach helps in the digestion of food materials.  
(B) Sodium hydroxide is used for making bathing soaps.  
(C) Hydrochloric acid is called the king of acids  
(D) Magnesium hydroxide is used as an antacid

25. Latin name and symbol of tin, antimony and tungsten are respectively
- (A) Plumbum – Pb, Stannum – Sn and Wolfram – W  
 (B) Stibium - Sb , Wolfram -W and Plumbum – Pb  
 (C) Stannum – Sn, Stibium – Sb and Wolfram -W  
 (D) Wolfram – W, Stannum -Sn and Plumbum – Sb
26. Heating a block of gold is considered a ..... change
- (A) Physical change  
 (B) Chemical change  
 (C) Physical and chemical change  
 (D) Neutral change
27. In our body the transport system consists of many components. What type of organization it is?
- (A) cellular level of organization  
 (B) tissue level of organization  
 (C) organ level of organization  
 (D) organ system level of organization.
28. Which one of the following is not a characteristic of bacteriophage?
- (A) It cannot live without a living host.  
 (B) It contains DNA  
 (C) It can infect bacteria  
 (D) It cannot be crystallized
29. Bryophytes are amphibious plants, because
- (A) They live both in water as well as on land  
 (B) They live as parasites as well as saprophytes  
 (C) They live as autotrophs as well as heterotrophs  
 (D) They need land for living and water for reproduction.
30. Eyes are called as biological clock of the body. Why?
- (A) They are watching clock and giving signals to look after the works.  
 (B) They are recognizing night and day times.  
 (C) They are responsible for sleep and wake cycle.  
 (D) They are responsible for detecting light and darkness.

### Section 4: Logical Reasoning

31. The missing number in the sequence:  
 2, 7, 22, 67,.....?.....
- (A) 202 (B) 134  
 (C) 89 (D) 214
32. Choose the number suitable for the place indicated by ?
- 
- (A) 986 (B) 698  
 (C) 896 (D) 566
33. If '+' means '-'; '-' means '×'; '×' means '÷'; '÷' means '+' ; means then the value of  $(100 - 2 + 60 \div 56)$  is
- (A) 12 (B) 40  
 (C) 14 (D) 6
34. Select the appropriate Venn diagram representing Dogs, Rabbits, Rats:
- (P)

(Q)

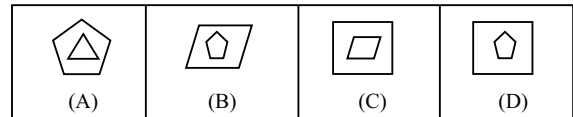
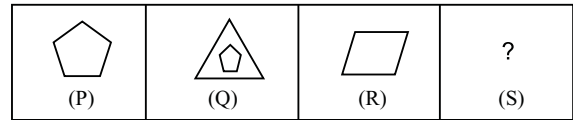
(R)

(S)

(T)

- (A) Diagram (P)                      (B) Diagram (Q)  
 (C) Diagram (T)                      (D) Diagram (R)
35. Pick the odd man out:  
 (A) aBEFij                              (B) cDGHkl  
 (C) tUWXab                            (D) gHKLop
36. Code for 'WEST' is 'ZHVW', select code for 'SOUTH'  
 (A) VQWVJ                              (B) VRXWK  
 (C) UQWVJ                              (D) HTUOS
37. The next term in the sequence:  
 5, 64, 25, 32, 125, 16,.....?.....  
 (A) 8                                      (B) 625  
 (C) 225                                    (D) 525

38. In the English alphabets, the letter fifth to be left of seventeenth letter from the right end is.....  
 (A) R                                      (B) G  
 (C) F                                      (D) E
39. Find the similar relationship between R and S as the one given in figure P and Q.



40. If  $3+7=103721$  and  $6+5=116530$  then  $9+4=?$   
 (A) 139436                              (B) 369413  
 (C) 133694                              (D) 361394

### Section 5: General Knowledge

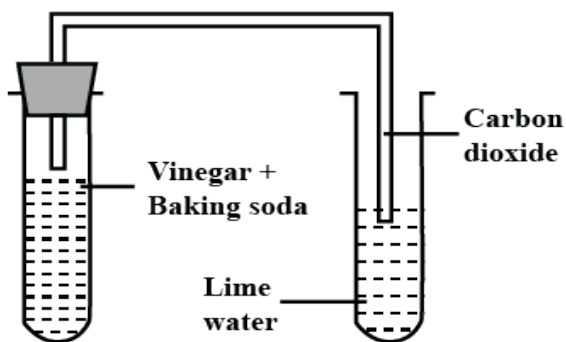
41. Which European capital city's name means 'Merchant's Harbour'?  
 (A) Amsterdam                      (B) Copenhagen  
 (C) Stockholm                      (D) London
42. Who was the first batsman to be given out by Third Umpire?  
 (A) Jayasuriya                      (B) Brian Lara  
 (C) Sachin Tendulkar              (D) Allen Border
43. Which musical instrument did Bismillah Khan play?  
 (A) Shehnai                            (B) Sitar  
 (C) Tabla                                (D) Sarangi
44. Which country's old name is not matched correctly?  
 (A) Thailand – Siam  
 (B) Myanmar – Burma  
 (C) Cambodia – Formosa  
 (D) Zambia – Northern Rhodesia
45. The ancestral place of American Vice-President Kamala Harris is Thulasendrapuram in Tamilnadu. In which district is it located?  
 (A) Thanjavur                      (B) Tiruvarur  
 (C) Tiruvannamalai              (D) Tiruchirappalli

### Section 6: Extrapolative Questions

46. The radii of two cylinders are in the ratio 5 : 3 and their heights are in the ratio 9 : 7. Find the ratio of their curved surface areas.  
 (A) 7 : 15                              (B) 15 : 63  
 (C) 63 : 10                              (D) 15 : 7
47. The difference between the compound interest and the simple interest on a certain sum of money at 20% per annum for 2 years is Rs 880. Find the sum when the interest is compounded annually.  
 (A) Rs 22000                            (B) Rs 10000  
 (C) Rs. 20000                            (D) Rs 12000
48. **Assertion :** Fuse is a strip of alloy wire which is made up of lead and tin  
**Reason (1):** lead-tin alloy has high resistance  
**Reason (2):** lead-tin alloy has low melting point

- (A) Both Assertion, Reason 1 & Reason 2 are true and Reason 1 & Reason 2 are the correct explanation of Assertion A.
- (B) Both Assertion, Reason 1 & Reason 2 are true but Reason 1 is the correct explanation for the assertion.
- (C) Both Assertion, Reason 1 & Reason 2 are true but Reason 2 is the correct explanation of the Assertion.
- (D) Assertion is not true but Reason 1 & Reason 2 are true

49. The correct observation for the experiment shown in this diagram are



- (A) Lime water turns milky
  - (B) Lime water turns milky in the beginning and after passing excess carbon dioxide becomes a clear solution.
  - (C) Lime water turns milky and the white precipitate formed will not dissolve on passing excess carbon dioxide through it.
  - (D) No visible change occurs at room temperature, but on heating lime water turns milky.
50. We are sitting in a chair for an hour and doing work in computer, to collect a cup of water, if we turn back suddenly there is a chance of sudden spark of pain at the back our body. What is the reason for sudden pain?
- i. Muscular fatigue
  - ii. Rigor-mortis
  - iii. muscle tear
  - iv. muscle pull
- (A) i and ii only
  - (B) ii and iii only
  - (C) i and iii only
  - (D) iii and iv only