



Section 1: English

- Which of the following words is an adverb?
(A) tall (B) beautifully
(C) quick (D) should
- Choose the correct preposition to fill up the blank in the following sentence:
We cordially invite you our Annual Day Celebrations.
(A) to (B) on
(C) for (D) over
- In which of the following sentences does the subject and verb agree?
(A) Every boy and girl were given prizes.
(B) Every boy and girl are given prizes.
(C) Every boy and girl was given a prize.
(D) None of these.
- Choose the correct reported speech form of the following direct speech utterance:
She said to me, "Your mother was looking for you".
(A) She said to me that her mother was looking for me.
(B) She asked me if my mother had been looking for me.
(C) She told me that my mother had been looking for me.
(D) She told me that my mother had been looking for you.
- From the options, choose the correct simple sentence form of the following complex sentence:
When the man saw his young grandchild, he smiled with happiness.
(A) The man saw his young grandchild and smiled with happiness.
(B) The man seeing his young grandchild, smiled with happiness
(C) The man saw his young grandchild smiling with happiness.
(D) Seeing his young grandchild, the man smiled with happiness.
- Choose from the options the correct meaning of the idiom 'the apple of one's eye'
(A) very dear
(B) a tearful eye
(C) the most tender part of the eye
(D) None of the above
- Choose the correct word from the homophones to fill up the blank:
He..... his bicycle quite comfortably.
(A) road (B) rode
(C) rowed (D) none of the above
- Find the correct meaning of the homonym used in the following sentence:
Try not to be mean towards the underprivileged.
(A) average (B) imply
(C) not nice (D) none of the above
- Complete the collocation: "I was running late so I only had time for a shower."
(A) short (B) quick
(C) fast (D) none of the above
- Choose the correct question for the part underlined in the following sentence:
Peter runs with his dog on Sundays.
(A) What does Peter do on Sundays?
(B) When does Peter run with his dog?
(C) Whom does Peter run with on Sundays?
(D) Who runs with the dog on Sundays?

Section 2: Mathematics

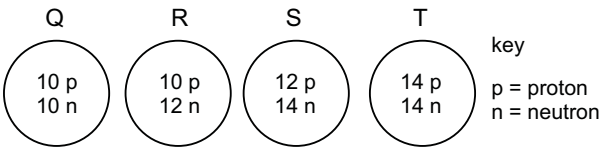
11. Geeta bought furniture costing Rs 24,840, inclusive of sales tax. Find the market price of this furniture, if the sales tax charged is 8% of the market price.
- (A) Rs 26,827.20 (B) Rs 23,000
(C) Rs 27,000 (D) Rs 25,875
12. Rekha bought two different air fresheners, which last for 60 days and 55 days respectively, to use in her new apartment. She replaces them on a regular basis. After how many days will she replace them again on the same day?
- (A) 660 (B) 635
(C) 600 (D) 650
13. A teacher recorded the marks scored by 35 students and calculated the mean marks as 58. While checking the data once again, she found that she entered the marks scored by one of the students incorrectly as 42 instead of 91. What is the correct mean?
- (A) 55 (B) 59
(C) 59.4 (D) 55.4
14. If the graph of a polynomial intersects the x axis at exactly two points, it need not be a quadratic polynomial.
- (A) False (B) True
(C) Ambiguous (D) Data insufficient
15. If $\operatorname{cosec} A + \cot A = p$, then find the value of $\cot A$ in terms of p ?
- (A) $\frac{p^2+1}{p}$ (B) $\frac{2p}{p^2-1}$
(C) $\frac{p^2-1}{2p}$ (D) $\frac{p}{p^2+1}$
16. If two pipes function simultaneously the reservoir will be filled in 12 hours. One pipe fills the reservoir 10 hours faster than the other. How many hours it takes the second pipe to fill the reservoir?
- (A) 30 hours (B) 40 hours
(C) 20 hours (D) 25 hours
17. In a right triangle ABC, right angled at C, P and Q are points on the sides CA and CB respectively that divide these sides in the ratio 1 : 1. Which of the following is always true?
- (A) $4AC^2 + BC^2 = AQ^2$
(B) $4AC^2 + BC^2 = 4AQ^2$
(C) $AC^2 + 4BC^2 = 4AQ^2$
(D) $AC^2 + 4BC^2 = AQ^2$
18. If the sum of zeroes of the quadratic polynomial $6x^2 + kx + 24$ is -5, then find the value of k .
- (A) 8 (B) 32
(C) 4 (D) 30
19. A bucket is in the shape of a frustum of a cone of height 80 cm. The diameters of its two circular ends are 104 cm and 26 cm. Find the capacity of the bucket.
- (A) $297,440 \text{ cm}^3$ (B) $197,440 \text{ cm}^3$
(C) $296,400 \text{ cm}^3$ (D) $196,400 \text{ cm}^3$
20. The angle of depression of a car, standing on the ground, from the top of a 66 m tall tower is 45° . Find the distance of the car from the base of the tower.
- (A) 22 m (B) 66 m
(C) 44 m (D) $66\sqrt{3}$ m

Section 3: Science

21. Suppose you are in some unknown planet and you would like to calculate the acceleration due to gravity (g') on its surface. If the density of the planet is twice of that of earth and the radius is half the radius of the earth, then
- (A) $g' = 2g$ (B) $g' = \frac{g}{2}$
(C) $g' = g$ (D) $g' = 4g$
22. When light moves from one transparent medium to another transparent medium its..... remains unchanged
- (A) Speed (B) Frequency
(C) Wavelength (D) Intensity

23. The sky appears red in the morning and evening and blue in the noon is due to
 (A) Raman scattering (B) Mie scattering
 (C) Rayleigh scattering (D) Inelastic scattering
24. Which of the following statements are wrong?
 (1) Blue vitriol is $\text{CuSO}_4 \cdot 10\text{H}_2\text{O}$
 (2) White vitriol is $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
 (3) Green vitriol is $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$
 (4) Gypsum is $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$
 (A) 1, 2 & 3 only (B) 2, 3 & 4 only
 (C) 1, 2 & 4 only (D) 3 & 4 only
25. The following reaction can be classified as reaction.

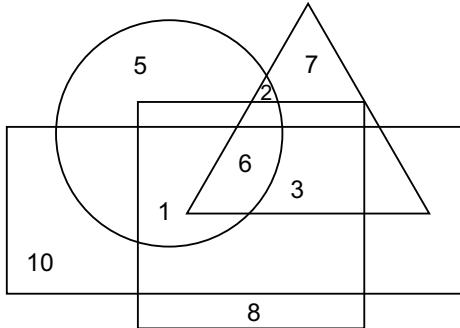
$$\text{NaCl} + \text{AgNO}_3 \longrightarrow \text{AgCl} + \text{NaNO}_3$$

 (A) Double displacement
 (B) Decomposition
 (C) Simple displacement
 (D) Direct combination
26. The diagrams show the nuclei of four different atoms.

 Which two atoms are isotopes of each other?
 (A) Q and R (B) Q and T
 (C) R and S (D) S and T
27. What is the advantage of presence of 4 chambered heart in our body?
 (A) it is maintaining continuous supply of blood.
 (B) it is regulating continuous supply of blood to brain.
 (C) it is maintaining complete separation of oxygenated blood from deoxygenated blood.
 (D) it has no advantage.
28. Secondary growth is different from lateral growth. How?
 (A) Secondary growth is caused by cambium which results in increase in girth of the plant.
 (B) Lateral growth does not occur in dicot plants.
 (C) Secondary growth occurs in most of the monocot plants.
 (D) Lateral growth occurs from terminal bud not from vascular cambium.
29. The significance of chloroplast and mitochondria respectively are
 (A) Synthesis and storage
 (B) Anabolic and catabolic activities
 (C) Disintegration and synthesis
 (D) Both (A) and (C)
30. How can you recognize leech as annelidan?
 (A) Presence of bisexual character in a body.
 (B) Presence of well developed sense organs.
 (C) Presence of segmentally arranged organs.
 (D) Presence of nephridial tubules.

Section 4: Logical Reasoning

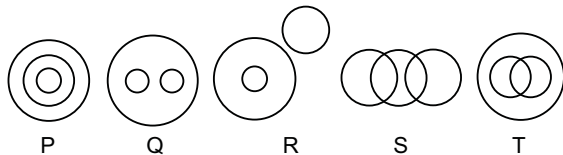
31. The next term in the sequence:
 81, 3, 27, 9, 9, 27, 3, ?
 (A) 18 (B) 81
 (C) 9 (D) 1
32. The unit digit of $(64)^{31}$ is
 (A) 6 (B) 1
 (C) 4 (D) 3
33. Let us consider '+' means '-'; '-' means '×'; '×' means '÷'; '÷' means '+'; means . If $30 \times 5 + 8 \div x = 8$ then, the value of x is
 (A) 4 (B) 19
 (C) 10 (D) 16

34. In the Venn diagram, the rectangle represents the people who like to read books, the square represents the people who like cricket, the circle represents the people who like kabaddi, the triangle represents the people who like hockey.



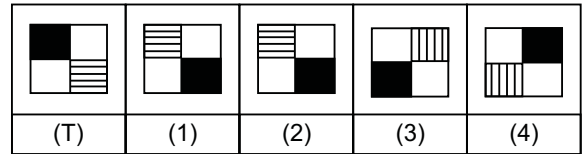
Which number will represent the people who like reading books, cricket and hockey?

- (A) 9 (B) 3
(C) 1 (D) 10
35. Anbu walks 16 kms towards south to reach A. From there he walks 4 kms towards north to reach B. then he walks 5 kms towards west to reach C. the distance between the starting point and C is
- (A) 10 kms (B) 13 kms
(C) 16 kms (D) 25 kms
36. 'A' is poorer than 'B', but not as poor as 'C'. 'D' is not as poor as 'A'. who is the poorest of all?
- (A) D (B) C
(C) B (D) A
37. Select the appropriate Venn diagram representing Doctors, Women and Teachers:



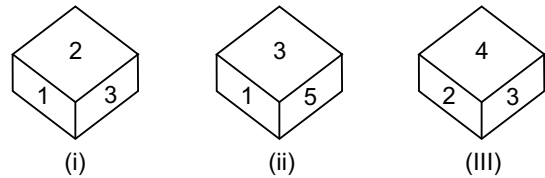
- (A) Diagram (P) (B) Diagram (Q)
(C) Diagram (T) (D) Diagram (S)

38. Choose the correct mirror image of the given figure (T) from amongst the four alternatives:



- (A) (1) (B) (2)
(C) (3) (D) (4)

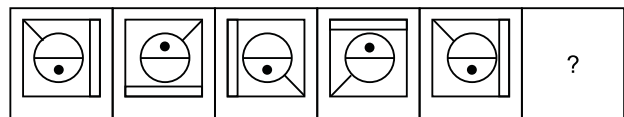
39. Show below are three different positions of the same dice. Find the number on the face opposite the face showing 3.



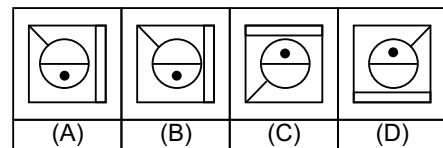
- (A) 6 (B) 2
(C) 5 (D) 4

40. Out of the given answer figures, which is the correct one to replace the question mark (?) in the problem figure.

Problem figure:



Answer figure:



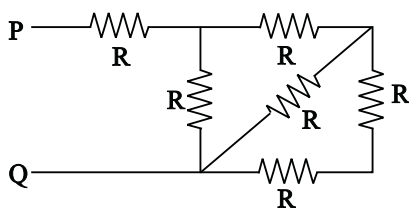
Section 5: General Knowledge

41. World Yoga Day is celebrated on
- (A) 15th August (B) 21st June
(C) 10th September (D) 6th November
42. The Rs.500 and Rs.1000 notes were demonetized on
- (A) 8th November 2016 (B) 6th December 2017
(C) 8th October 2015 (D) 6th November 2014

43. Which field of study is correctly matched?
 (A) Kalology – Fingerprints
 (B) Graphology – Handwriting
 (C) Selenology – Earthquakes
 (D) Cytology – Birds
44. What is the fear of foreigners called?
 (A) Bibliophobia (B) Bathophobia
 (C) Zenophobia (D) Hydrophobia
45. The Indian Parliament was rocked by the Pegasus issue. The Pegasus spyware takes its name from which kind of Greek mythological figure?
 (A) Unicorn
 (B) Buffalo like creature
 (C) A creature with the head of a human and the body of a horse
 (D) A winged horse

Section 6: Extrapolative Questions

46. A straight highway leads to the foot of a tower. A man standing on its top observes a car at a point D, which has an angle of depression of 30° . The car is approaching the foot of tower with a uniform speed. After 14 seconds, the car reaches a point C, which has an angle of depression of 60° from the top of the tower. Find the time taken by the car to reach the foot of tower from the point C.
 (A) 2 seconds (B) 9 seconds
 (C) 7 seconds (D) 10 seconds
47. If the sum of first 12 terms of an AP is 684 and that of first 22 terms is 2,574, find the sum of its first n terms.
 (A) $n(n-15)$ (B) $n(6n-15)$
 (C) $12n-30$ (D) $6n-12$
48. What is the equivalent resistance across P and Q in the given following resistor network?



- (A) $\frac{5}{3}R$ (B) $\frac{10}{3}R$
 (C) $\frac{13}{8}R$ (D) $\frac{5}{8}R$

49. The correct order of separation of sand, sodium chloride, water and oil is
 (A) Separating funnel, decantation and evaporation
 (B) Decantation, separating funnel and evaporation
 (C) Evaporation, separating funnel and decantation
 (D) Decanation, evaporation and separating funnel.
50. **Assertion (A):** In plants fertilization is carried out by the fusion of two pairs of cells.
Reason (R): Two male gametes fuse with two female cells.
 (A) Both A and R are true. R explains A
 (B) Both A and R are false.
 (C) A is true but R is false
 (D) A is true but R does not explain A.