1. Area of sector $= \frac{\theta}{360} \times \pi r^2$

   $= \frac{40}{360} \times \frac{22}{7} \times 4 \times 4$

   $= \frac{1}{9} \times \frac{22}{7} \times 16 = 5.59$

2. $\frac{16}{25}, \frac{25}{3}, \frac{7}{15}, \frac{8}{5}, \frac{1}{15}$

   Taking LCM of 25, 3, 15, 5, 15 :

3	25, 3, 15, 5, 15
5	25, 1, 5, 5, 5
5	5, 1, 1, 1, 1
	1, 1, 1, 1, 1

   LCM = 3 x 5 x 5 = 75
   Now, we will make the denominator of each term = 75

   $\frac{16}{25} \times \frac{3}{3} = \frac{48}{75}$

   $\frac{25}{3} \times \frac{25}{25} = \frac{625}{75}$

   $\frac{7}{15} \times \frac{5}{5} = \frac{35}{75}$

   $\frac{8}{5} \times \frac{15}{15} = \frac{120}{75}$

   $\frac{1}{15} \times \frac{3}{3} = \frac{3}{75}$

   Now, compare the numerators and arrange in ascending order.

   $\frac{3}{75}, \frac{35}{75}, \frac{48}{75}, \frac{120}{75}, \frac{625}{75}$

   $\frac{1}{15}, \frac{7}{15}, \frac{16}{25}, \frac{8}{5}, \frac{25}{3}$

3. LCM of 24 and 32 :

2	24, 32
2	12, 16
2	6, 8
3	3, 4
2	1, 4
2	1, 2
	1, 1

   LCM = 2 x 2 x 2 x 3 x 2 x 2 = 96
   Now, divide 2000 by 96

   ```
   96) 2000 (2
        192
        ────
         80
   ```

   80 Remainder
   The greatest number less than 2000 which is divisible by 24 and 32 are 2000 – 80 = 1920

4. $27 - [48 \div \{4 + (15 - \overline{13 - 2})\}]$

   $27 - [48 \div \{4 + (15 - 15)\}]$

   $27 - [48 \div \{4 + (0)\}]$

   $27 - [48 \div \{4\}]$

   $27 - [48 \div 4]$

   $27 - [\frac{48}{4} = 12]$

   $27 - 12 = 15$

5. $a + b + c = 9$

   $ab + bc + ca = 15$

   $a^2 + b^2 + c^2 = ?$

   $(a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$

   $9^2 = a^2 + b^2 + c^2 + 2(15)$

   $81 = a^2 + b^2 + c^2 + 30$

   $81 - 30 = a^2 + b^2 + c^2$

   $a^2 + b^2 + c^2 = 51$

6. Let the numbers be $x - 1, x, x + 1$
   According to the question;

   $\frac{x-1}{5} + \frac{x}{3} + \frac{x+1}{4} = 40$

   $\frac{12(x-1) + 20(x) + 15(x+1)}{60} = 40$

   $\frac{12x - 12 + 20x + 15x + 15}{60} = 40$

   $47x + 3 = 60 \times 40$

   $47x + 3 = 2400 = 47x = 2400 - 3$

   $47x = \frac{2397}{47} = 51$

   $x = 51$

   Numbers are :

   $x - 1 = 51 - 1 = 50$

   $x = 51$

   $x + 1 = 51 + 1 = 52$

7. Speed = 120 km/hr
   Time = 36 min

   $= \frac{36}{60} hours$

   Distance = Speed x Time

   $= 120 \times \frac{36}{60}$

   = 72 km

8. Let the first part be x.
   Then, the second part is $= 34 - x$
   Given :

   $\frac{4}{7} \times x = \frac{2}{5} \times (34 - x)$

   $\frac{4x}{7} = \frac{68 - 2x}{5}$

   $4x \times 5 = 7(68 - 2x)$

   $20x = 7 \times 68 - 14x$

   $34x = 7 \times 68$

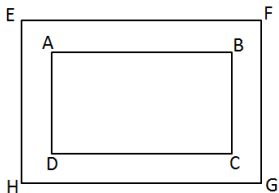 $x = \frac{7 \times 68}{34}$

   $x = 14$

   First part $= x = 14$

Second part = 34 − x = 34 − 14 = 20

9.
$$
\begin{array}{r}
3x - 5 \\
2x^2 - x - 6\,\overline{\smash{\big)}\,6x^3 - 13x^2 - 13x + 30} \\
6x^3 - 3x^2 - 18x \\
\;-\quad+\quad\;+ \\
\hline
-10x^2 + 5x + 30 \\
-10x^2 + 5x + 30 \\
+\quad\;-\quad\;- \\
\hline
0 \\
\hline
\end{array}
$$

Ans = $(3x - 5)$

10. Area of inner square ABCD = side × side
= 21 × 21
= 441 m^2
Area of outer square EFGH = side × side
= (21 + 6) × (21 + 6)
= 27 × 27
= 729 m^2
Area running area between both square
= 729 m^2 − 441 m^2
= 288 m^2

11. Amount = Rs 3825/- in 4 years
Amount = Rs 4050/- in 6 years
Interest in 2 years = 4050 − 3825
= 225
$SI = \frac{P \times R \times T}{100}$
$225 = \frac{P \times R \times 2}{100}$
$PR = \frac{225 \times 100}{2} = 11250$
$PR = 11250$ ....(i)
$SI = \frac{P \times R \times 4}{100}$
$SI = \frac{PR}{25}$
$P + SI = 3825$
$P + \frac{PR}{25} = 3825$
Putting PR = 11250 from (i)
$= P + \frac{11250}{25} = 3825$
$P + 450 = 3825$
$P = 3825 - 450$
P = 3375
Putting this in equation (i)
PR = 11250
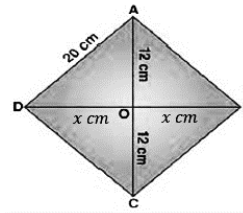$R = \frac{11250}{3375} = \frac{10}{3}\%$
Rate = $\frac{10}{3}\%$

12. Men   Work / Earn   Days

15	900	5
20	x(let)	8

15 × x × 5 = 20 × 900 × 8
$x = \frac{20 \times 900 \times 8}{15 \times 5}$
$x = 4 \times 60 \times 8 = 240 \times 8$
x = Rs 1920/-

13.

Let the other triangle be $2x$
$x^2 + 12^2 = (20)^2$
$x^2 + 144 = 400$
$x^2 = 400 - 144$
$x^2 = 256$
$x = 16$
$2x = 3l$
Area of Rhombus = $\frac{1}{2}$ × diagonal$_1$ × diagonal$_2$
$= \frac{1}{2} \times 32 \times 24$
$= 16 \times 24\ cm$
$= 384 cm^2$

14. MP = Rs 4600/-
Discount = 5%
GST = 10%
CP = MP − Discount
Discount = $\frac{5}{100} \times 4600$ = Rs 230/-
CP = 4600 − 230
= Rs 4370/-
SP = CP + GST
= 4370 + $\frac{10}{100} \times 4370$
= 4370 + 437
SP = Rs 4807/-

15. 200% of a number is 90
Let the number be x
$\frac{200}{100} \times x = 90$
$x = \frac{90}{2} = 45$
80% of the number
$\frac{80}{100} \times 45 = 36$

16. $\frac{1}{2^{1990}} - \frac{1}{2^{1991}} = 2^x$
$2^{-1990} - 2^{-1991} = 2^x$
$2^{-1991}(2^1 - 1) = 2^x$
$= 2^{-1991}(2 - 1) = 2^x$
$2^{-1991} = 2^x$
$x = -1991$

17. Rate = ?
Let sum = x
Amount given = $2x$

Time = $\frac{25}{4} years$

$SI = 2x - x = x$

$SI = \frac{P \times R \times T}{100}$

$1x = \frac{x \times R \times 25}{100 \times 4}$

$R = 4 \times 4 = 16\%$

Rate of interest 16% p.a.

18. Let the exterior angle be x.

Then, interior angle = $5x$

$x + 5x = 180^0$

$6x = 180^0$

$x = \frac{180}{6} = 30^0$

Interior angle =$5x = 150^0$

Sum of interior angle of a regular polygon with n sides :

$(2n - 4) \times 90^0$

Each interior angle = $\frac{(2n-4) \times 90^0}{n} = 150^0$

$(2n - 4)90 = 150n$

$180n - 360 = 150n$

$180n - 150n = 360$

$30n = 360^0$

$n = \frac{360}{60} = 12$

Number of sides = 12

19. $\frac{a-1}{a} = \frac{1}{2}$

To find :

$4a^2 + \frac{4}{a^2}$

$\frac{a-1}{a} = \frac{1}{2}$

$\frac{a}{a} - \frac{1}{a} = \frac{1}{2}$

$1 - \frac{1}{a} = \frac{1}{2} = \frac{-1}{a} = \frac{1}{2} = -1$

$\frac{-1}{a} = \frac{-1}{2}$

$a = 2$

$4a^2 + \frac{4}{a^2} = 4.(2)^2 + \frac{4}{(2)^2}$

$= 4 \times 4 + \frac{4}{4}$

$= 16 + 1$

$= 17$

20. $4x^2 - [3y^2 - \{5x^2 - 2y^2 - (x^2 - y^2)\}]$

$4x^2 - [3y^2 - \{5x^2 - 2y^2 - x^2 + y^2\}]$

$4x^2 - [3y^2 - \{4x^2 - y^2\}]$

$4x^2 - [4y^2 - 4x^2]$

$4x^2 - 4y^2 + 4x^2$

$8x^2 - 4y^2$

PART B

1. CP = Rs 2400/-

Marked at 25% above CP

MP = CP + CP $\times \frac{25}{100}$

$= 2400 + 2400 \times \frac{25}{100}$

$= 2400 + 600$

MP = Rs 3000/-

Discount = 15%

Discount = $\frac{15}{100} \times 3000$

= Rs 450/-

SP = MP – Discount

SP = 3000 – 450

SP = Rs 2550/-

Profit = SP – CP

= 2550 – 2400

= Rs 150/-

Profit Percent = $\frac{Profit}{CP} \times 100$

$= \frac{150}{2400} \times 100$

$= \frac{25}{4} = 6\frac{1}{4}\%$

2. Dimensions of cuboid = 9 cm, 3.5 cm, 4 cm

Volume = $l \times b \times h$

$9 \times 3.5 \times 4$

= 126 m³

Surface area = 2 $(lb + bh + hl)$

$= 2(9 \times 3.5 + 3.5 \times 4 + 4 \times 9)$

$= 2(31.5 + 14 + 36)$

$= 2 \times 81.5$

= 163 m²

3. External volume of the box = $(10 \times 8 \times 7)$

$= 560 \ cm^3$

Internal volume of the box =

$(10-2) \times (8-2) \times (7-2) = 8 \times 6 \times 5$

$= 240 \ cm^3$

Volume of wood =

External volume - Internal volume

$= 560 \ cm^3 - 240 \ cm^3$

$= 320 \ cm^3$

Total cost of wood = 320×2

= Rs 640/-

4. Average speed = $\frac{2S_1 S_2}{S_1 + S_2}$

$= \frac{2 \times 60 \times 90}{60 + 90}$

$= \frac{2 \times 60 \times 90}{150}$

= 72 km/hr

5. Let Son's age be x.

Then father's age = $2x^2$

After 8 years ;

Son's age = $x + 8$

Father's age = $2x^2 + 8$

According to questions :

$2x^2 + 8 = 4 + 3 (x + 8)$

$2x^2 + 8 = 4 + 3x + 24$

$2x^2 + 8 = 3x + 28$

$2x^2 + 8 - 3x - 28 = 0$

$2x^2 - 8x + 5x - 20 = 0$

$2x(x - 4) + 5(x - 4) = 0$

$(2x + 5)(x - 4) = 0$

$(2x + 5) = 0 \qquad (x - 4) = 0$

$2x = -5 \qquad x - 4 = 0$

$x = \frac{-5}{2} \qquad x = 4$

Age cannot be negative

Son's age = 4 years

Father's age = $2x^2 = 2(4)^2 = 32\ years$

6. Edge if a cube = 22 cm

   Diameter of bullet = 2 cm

   $r = 1$ cm

   Volume of cube = (side)^3

   $= (22)^3 = 10,648$

   Volume of each bullet which is spherical in shape = $\frac{4}{3}\pi r^3$

   $= \frac{4}{3} \times \frac{22}{7} \times (1) = \frac{88}{21} cm^3$

   No of bullet = $\frac{\text{volume of cube}}{\text{volume of bullet}}$

   $= \frac{10648}{88} \times 21$

   = 2541 Bullets

7. A's one day work = $\frac{1}{10}$

   B's one day work = $\frac{1}{12}$

   C's one day work = $\frac{1}{15}$

   $(A + B + C)'s\ one\ day\ work = \frac{1}{10} + \frac{1}{12} + \frac{1}{15}$

   $= \frac{6+5+4}{60}$

   $= \frac{15}{60} = \frac{1}{4}$

   Suppose work is completed in x days.

   $A's\ 2\ day\ work + B's\ (x - 3)day\ work +$
   $C's\ x\ day\ work = 1$

   $2 \times \frac{1}{10} + (x - 3) \times \frac{1}{12} + x \times \frac{1}{15} = 1$

   $\frac{1}{5} + \frac{x-3}{12} + \frac{x}{15} = 1$

   $= \frac{12+5(x-3)+4x}{60} = 1$

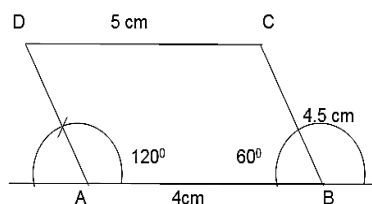 $= \frac{12+5x-15+4x}{60} = 1$

   $= \frac{9x-3}{60} = 1$

   $9x - 3 = 60$

   $9x = 63$

   $x = \frac{63}{9} = 7$

   Work lasts for 7 days.

8.

1. Draw AB = 4 cm
2. From A, draw angle = 120^0
3. From B, raw angle = 60^0
4. From B, draw line = 4.5 cm to C passing through 60^0 arc.
5. Draw an arc from C measuring 5 cm
6. Join C to the point where 5 cm arc passes the AD line.

9. Volume of wall = $\left(33 \times \frac{3.5}{10} \times \frac{40}{100}\right) m^3$

   $= \left(33 \times \frac{35}{10} \times \frac{40}{100}\right) m^3$

   $= \frac{231}{5} m^3$

   Cement and sand part = $\frac{1}{10} \times \frac{231}{5} \Rightarrow \frac{231}{50} m^3$

   Remaining part = $\frac{231}{5} - \frac{231}{50}$

   $= \frac{2310-231}{50}$

   $= \frac{2079}{50} m^3$

   Volume of each brick = $\frac{22}{100} \times \frac{10}{100} \times \frac{7}{100}$

   $= \frac{22 \times 7}{100 \times 10 \times 100}$

   Number of bricks = $\dfrac{\frac{2079}{50}}{\frac{22 \times 7}{100 \times 10 \times 100}}$

   $= \frac{2079}{50} \times \frac{100 \times 10 \times 100}{22 \times 7}$

   $= 27 \times 10 \times 100 = 27000$

   ∴Bricks used = 27000

10. a) $\frac{17-3x}{5} - \frac{4x+2}{3} = (5 - 6x) + \frac{7x+14}{3}$

    $\frac{51-9x-20x-10}{15} = \frac{15-18x+7x+14}{3}$

    $41 - 29x = 75 - 90x + 35x + 70$

    $41 - 29x = 145 - 55x$

    $-29x - 55x = 145 - 41$

    $26x = 104$

    $x = \frac{104}{26} \Rightarrow x = 4$

    b) $\frac{2}{x-3} + \frac{3}{x-4} = \frac{5}{x}$

    $\frac{2(x-4)+3(x-3)}{(x-3)(x-4)} = \frac{5}{x}$

    $\frac{2x-8+3x-9}{x^2-4x-3x+12} = \frac{5}{x}$

    $\frac{5x-17}{x^2-7x+12} = \frac{5}{x}$

    $5x^2 - 17x = 5x^2 - 35x + 60$

    $-17x + 35x = 60$

    $18x = 60$

    $x = \frac{60}{18}$

    $x = \frac{10}{3}$

ENGLISH SOLUTIONS

SECTION 'A'

1. a)
   i. Disgusting
   ii. To keep something
   iii. To live in a particular place
   iv. To make somebody go away
   v. Higher than the usual.

   b)
   i. Ari was convinced that he was not a bird at all because he had no parents to teach him how to fly.
   ii. If you walk fast with Ari, he would be left behind. He would run after you cooing frantically and showing anger.
   iii. As Ari was raised with human beings, he refused to fly and walked instead like humans.
   iv. The phrase which is used to express Ari's anger if he was left too far behind while going for a walk with the family is "cooing frantically, his chest pouting out with indignation.'
   v. Ari loved music, he would move around the gramophone bowing and cooing to a waltz tune, to military march he would raise his chest higher and stomp up and down the room.

2. a) The mother has compared her life to a stair which had cracks in it and splinters and boards torn up. It has places with no carpet on the floor.

   b) It has been a hard and struggling life for the mother. She had struggled and worked hard in her life. She has faced as lot of difficulties in life.

   c) The mother's attitude towards life has been determined and optimistic. Though life has not been easy for her, she has not lost hope and had worked hard to excel in life. She has faced a lot of problems but has never been disheartened. She has always fought hard and moved ahead.

   d) Here 'crystal stair' implies an easy and comfortable life. The mother says that life has not been a 'crystal stair' for her i.e., it has not been easy and comfortable for has.

SECTION 'B'

3. a) Leadership is the art of motivating and guiding people towards achieving a common goal. It involves having a vision, setting goals, inspiring and empowering others to work towards those goals, and making decisions that align with the vision. Leadership is a critical factor in the success of any organization, group, or team. There are different types of leadership, and one of the most effective is transformational leadership. Transformational leadership is a style of leadership that focuses on inspiring and motivating followers to achieve their full potential. It involves creating a vision and inspiring others to work towards it. Transformational leaders empower their followers to take ownership of their work and encourage them to develop their skills and abilities. They provide support and encouragement and foster a positive and inclusive work environment. One of the key features of transformational leadership is charisma. Transformational leaders have a magnetic personality that attracts and inspires others. They are passionate about their vision and their enthusiasm is contagious. They have excellent communication skills and can effectively articulate their vision to others. They also listen actively to their followers, take time to understand their needs and concerns. Another feature of transformational leadership is individualized consideration. Transformational leaders recognize that each follower has unique talents, abilities and aspirations. They take the time to understand their followers' strengths and weaknesses and provide them with the support they need to develop their full potential. They also provide opportunities for their followers to learn and grow. Intellectual stimulation is another aspect of transformational leadership. Transformational leaders encourage their followers to think creatively and explore new ideas. They challenge their followers to question assumptions and think critically. They also provide a safe space for their followers to experiment and take risks, knowing that failure is an essential part of the learning process. Finally, transformational leadership is characterized by inspirational motivation. Transformational leaders inspire their followers

to work towards a common goal. They create a sense of purpose and meaning which motivates their followers to go above and beyond what is expected of them. They celebrate successes and acknowledge the contributions of their followers, creating a positive and supportive work environment.

In conclusion, transformational leadership is an effective style of leadership that focuses on inspiring and motivating followers to achieve their full potential. Transformational leaders create a vision and inspire others to work towards it. They provide individualized consideration, intellectual stimulation and inspirational motivation. Transformational leaders have a magnetic personality that attracts and inspires others. They create a positive and supportive work environment that encourages learning, growth and development.

b) I met a stranger at the railway station and it turned out to be an unforgettable experience. It was a bright and sunny day and I was on my way back home from a weekend trip with my family. As we waited for our train, I noticed a man sitting on a bench across from us. He looked tired and seemed lost in his thoughts. Curiosity got the better of me and I decided to strike up a conversation with him. At first, he seemed hesitant to talk, but eventually, he opened up. He told me that he had just lost his job and was headed to a new city to start over. As he spoke, I could sense his frustration and fear of the unknown. I listened to him patiently and tried my best to offer words of encouragement. We continued to talk and as the train arrived, he got up to leave. Before he left, he thanked me for listening to him and said that our conversation had given him hope. He left with a smile on his face and I was left feeling a sense of accomplishment. Meeting a stranger can be an intimidating experience, but it can also be a life-changing one. It was fascinating to see how a simple conversation could have a profound impact on someone's life. It taught me that everyone has a story to tell and sometimes, all they need is someone to listen. This experience also taught me the importance of empathy and compassion. It made me realize that we should never judge someone based on their appearance or situation. We should always be kind and understanding towards others, especially strangers, as we never know what they might be going through. In conclusion, meeting a stranger at the railway station was an experience that I will never forget. It was a

reminder of the power of human connection and the impact that we can have on each other's lives. It taught me the importance of kindness, empathy, and compassion towards others and I will always carry these lessons with me.

c) As a Class 8 student, using a mobile phone has become an integral part of my life. I use it to stay connected with my friends, to browse the internet and to play games. However, recently my father asked me to stop using my mobile phone, which came as a shock to me. At first, I didn't understand why he was asking me to do this, but upon reflection, I realize that there are several reasons why it might be a good idea. Firstly, using a mobile phone can be a major distraction. As a student, I need to focus on my studies and complete my homework on time. However, my mobile phone often distracts me, and I end up spending more time than I should browsing social media or playing games. This can affect my grades and my overall academic performance. Secondly, using a mobile phone excessively can be harmful to my health. Studies have shown that the blue light emitted by mobile phone screens can disrupt our sleep patterns and cause eye strain. Moreover, constantly using a mobile phone can lead to poor posture and neck pain. These health issues may seem minor at first, but they can have long-term consequences if left unchecked. Finally, using a mobile phone can be a source of addiction. It's easy to get hooked on the constant stream of notifications and updates that our phones provide. This addiction can lead to a sense of disconnection from the world around us and can even affect our mental health. In light of these concerns, I realize that my father's request to stop using my mobile phone is a reasonable one. However, I also recognize that giving up my mobile phone completely may not be practical or desirable. Instead, I need to find a way to use my phone responsibly, without letting it distract me from my studies, harm my health or fuel an addiction. To achieve this, I plan to set some guidelines for myself. For example, I will limit my mobile phone use to certain times of the day, such as after completing my homework or during designated break times. I will also turn off notifications for social media and gaming apps, so that I am not constantly distracted. Finally, I will make an effort to engage in activities that do not involve my phone, such as reading or playing sports. In conclusion, while it may be difficult to give up using a mobile

phone completely, it is important to use it responsibly. My father's request to limit my phone use is a reminder that there are other important things in life, such as education, health and human connection, that require our attention and focus. By setting some guidelines for myself, I hope to strike a balance between using my mobile phone and living a well-rounded life.

4. Sender's Name,
Address.

Receiver's Name,
Address.

Dear [Brother's Name],
I hope this letter finds you in good health and high spirits. I am writing to you to tell you about a recent incident that took place at my school which left a lasting impression on me. Last week, during the lunch break, I was hanging out with my friends in the school courtyard when suddenly there was a loud commotion. I rushed over to see what was happening and to my horror, I saw one of my fellow students, Mark, drowning in the school pool. I was frozen with fear, but one of our classmates, John, sprang into action. He dove into the pool and managed to pull Mark to safety. John's quick thinking and bravery saved Mark's life. After the incident, everyone was talking about John's heroic act. The school principal called an assembly and praised John's bravery in front of the entire school. John was overwhelmed with emotions and received a standing ovation from everyone. The incident left a deep impact on me. It made me realize the importance of being courageous and selfless in the face of danger. I feel proud to be a part of such a brave and compassionate school community. I hope you find this account of the incident interesting. Take care of yourself and give my regards to everyone at home.

Yours affectionately,
[Your name]

5. As the man sat on his chair, his eyes glued to the screen in front of him, he couldn't help but glance towards the window. Outside, the sun was shining bright and the birds were chirping, but he knew that the world outside was not safe. The room around him was in complete disarray, with papers and files strewn across the floor and the desk. It was as if a storm had swept through the room, leaving behind a trail of chaos. Behind him, his faithful companion, a brown Labrador Retriever, sat quietly, watching him with his big brown eyes, he too was eager to step outside and enjoy the beautiful weather. However, the man knew better than to risk it. He knew that the world outside was still dangerous, with harmful germs and viruses lurking around every corner. Despite the mess around him, the man remained focused on his computer screen. He was in the middle of an important meeting, and he could not afford to be distracted. The conversation on the screen was intense and he knew that every word mattered. However, even as he listened intently to the discussion, his mind kept drifting towards the window. He longed to step outside and feel the warm sun on his face, to breathe in the fresh air and to run free with his loyal companion. But for now, he knew that he had to stay inside and do his part to keep himself and others safe. He silently wished for the day when the world would be safe again, when he could step outside without fear and when his furry friend could run free without any worries. The environment inside his room heightened his longingness to go outside. The picture descries the barriers present between us and nature in the modern times.

SECTION 'C'

1. a) Suman works hard at school.
   b) Somebody will trip over your bicycle if you don't move it.
   c) Was she upset when she heard the news?
   d) The pastor preached to an attentive crowd of people.
   e) It was a good laughable idea.
   f) These apartments have been often broken into by thieves.
   g) I am giving you this medicine to take it at bed time.
   h) How many people can be accommodated in this auditorium?
   i) She is too clever to be fooled.
   j) The manager handled the situation skilfully.

2. a) Ayush neither likes tea nor coffee.
   b) I do not know the time when Shubham will come back.
   c) Payal left for Yemen so she sold all the furniture.
   d) Monica was to reach here at 8 but she has not turned up yet.
   e) Ankit have no apples in the shop therefore he has to buy them.

3. **Antonym**
   a) Permanent
   b) Bad
   c) Increase
   d) Smile
   e) Soft
4. **Synonym**
   a) Difficulty
   b) Still
   c) Finish
   d) Strange
   e) Alike
5. Correct form of verb
   a) Leave
   b) were
   c) hit
   d) was lying
   e) went
   f) escaped
   g) been traveling
   h) we would have been involved
   i) delayed
   j) dampen
6. Fill in the blanks.
   a) With
   b) Upon/On
   c) Out
   d) Up
   e) Though
   f) Down
   g) In
   h) Out
   i) Into
   j) Across
7. a) I am unduly harassed by the police.
   b) This information might have been given earlier.
   c) The admission tickets are checked at the gate.
   d) I am being called by her.
   e) By whom was your pen stolen?

8. **Idioms**
   a) At the helm of the ship
   b) A quarrel
   c) Talk about nothing
   d) Work single handedly
   e) An eventful day
9. **Indirect speech**
   a) She exclaimed that she had spilt coffee on the table.
   b) He asked me when she would go to Jaipur.
   c) He commanded his servant to go away at once.
   d) He admitted that he was at fault.
   e) They exclaimed with amazement that it was a very pleasant weather.
   f) Mohan suggested Lata that they should watch some good movie.
   g) She asked me affectionately what could she do for me.
   h) Veena told her mother to cheer up, she would go and get work somewhere.
   i) The girl exclaimed that the paper was very difficult.
   j) I asked the guard when the next flight would come in.
10. **Similes**.
    a) Fiddle
    b) Dove
    c) Drum
    d) Happy
    e) Bee
11. a) Epitaph
    b) Aristocracy
    c) Celibacy
    d) Conference
12. Fill in the blanks
    a) Practise
    b) Lightning
    c) Assent
    d) Site
    e) Effect

GENERAL KNOWLEDGE SOLUTIONS

1. a) India
2. d) Bihar Astronomical Observatory
3. d) Brendan Fraser
4. b) Jammu & Kashmir
5. d) Council of Scientific and Industrial Research (CSIR)
6. b) Bhutan
7. c) South Korea
8. d) Victoria
9. b) Kolkata
10. c) Potato
11. b) Uttar Pradesh
12. c) Novak Djokovic
13. c) All India Radio News
14. b) Ministry of Chemicals and Fertilisers
15. c) Chai (Tea)
16. a) Indian Oil Corporation
    Explanation: At Tinsukia, Assam (M15 is a blend of 15% methanol and 85% gasoline).
17. d) Mumbai to Ahmedabad
18. a) Ministry of Culture
19. c) USA
20. b) Prime Minister
21. b) Cricket
22. b) 2014
23. d) 2025
24. d) Tamil Nadu
25. d) Kolkata
26. b) 26 January 1950
27. c) Vaishali in 383 BC
    Explanation: The second Buddhist Council was held at ancient city of Vaishali, what is now in the state of Bihar bordering Nepal. It was held under the patronage of king Kalasoka and was presided by sabakami. This council was held about a century after the first council.
28. a) Andromeda galaxy
29. c) Kalibangan
    Explanation: Kalibangan is a town located on banks of river Ghaggar between Suratgarh and Hanumangarh in Hanumangarh distric, Rajasthan.
30. a) 2 Years 11 Months 18 Days
31. c) Nagananda, Priyadarshika and Ratnavali
32. a) Iltutmish
33. c) Sap of Plants
    Explanation: Plant nectar, honeydew and other fluids.
34. c) automatically maintaining a steady temperature
35. b) Art. 14
36. a) Age of Earth is 4.543 billion years
37. a) Ratti
38. d) Periyar
39. b) Ammonia
40. c) 1923
41. c) Mariana Trench
    Explanation: Near the southern tip there the deep crescent-shaped trench, near the southern tip there is a small shaped area called 'Challenger Deep' which is the deepest point and is 36,000 feet below see level.
42. c) Junko Tabei
43. d) India
    Explanation: The member countries of ASEAN are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore.
44. a) 1920
45. a) Rowlatt Act
    Explanation: The Rowlatt Act of 1919 authorised the British government to arrest anybody suspected of terrorist activity and such people could be detained/arrested of to two years
46. d) Magma
47. d) 06 August 2019
48. c) upper and lower crust and solid upper part of mantle
49. b) Titan (Saturn moon)
50. c) Yajurveda
51. a) The Hague
52. c) hydrochloric acid
    Explanation: The gastric juice is a unique combination of Hydrochloric acid (HCl) Lipase and Pepsin. These inactivate any microorganism before they reach the intestines.
53. d) New Delhi
54. b) S-Wave (Transverse Wave)
55. a) European Space Agency
56. b) 1966
    Explanation: On 17 Novemeber 1966 the UN General Assembly passed a resolution 2152 (XXI) establishing UNIDO as an autonomus body within the UN to promote and accelerate industrialization of develoving counries.
57. c) Baldev Singh
58. b) Venus
    Explanation: Our nearest planet Venus is 7,521 miles (12,104 kilometers) across and earth is 7,926 miles (12,756 kilometers) across.

59. a) Igneous rock
60. a) Tele-conferencing
61. a) Goa

   Explanation: The Basilica of Bom Jesus is a catholic Basilica located at Goa in the Konkan region.

62. a) Kerala

   Explanation: Sabarimala is 191 km away from Thiruvanthapuram.

63. b) Assam

   Explanation: Husari is carol singing, Bihu songs and dancing invariably follow the main item of Husari singing.

64. a) Kerala High Court
65. a) 71%

66. a) Parliament by law
67. c) President
68. a) Both (i) and (ii)
69. b) Presidential Ordinances
70. a) Ministry of Home Affairs
71. b) Akbar
72. a) Rajya Sabha only
73. c) Vacuum
74. a) First Schedule

   Explanation: The first schedule of the Indian Constitution contains list of states and UTs, their extent and territorial jurisdictions.

75. a) Ladakh

Explanation: 71% of the Earth's surface is water covered and ocean hold 96.5% of all Earth's water.