## SSC CGL (Tier-I) Practice Set - 2023

1. (a) Garbage is domestic waste material. Similarly, Gangue is waste material of ore.
2. (d) Nephron is the basic structural and functional unit of the kidney. Similarly, neuron is the basic structural and functional unit of the Central Nervous System.

ख्याजिएय
3. (c) Library is a building or room in which collections of books, newspapers, journals etc. are kept. Similarly, forest is a large area of land thickly covered with trees, bushes etc.
4. (d) Joker is an additional card in a pack of cards. Similarly, Cover is an additional part of a book.
5. (c) Car is parked in Garrage. Similarly, aeroplane is parked in Hangar.
(6-7)
ऊुाजिस

| Member | Gender | Profession | Relationship |
| :--- | :--- | :--- | :--- |
| P | Female | Lady <br> Teacher | Wife of S; <br> Mother of Q; <br> Mother-in-law of R; <br> Grandmother of T <br> and U. |
| Q | Male | Doctor | Son of P and S; <br> Husband of R; <br> Father of T and U |
| R | Female | Lawyer | Daughter-in-law of P <br> and S; Wife of Q; <br> Mother of T and U |
| S | Male | Salesman | Husband of P; <br> Father of Q; <br> Grandfather of T <br> and U; <br> Father-in-law of R. |
| T | Not <br> Given | Engineer | Child of Q and R; <br> Grandchild of P and S |
| U | Male | Manager | Son of Q and R; <br> Grandson of P and S; <br> Brother of T |

6. (b) Married couples are : (Q and R) and (P and S).
7. (d) P is a Lady Teacher.
8. (c) $\mathrm{J}=10 \Rightarrow$ Position Number in English alphabetical series.

9. (a) A P P R E C I A T I O N
$\begin{array}{cccccccccccc}\text { A } & \downarrow & & R & \text { E } & \text { C } & \text { A } & & \text { O } \\ & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 1 & 7 & 7 & 8 & 3 & 2 & 4 & 1 & 9 & 4 & 6 & 5\end{array}$
Therefore,
P E R C E P T I O N

| $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ | $\downarrow$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 7 | 3 | 8 | 2 | 3 | 7 | 9 | 4 | 6 | 5 |

फ़ापिएस
10. (c)


Given expression
$6+(3 \times 1)+5=$ ?
After changing the signs
? $=6 \times(3-1) \times 5$
or, ? $=6 \times 2 \times 5=60$
11. (b)


Starting Point
क्याप्जियन
12. (a)


Now, he is facing towards north.
13. (b) Mondays $\Rightarrow 1$ st, 8 th, 15 th,

22nd and 29th
23rd $\rightarrow$ Tuesday
24th $\rightarrow$ Wednesday
25th $\rightarrow$ Thursday
14. (d) The letters A, B, D and E are on the adjacent faces of face C . Therefore, some other letter lies opposite ' C '. The letters B, C and E are on the adjacent faces of face $D$. Therefore, $A$ lies opposite D.
15. (c) There is no ' $R$ ' letter in the given word. Therefore, the word COUNTER cannot be formed.
ANNOUN CEMENT $S$ आ M Sिিर्स
$\Rightarrow$ CEMENT
AN NOUNCEMENTS
$\Rightarrow$ NOUN
A N N O U N C E M ENTS
$\Rightarrow$ TENSE
16. (b) There is no ' N ' letter in the given word. Therefore, the word ARAMANA cannot be formed.
DHAR AMS ALA
$\Rightarrow$ MASALA
D H ARAMS ALA
$\Rightarrow$ R A M A
D HARAM S A LA
$\Rightarrow$ S A HARA
17. (c) Suppose the present age of Ketan is $x$ years.

According to question
$\mathrm{x}+1=2(\mathrm{x}-10)$
or, $x+1=2 x-20$
or, $2 \mathrm{x}-\mathrm{x}=20+1$
$\therefore \mathrm{x}=21$ years
18. (a) Suppose the present age of the mother $=x$ years
$\therefore$ Present age of person $=\frac{2}{5} \mathrm{x}$ years
8 years hence
$\left(\frac{2}{5} x+8\right)=\frac{(x+8)}{2}$
凹াভ্ভির্ম
or, $2 \frac{(2 \mathrm{x}+40)}{5}=\mathrm{x}+8$
or, $4 x+80=5 x+40$
or, $5 x-4 x=80-40$
$\therefore x=40$ years
19. (b) Suppose the age of son is $x$ years

Therefore, age of father $=10 \mathrm{x}$ years
According to question
$\frac{10 \mathrm{x}+\mathrm{x}}{2}=22$
$\Rightarrow 11 \mathrm{x}=44$
$\therefore \mathrm{x}=\frac{44}{11}=4$ years
Age of father $=10 \times 4=40$ years
20. (c) $5+3=8$
$8 \times 2=16$
$16+3=19$
$19 \times 2=38$
$38+3=41$
ত্যাভির্র
$41 \times 2=82$
21. (b) $826=480+346$
$480=346+134$
$346=134+212$
22. (b)


Therefore,
फ्याप्जिए
S O I L
$\downarrow \downarrow \downarrow \downarrow$
N E J K
23. (a) The first Premise is Universal Affirmative (A-type).
The second Premise is Particular Affirmative (I-type).
Most players are men.


Some man are singers.
A $+\mathrm{I} \Rightarrow$ No Conclusion
Conclusion I is Converse of the second statement.
24. (b)


फ़ाजिएर्न
25. (a) 408
(169) 395
$408-\sqrt{169}=408-13=395$
Therefore,
$129-\sqrt{\mathrm{x}}=122$
or, $\sqrt{\mathrm{x}}=129-122=7$
$\therefore \mathrm{x}=(7)^{2}=49$
26. (c) Pali is a Middle Indo-Aryan language (of Prakrit group) of the Indian subcontinent. It is best known as the language of many of the earliest extant Buddhist scriptures, as collected in the Pali Canon or Tipitaka, and as the liturgical language of Theravada Buddhism. Pali is a literary language of the Prakrit language family and was first written down in Sri Lanka in the first century BCE

खुप्ञिय
27. (a) The legendary musical prowess of Tansen surpasses all other legends in Indian music. In terms of influence, he can be compared only to the prolific sufi composer Amir Khusro (1253-1325), or to bhakti tradition composers such as Swami Haridas. Several of his raga compositions have become mainstays of the

Hindustani tradition, and these are often prefaced with Miyan ki ("of the Miyan"), e.g. Miyan ki Todi, Miyan ki Malhar, Miyan ki Mand, Miyan ka Sarang; in addition he is the creator of major ragas like Darbari Kanada, Darbari Todi, and Rageshwari. Tansen also authored Sangeeta Sara and Rajmala which constitute important documents on music.
28. (b) The Constitution of India came into force on 26 January 1950. It was adopted by the Constituent Assembly on 26 November, 1949.Republic Day honours the date on which the Constitution of India came into force on 26 January 1950 replacing the Government of India Act (1935) as the governing document of India.

শ্ডাভ্ভির্র
29. (a) The Great Barrier Reef is in the Coral Sea, on Australia's north-eastern coast. It stretches more than $2,300 \mathrm{~km}$ along the state of Queensland's coastline, beginning at the tip of Cape York Peninsula in the north and extending down to Bundaberg in the south. The Great Barrier Reef is ideal for Cairns Scuba Diving.
30. (b) India's First International Cruise Vessel was flagged off recently from Chennai to Sri Lanka. This marks the start of the international cruise tourism terminal at Chennai. The MV Empress cruise has a capacity to accommodate 3,000 passengers. It will connect three portsTriconmalle, Hambantota and Jaffna-in Sri Lanka.

खुप्षिিस
31. (a) The economic liberalisation in India refers to ongoing economic reforms in India that started on 24 July, 1991. In 1991, the government of P. V. Narasimha Rao and his finance minister Manmohan Singh (currently the Prime Minister of India) started breakthrough reforms which included opening for international trade and investment, deregulation, initiation of privatization, tax reforms, and inflation controlling measures.

凸 आভভির্स
32. (a) Narasimhavarman-I, son of MahendravarmanI, was a Tamil king of the Pallava dynasty who ruled South India from 630-668 A.D. He avenged his father's defeat at the hands of the Chalukya king, Pulakesin II in the year 642 CE. Narasimhavarman was also known as Mamallan (great wrestler) and Mamallapuram (Mahabalipuram) was named after him. It was during his reign that the Chinese traveller Hieun Tsang visited Kanchipuram.
33. (b) Freedom of the press or freedom of the media is the freedom of communication and expression through mediums including various electronic media and published materials. The concept of freedom of speech is often covered by the same laws as freedom of the press, thereby giving equal treatment to spoken and published expression.

खणापिस्त
34. (a) The troposphere is the lowest portion of Earth's atmosphere. It contains approximately $80 \%$ of the atmosphere's mass and $99 \%$ of its water vapor and aerosols. The average depth of the troposphere is approximately 17 km in the middle latitudes. It is deeper in the tropics, up to 20 km , and shallower near the Polar Regions, at 7 km in summer, and indistinct in winter. Most of the phenomena we associate with day-to-day weather occur in the troposphere.
35. (d) The important towns of Chera dynasty were Musiri, Tondi, Bandar and Vanji. Roman built

36. (d) The 6th edition of Exercise Ekatha was held in Maldives 3 between Indian Navy divers and Marine Commandos and Maldives National Defence Force (MNDF). This bilateral exercise aims to boost interoperability in diving and special operations. The 5th edition of Exercise Ekatha was held in October 2022 at Maldives.
37. (b) The ionosphere is a part of the upper atmosphere, from about 85 km to 600 km altitude, comprising portions of the mesosphere, thermosphere and exosphere, distinguished because it is ionized by solar radiation. It plays an important part in atmospheric electricity and forms the inner edge of the magnetosphere. It has practical importance because, among other functions, it influences radio propagation to distant places on the Earth. The ionosphere is a shell of electrons and electrically charged atoms and molecules that surrounds the Earth, stretching from a height of about 50 km to more than 1000 km . It owes its existence primarily to ultraviolet radiation from the Sun.

फ़ापिएर्त
38. (a) When the Constituent Assembly started the work of drafting the Constitution, Pt . Jawaharlal Nehru proposed the 'Objectives Resolution' on December 13, 1946. The 'Resolution' highlighted the objectives and laid down the 'national goals'. The 'Objective Resolution' passed by the Constituent Assembly
on January 22，1947，ultimately became the Preamble to the Constitution of India．
39．（d）Chauth（from Sanskrit meaning one－fourth） was regular a tax or tribute imposed，from early 18th century，by the Maratha Empire in India．It was nominally levied at $25 \%$ on revenue or produce，hence the name．It was levied on the Mughalai lands which was under Mughal rule．The right to assess and collect this tax was asserted first by Shivaji in the later 17th century，on spurious grounds that his family was hereditary tax collectors in Maharashtra．

खाভি氏ির্ज
40．（d）Immediately after independence，policy planners sought a solution to the recurring flood menace faced by people of North Bihar from the Kosi and other rivers flowing from Nepal to India．The Kosi project was thus conceptualized（based on investigations between 1946 to 1955），in three continuous interlinked stages．The third part envisaged a high multipurpose dam within Nepal at Barakshetra to provide substantial flood cushion along with large irrigation and power benefits to both countries．

खुण্ভির্स
41．（b）Glycerol forms the backbone of triglycerides， and is chiefly produced by saponification of fats as a byproduct of soap－making．It is also a byproduct of the production of biodiesel via transesterification．This form of crude glycerin is often dark in appearance with a thick，syrup－ like consistency．Triglycerides are treated with an alcohol such as ethanol with catalytic base to give ethyl esters of fatty acids and glycerol． Glycerol（or glycerine，glycerin）is a simple polyol compound．It is a colourless，odorless， viscous liquid that is widely used in pharmaceutical formulations．Glycerol has three hydroxyl groups that are responsible for its solubility in water and its hygroscopic nature． The glycerol backbone is central to all lipids known as triglycerides．Glycerol is sweettasting and of low toxicity．

खुप्रिस
42．（b）Inelastic demand means that if the price changes，the quantity demanded will not change much．The more necessary a good is， the lower the elasticity，as people will attempt to buy it no matter the price．Necessities such as water are likely to have perfectly inelastic demand．

43．（d）The Goods \＆Services Tax（GST）revenue collected in the month of May 2023 rose $12 \%$ on an annual basis to Rs 1.57 lakh crore．The Finance Ministry reported the GST collections for the month of April 2023 at Rs 1.87 lakh crore，the highest ever．Monthly GST revenues more than Rs 1.4 lakh crore for 14 months in a row，with Rs 1.5 lakh crore crossed for the 5th time since inception of GST．फुा ছिির
44．（d）Dry chemical is a powder based agent that extinguishes by separating the four parts of the fire tetrahedron．It prevents the chemical reactions involving heat，fuel，and oxygen and halts the production of fire sustaining＂free－ radicals＂，thus extinguishing the fire．Sodium bicarbonate，＂regular＂or＂ordinary＂used on class $B$ and $C$ fires，was the first of the dry chemical agents developed．In the heat of a fire，it releases a cloud of carbon dioxide that smothers the fire．That is，the gas drives oxygen away from the fire，thus stopping the chemical reaction．This agent is not generally effective on class A fires because the agent is expended and the cloud of gas dissipates quickly，and if the fuel is still sufficiently hot， the fire starts up again．While liquid and gas fires don＇t usually store much heat in their fuel source，solid fires do．

फ़ाप्डिस
45．（d）The English East India Company was founded in 1600．Akbar was Mughal Emperor from 1556 until his death in 1605.

46．（a）Shiv Kumar Sharma is famous for playing Santoor．Tarun Bhattacharya is also a famous santoor player．
47．（d）Neutering involves removing the source of the hormones that control reproduction and that determine the typical physical and behavioral characteristics that distinguish males and females．In dogs and cats，this is usually done by surgically removing the testicles in males （castration）and the ovaries in females （spaying）．The primary purpose of neutering is to prevent reproduction．

फ़ापिएर्स
48．（a）Zambia＇s Kafue National Park（KNP）is the third largest national park in Africa．New reports reveal that lion and leopard population in this region are rebounding，after 50 years of poaching．Scientists found leopard densities in southern KNP increased threefold－from about 1.5 leopards in 2019 to approximately
4.4 leopards per 100 square kilometres in 2022. This was due to rigorous counter－poaching operations for four years．

खुप্ভির্स
49．（a）Surat，previously known as Suryapur，is a well developed commercial city of the Indian state of Gujarat．The city is located 306 km south of state capital Gandhinagar，and is situated on the left bank of the Tapti River（Tapi）．The city is largely recognized for its textile and diamond businesses．It is also known as the diamond capital of the world and the textile capital／Manchester textile city of India，a distinction it took over from Ahmedabad．It is also known as the＂Embroidery capital of India＂with the highest number of embroidery machines than any other city．

खुप्रिज्य
50．（a）Three subject lists，the Union list，the State list，and the Concurrent list，define the legislative powers of each level of government．The parliament of India enjoys the exclusive right to legislate on the subjects contained in the Union List．
51．（c）First number $(X)=17 x+13$
ऊাঙ্িির্ম
Second number $(Y)=17 y+11$
$\therefore \frac{\mathrm{x}+\mathrm{y}}{17}=\frac{17(\mathrm{x}+\mathrm{y})}{17}+\frac{13+11}{17}$
$\therefore$ Required remainder
＝Remainder obtained on dividing
$11+13$ i．e． 24 by $17=7$
52．（d）Let the unknown number be $x$ ．
$\therefore 71 \times \mathrm{x}+47=98 \times 7$
$\Rightarrow 71 \mathrm{x}=686-47=639$
$\Rightarrow \mathrm{x}=\frac{639}{71}=9=3 \times 3$
53．（a）Let the required number be $x$ ．
As given，
$\Rightarrow \mathrm{x} \times \frac{5}{4}-\mathrm{x} \times \frac{5}{14}=25$
$\Rightarrow 5 \mathrm{x}\left(\frac{1}{4}-\frac{1}{14}\right)=25$
$\Rightarrow 5 \mathrm{x}\left(\frac{7-2}{28}\right)=25 \Rightarrow 5 \mathrm{x} \times \frac{5}{28}=25$
⿹勹⿰丿丿丄心িির্র
$\Rightarrow \mathrm{x}=\frac{25 \times 28}{5 \times 5}=28$
54．（d）We find LCM of 5， 6 and 8
$5=5$
$6=3 \times 2$
$8=2^{3}$
$=2^{3} \times 3 \times 5=8 \times 15=120$
Required number $=120 \mathrm{~K}+3$
$\therefore$ when $\mathrm{K}=2,120 \times 2+3=243$
required no．
It is completely divisible by 9
55．（b）LCM of 20， 30 and 40 minutes $=120$ minutes
Hence，the bells will toll together again after 2 hours i．e．at 1 p．m．

खालिए
56．（d）$\frac{1}{5 \times 6}+\frac{1}{6 \times 7}+\frac{1}{7 \times 8}+\frac{1}{8 \times 9}+\frac{1}{9 \times 10}+\frac{1}{10 \times 11}$
$=\frac{1}{5}-\frac{1}{6}+\frac{1}{6}-\frac{1}{7}+\frac{1}{7}-\frac{1}{8}+\frac{1}{8}-\frac{1}{9}+\frac{1}{9}-\frac{1}{10}+\frac{1}{10}-\frac{1}{11}$
$=\frac{1}{5}-\frac{1}{11}=\frac{11-5}{55}=\frac{6}{55}$
57．（d）Expression
$=\frac{\frac{5}{4} \div \frac{3}{2}}{\left(\frac{2+30-27}{30}\right)}=\frac{\frac{5}{4} \times \frac{2}{3}}{\frac{5}{30}}=\frac{5}{6} \times \frac{30}{5}=5$

58．（a）$\sqrt{5+\sqrt{11+\sqrt{19+\sqrt{29+7}}}}$
आাডিভর্स
$=\sqrt{5+11+\sqrt{19+6}}$
$=\sqrt{5+11+\sqrt{25}}$
$=\sqrt{5+\sqrt{11+5}}=\sqrt{5+4}$
$=\sqrt{9}=3$
59．（c）Average of five numbers
$=\frac{2 \times 8+3 \times 3}{2+3}=\frac{16+9}{5}=\frac{25}{5}=5$
60．（c）Required average
$=\frac{2+3+5+7+11+13+17+19+23+29}{10}$
$=\frac{129}{10}=12.9$
61．（a） $\mathrm{A}: \mathrm{B}=3: 4$

$$
B: C=6: 5
$$

A ：B ： $\mathrm{C}=(3 \times 6):(4 \times 6):(4 \times 5)$
＝ $18: 24: 20$
$=9: 12: 10$
$\therefore \mathrm{C}: \mathrm{A}=10: 9$
62．（b）Let the numbers be $x$ and $y$ ．
According to the question，
$\mathrm{x}+\mathrm{y}=3(\mathrm{x}-\mathrm{y})$
$\Rightarrow \mathrm{x}+\mathrm{y}=3 \mathrm{x}-3 \mathrm{y}$
$\Rightarrow 3 \mathrm{x}-\mathrm{x}=\mathrm{y}+3 \mathrm{y}$
$\Rightarrow 2 \mathrm{x}=4 \mathrm{y}$
$\Rightarrow \mathrm{x}=2 \mathrm{y}$
$\Rightarrow \frac{\mathrm{x}}{\mathrm{y}}=\frac{2}{1}$
63．（d）Let the required amount be Rs．$x$ ．
According to the question，
$90 \times 83 \frac{1}{3} \%=\mathrm{x} \times 60 \%$
$\Rightarrow 90 \times \frac{250}{3}=x \times 60$
$\Rightarrow \mathrm{x}=\frac{30 \times 250}{60}=$ Rs． 125
ऊাড্ভির্স

64．（a）Let B＇s income be Rs． 100.
$\therefore$ A＇s income $=$ Rs． 125
$\therefore$ Required per cent
$=\left(\frac{100}{125} \times 100\right)=80 \%$
65．（b） $3 x-2=\frac{3}{x}$
$3 x-\frac{3}{x}=2$
$\Rightarrow \mathrm{x}-\frac{1}{\mathrm{x}}=\frac{2}{3}$
फाগিির্স
On squaring both sides
$\left(x-\frac{1}{x}\right)^{2}=\frac{4}{9}$
$\Rightarrow x^{2}+\frac{1}{x^{2}}-2=\frac{4}{9}$
$\Rightarrow \mathrm{x}^{2}+\frac{1}{\mathrm{x}^{2}}$
$=\frac{4}{9}+2=\frac{22}{9}=2 \frac{4}{9}$
66．（c）$x^{2}+\frac{1}{5} x+a^{2}$
$=\mathrm{x}^{2}+2 \cdot \mathrm{x} \cdot \frac{1}{10}+\left(\frac{1}{10}\right)^{2}-\left(\frac{1}{10}\right)^{2}+\mathrm{a}^{2}$
फ্ডাচ্ভির্ন
$\therefore \mathrm{a}^{2}-\left(\frac{1}{10}\right)^{2}=0 \Rightarrow \mathrm{a}^{2}=\left(\frac{1}{10}\right)^{2}$
$\Rightarrow \mathrm{a}=\frac{1}{10}$
67．（c） $\mathrm{a} \sin \theta+\mathrm{b} \cos \theta=\mathrm{c}$
$a \cos q-b \sin \theta=x$（let）
On squaring equations（i）and（ii）and adding，
$\mathrm{a}^{2} \sin ^{2} \theta+\mathrm{b}^{2} \cos ^{2} \theta+2 \mathrm{ab} \sin \theta$ ．
कुप्িिির্স
$\cos \theta+a^{2} \cos ^{2} \theta+b^{2} \sin ^{2} \theta-2 a b-\sin \theta \cdot \cos \theta=c^{2}$
$+\mathrm{x}^{2}$
$\Rightarrow \mathrm{a}^{2}\left(\sin ^{2} \theta+\cos ^{2} \theta\right)+\mathrm{b}^{2}\left(\cos ^{2} \theta+\sin ^{2} \theta\right)=\mathrm{c}^{2}+\mathrm{x}^{2}$
$\Rightarrow \mathrm{a}^{2}+\mathrm{b}^{2}=\mathrm{c}^{2}+\mathrm{x}^{2}$
$\Rightarrow \mathrm{x}^{2}=\mathrm{a}^{2}+\mathrm{b}^{2}-\mathrm{c}^{2}$
$\Rightarrow x= \pm \sqrt{a^{2}+b^{2}-c^{2}}$
68．（b） $\sin \theta+\sin ^{2} \theta=1$
$\Rightarrow \sin \theta=1-\sin ^{2} \theta=\cos ^{2} \theta$
$\therefore \cos ^{2} \theta+\cos ^{4} \theta$
$=\cos ^{2} \theta+\left(\cos ^{2} \theta\right)^{2}$
$=\cos ^{2} \theta+\sin ^{2} \theta=1$
69．（c）

$\angle \mathrm{IBC}=\frac{70^{\circ}}{2}=35^{\circ}$ ；
$\angle \mathrm{ICB}=\frac{50^{\circ}}{2}=25^{\circ}$ ；
$\therefore \angle \mathrm{BIC}=180^{\circ}-35^{\circ}-25^{\circ}$
$=180^{\circ}-60^{\circ}=120^{\circ}$
70．（c）

$\therefore \angle \mathrm{BOC}=180^{\circ}-\angle \mathrm{A}$
$\Rightarrow \angle \mathrm{BOC}+\angle \mathrm{BAC}=180^{\circ}$
71．（d）


ख्यापिएय

Side of rhombus $=$ side of square.
$=\sqrt{2 \mathrm{a}}=40 \sqrt{2} \Rightarrow \mathrm{a}=40$
$\mathrm{AC} \perp \mathrm{BD} ; \angle \mathrm{AOD}=90^{\circ}$
Let $\mathrm{AC}=3 \mathrm{x}$ and $\mathrm{BD}=4 \mathrm{x} \mathrm{cm}$
$\therefore \mathrm{AO}=\frac{3 \mathrm{x}}{2} ; \mathrm{OD}=2 \mathrm{x} \mathrm{cm}$
फ्या গ্ভिর্ज
From $\triangle \mathrm{AOD}$ ，
$\mathrm{OA}^{2}+\mathrm{OD}^{2}=\mathrm{AD}^{2}$
$\Rightarrow\left(\frac{3 \mathrm{x}}{2}\right)^{2}+4 \mathrm{x}^{2}=40^{2}$
$\Rightarrow 9 \mathrm{x}^{2}+16 \mathrm{x}^{2}=1600 \times 4$
$\Rightarrow 25 \mathrm{x}^{2}=6400$
$\Rightarrow \mathrm{x}^{2}=6400 \div 25=256$
$\Rightarrow \mathrm{x}=\sqrt{256}=16$
$\therefore \mathrm{AC}=3 \times 16=48 \mathrm{~cm}$

and $B D=4 \times 16=64 \mathrm{~cm}$
$\therefore$ Area of rhombus
$=\frac{1}{2} \times \mathrm{AC} \times \mathrm{BD}$
$=\frac{1}{2} \times 48 \times 64$
$=1536$ sq. cm .
72. (b) Side of square $=\sqrt{2}$ metre Radius of in-circle
$=\frac{\sqrt{2}}{2}=\frac{1}{\sqrt{2}}$ metre
Area of the circle $=\pi r^{2}$

$=\pi \times \frac{1}{2}=\frac{\pi}{2}$ sq. metre.
73. (d) $x^{2}+y^{2}+1=2 x$
$\Rightarrow \mathrm{x}^{2}+\mathrm{y}^{2}+1-2 \mathrm{x}=0$
$\Rightarrow \mathrm{x}^{2}-2 \mathrm{x}+1+\mathrm{y}^{2}=0$
$\Rightarrow(\mathrm{x}-1)^{2}+\mathrm{y}^{2}=0$
$\Rightarrow \mathrm{x}-1=0$
$\Rightarrow \mathrm{x}=1$ and $\mathrm{y}=0$
$\therefore \mathrm{x}^{3}+\mathrm{y}^{5}=1+0=1$
74. (d) $x+y+z=5+6-11=0$
$\therefore \mathrm{x}^{3}+\mathrm{y}^{3}+\mathrm{z}^{3}=3 \mathrm{xyz}$
$=3 \times 5 \times 6 \times(-11)=-990$
75. (c) $\mathrm{a}+\frac{1}{\mathrm{a}}=3$

खुप्িिर्स
On cubing both sides,
$\left(a+\frac{1}{a}\right)^{3}=3^{3}=27$
$a^{3}+\frac{1}{a^{3}}+3 a \times \frac{1}{a}\left(a+\frac{1}{a}\right)=27$
$\Rightarrow \mathrm{a}^{3}+\frac{1}{\mathrm{a}^{3}}+3 \times 3=27$
$\Rightarrow \mathrm{a}^{3}+\frac{1}{\mathrm{a}^{3}}=27-9=18$
$\therefore a^{3}+1 \frac{1}{a^{3}}=a^{3}+\frac{1}{a^{3}}+1$
$=18+1=19$
76. (b) Sing $\Rightarrow$ Sang (Past) $\Rightarrow$ Sung (Past Participle)
Here, sang is the right usage.
77. (b) It is Preposition related error.

Prep. - to is used after prefer
Hence, coffee ( Noun) to tea (Noun) is the right usage.

ख्याजिएस
78. (c) Here, Infinitive i.e. to commute for work/to work is the right usage.
79. (d) assure (V.) : to guarantee; to tell somebody that something is definitely going to happen. Here, assured is the right option.
80. (a) insist (V.) : to demand earnestly. insist (V.) agrees with on (Prep.) Hence, on is the right usage.
81. (c) Structure of Imperative Sentence :

Do/does + not + V (Infinitive without to) Hence, interrupt is the right usage. ऊुण्पिर्य
82. (a) run down (Phr. V.) : to lose power or stop working; to gradually stop functioning.
run short (Id.) : to become scanty/insufficient in supply
run past (Phr. V.) : to run near/alongside someone/something from one side to the other run up (Phr. V.) : accumulate Here, run down is the right usage.
83. (c) (1) attract (V.) : to interest something.

Here, attract is the right option.
84. (c) roam
wander (V.) : to walk around a place without any purpose; roam

फ़ापिएर्य
85. (b) pause
hesitate (V.) : to be worried about doing something ; to be slow to speak or act; pause.
86. (b) coax
persuade (V.) : to make somebody do something by giving them good reasons for doing it; convince; coax.
87. (d) once in a blue moon : very rarely

- You are seen only once in a blue moon The best option is rarely.

88. (c) to talk him over : to discuss something thoroughly, especially in order to reach an agreement or make a decision

- We talked themover to our point of view. The best opti on is convince. फुणापिएन

89. (b) kicked up a row : to complain loudly about something

- The food was so cold that dad kicked up a row and refused to pay for it.
The best option is made a great fuss.

- When I applied for this job, it was just a shot in the dark.
The best option is an attempt to guess something.

91. (c) inexact (Adj.) : not accurate or exact.
impeccable (Adj.) : without mistakes or faults; perfect.
92. (b) authentic (Adj.) : known to be real and genuine and not a copy; true and accurate. spurious (Adj.) : false, although seeming to be genuine
93. (a) determine (V.) : arrange something; establish. meander (V.) : ramble; to curve a lot rather than being in a straight line; wander.
94. (a) hypochondriac শ্ডাণ্ভির্स hypochondriac (N.) : worried all the time about
your health and believing that you are ill/sick when there is nothing wrong with you neophyte (N.) : a person who has recently started an activity
maniac (N.) : an insane person misanthrope ( $\mathbf{N}$. ) : someone who dislikes people in general
95. (a) mint
mint (N.) : a place where money is coined by authority of the government cannery (N.) : a factory where food is canned monetary (Adj.) : involving money
96. (b) vast (Adj.)
97. (a) around (Adv.)

फुप्रिएन
98. (c) oasis (Noun)
99. (b) search (Noun)
100.(c) camel (Noun)

