

1. 10 years ago, age of a father was more than  $3\frac{1}{2}$  the age of his son and after 10 years from now, the age of the father will be more than  $2\frac{1}{4}$  the age of his son. Now, how much is the total sum of the age of father and son?

- A. 120 years
- B. 115 years
- C. 110 years
- D. 100 years

Answer ||| C

Solution |||

Suppose the present age of father is F and son is S.

ATQ-

10 years ago,

$$F - 10 = \frac{6}{2} (S - 10)$$

$$2F - 20 = 6S - 60$$

$$-20 + 60 = 6S - 2F$$

$$6S - 2F = 40 \quad \text{--- (eq.i)}$$

10 years from now,

$$F + 10 = \frac{9}{4} (S + 10)$$

$$4F + 40 = 9S + 90$$

$$4F - 9S = 90 - 40$$

$$4F - 9S = 50 \quad \text{---(eq.ii)}$$

On solving both the equations-

We get,  $S = 30$  &  $F = 80$

Sum of their present ages -  $80 + 30 = 110$  years

Hence, option (c) is correct.

2. Two different situations of the same dice are shown. If the number 6 is on the lower board, then what will be the number on the upper board?



- A. 4
- B. 1
- C. 2
- D. 3

Answer ||| D

Solution |||

Moving in the clockwise direction,

Cube 1- 3 1 5

Cube 2- 3 4 2

Clearly, 6 will be opposite to 3

Hence, option (D) is correct.

3. Select the set in which the numbers are related in the same way as the numbers are related in the set below.

- (10, 18, 38)  
A. (4, 12, 22)  
B. (14, 12, 8)  
C. (12, 22, 46)  
D. (18, 6, 14)

Answer ||| C

Solution |||

$$10 \times 2 - 2 = 20 - 2 = 18$$

$$18 \times 2 + 2 = 36 + 2 = 38$$

Similarly, the option (c) is related to above number set in this manner.

$$12 \times 2 - 2 = 24 - 2 = 22$$

$$22 \times 2 + 2 = 44 + 2 = 46$$

Hence, the correct option is (c) - (12, 22, 46)

4. Three from the following four numbers are somehow identical and one number is uneven. Select that uneven number.

- A. 12  
B. 14  
C. 30  
D. 56

Answer ||| B

Solution |||

All except 14 are the multiple of only one prime number.

Hence, (b) is correct response.

5. The way, in which the verb 'deed' is related to 'reaction', \_\_\_\_\_ is related to 'inciting'.

- A. Foresight  
B. Feedback  
C. Response  
D. Welcome

Answer ||| C

Solution |||

Deed - reaction

Response - inciting

Hence, option (C) is correct

6. Select the option that is related to the third letter group in the same way as the second letter group is related to the first letter group.

BECD : YVXW :: DGEF : ?

- A. WUTV  
B. WTVU  
C. VRTS  
D. XUWV

Answer ||| B

Solution |||

The first and second set of letters are the pairs of the opposite letter.

BECD : YVXW

Similarly,

DGEF : WTVU

Hence, option (b) is correct.

7. From the given options, select the word pair whose two words are related to each other in the same way as the words of the word pair below are related.

Heat: Sun

A. House: Terrace

B. Vitamin: Fruit

C. Environment: Humidity

D. Ride: car

Answer ||| B

Solution |||

Sun is the source of heat.

Likewise, fruit is the source of vitamin.

Therefore, the correct response is option (b)

8. If BACK is coded as 11312 and CAKE as 51113. So how will MADE be coded?

A. 13145

B. 54113

C. 51413

D. 31145

Answer ||| B

Solution |||

The code is given after reversing the letter of the word.

The reverse order of back is kcab

Place value of k - 11

Place value of c - 3

Place value of a - 1

Place value of b - 2

Kcab- 11312

Similarly, the reverse order of MADE is EDAM and it will be coded as 54113

Hence, option (b) is correct

9. To correct the equation given below, which two symbols, should be mutated?

$$18+6-6\div 3\times 3=6$$

A. + और ÷

B. + और ×

C. - और ÷

D. + और -

Answer ||| A

Solution |||

According to the question,

If we interchange the + and ÷ sign the above equation become correct.

$18 \div 6 - 6 + 3 \times 3$  (applying BODMAS)  
 $= 3 - 6 + 9 \Rightarrow 12 - 6 \Rightarrow 6$   
 So, the correct answer is option (a)

10. Three words out of the following four words are somehow similar and one word is uneven. Choose the odd word.

- A. Tendency
- B. Endurance
- C. Stability
- D. Persistence

Answer ||| A

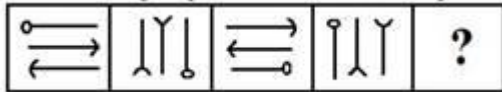
Solution |||

Tendency relates to the ability of a person to do something.

While endurance, stability and persistence means the state of being stable.

Hence, the odd word is (a) tendency.

11. Select the next figure in the following figure sequence.



- A.
- B.
- C.
- D.

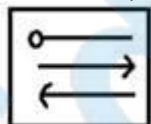
Answer ||| B

Solution |||

The figure first moves in anti-clockwise direction and then its mirror image shown in the next figure with the outward arrows.

In next figure the pattern is same but arrow sign changes to inward.

Therefore, according to the above pattern-



Option (b) is the correct sequence.

12. In the series given below, what number will replace the question mark (?)?

2, 5, 11, 23, 44, ?

- A. 77
- B. 63
- C. 51
- D. 66

Answer ||| A

Solution |||

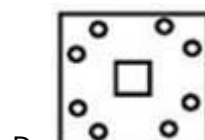
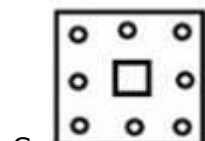
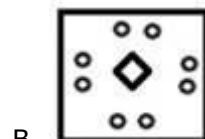
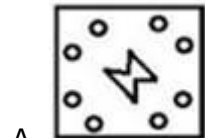
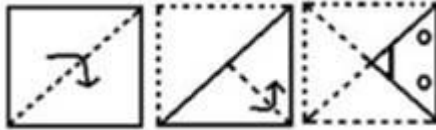
2 5 11 23 44 ? -- 77

+3 +6 +12 +21 +33

+3 +6 +9 +12

Hence, the correct option is (a).

13. A paper is folded and cut as shown below. What will it look like when open it?



Answer ||| D

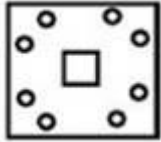
Solution |||

The paper will open in 2 steps:-

Step-1

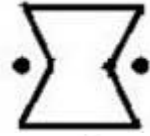


Step-2



Hence, the correct option is (d)

14. Select the option in which the given figure is hidden.

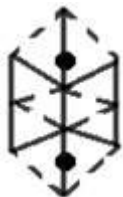


- A.
- B.
- C.
- D.

Answer ||| D

Solution |||

On observing the options we can see that the figure given under option (D) is indeed embedded in the original figure. It has been represented below,



Option (d) is the correct answer.

15. Arrange the following words in a logical and meaningful sequence.

- 1) Medicine
- 2) Disease identification
- 3) Consultation
- 4) Disease
- 5) Health Benefits
- 6) Doctor

- A. 4, 6, 3, 2, 1, 5
- B. 2, 6, 4, 1, 3, 5
- C. 4, 6, 2, 3, 1, 5
- D. 4, 6, 1, 3, 2, 5

Answer ||| C

Solution |||

We know that disease occurs first and then we go to the doctor. Thus the correct order is -

- 4. Disease
  - 6. Doctor
  - 2. Disease identification
  - 3. Consultation
  - 1. Medicine
  - 5. Health benefits
- Hence, the answer is (c)

16. Select the letter combination that is placed sequentially on the blank spaces of the letter series given below to complete the given series.

ac\_d\_b\_cbdd\_a\_bddb

- A. bdbca
- B. bdcab
- C. cbdbc
- D. bdabc

Answer ||| D

Solution |||

The sequence of series is acbddb.

acbddbacbddbacbddb

So, the correct option is (d)

17. Three letter groups from the following four-letter groups are similar in some way and one is unequal. Select the odd alphabets.

- A. TWUV
- B. HNLJ
- C. MSOQ
- D. DGEF

Answer ||| B

Solution |||

All except HNLJ has one vowel.

So the odd letter group is option (b)

18. Two statements are given below and then conclusions I, II and III are given.

Assuming the statement to be true, even if it seems to be at variance from commonly known facts, you have to decide which of the given conclusions logically follows the given statements.

Statement :

Some cars are vehicles.

No vehicle is four wheeler.

Conclusion :

I. There are no cars that are four wheeler.

- II. All four wheelers are cars.  
 III. Some vehicles are cars.  
 A. Both conclusions I and II follow.  
 B. Both the conclusions II and III follow.  
 C. Only conclusion II follows.  
 D. Only conclusion I follows.

Answer ||| D

Solution |||



Conclusion:

- I. There are no cars that are four wheeler. – (false) as there is no relation between them.  
 II. All four wheelers are cars. – (false) it is a possibility case.  
 III. Some vehicles are cars. – (true) it is clearly shown In the diagram.  
 Hence, option (d) is correct.

19.

Identify the diagram that best represents the relationship among the given classes.

Parents, rich people, farmers

- A.
- B.
- C.
- D.

Answer ||| A

Solution |||



Some parents are rich people and vice-versa.  
 Some rich people are farmers and vice-versa.



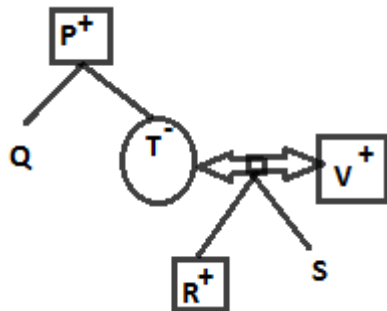
Some farmers are both parents and rich people.  
Hence, option (a) is correct.

20. P is father of Q and grandfather of R. R is brother of S. The mother of S is married to V. T is sister of Q. How is V related to P?

- A. Son
- B. Nephew
- C. Brother-in-law
- D. Son-in-law

Answer ||| D

Solution |||



From the diagram, it is clear that V is son-in-law of P.  
Hence, the correct option is (D)

21. In a code language, TEMPLE is written as DKOLDS. In the same code language, how will be WORSHIP written as -----?

- A. OHGRQNV
- B. OGHQRVN
- C. QJITSPX
- D. VNQGHOR

Answer ||| A

Solution |||

First, the letter of word written in reverse order and then each alphabet moves 1 step backward

I.e. ELPMET- DKOLDA

Similarly,

PIHSROW- OHGRQNV

Hence, option (a) is the correct response.

22. Select the set in which the numbers are interlinked in the same way as the numbers are related in the set given below.

(7, 13, 21)

- A. (12, 18, 25)
- B. (17, 22, 30)
- C. (9, 16, 25)
- D. (2, 8, 16)

Answer ||| D

Solution |||

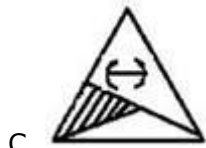
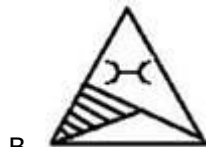
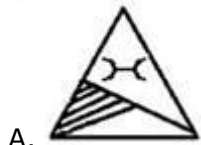
$$7 \xrightarrow{+6} 13 \xrightarrow{+8} 21$$

Likewise,

$$2 \xrightarrow{+6} 8 \xrightarrow{+8} 16$$

Hence, the correct answer is option (d)

23.If the mirror is placed on the right side of the diagram given below, then select the right mirror image to be made.



Answer ||| B

Solution |||

In a plane mirror, a mirror image is a reflected duplication of an object that appears almost identical, but it is reversed in the direction perpendicular to the mirror surface. As an optical effect it results from reflection of substances such as a mirror or water.



Hence, the correct answer is (b)

24.Select the number pair in which the two numbers are related in the same way as the two numbers are related in the number pair given below.

4 : 32

- A. 10 : 160
- B. 8 : 248
- C. 6 : 108
- D. 5 : 62

Answer ||| C

Solution |||

$$4^2 \times \frac{4}{2} = 32$$

Similarly,

$$6^2 \times \frac{6}{2} = 108$$

Hence, (c) is correct.

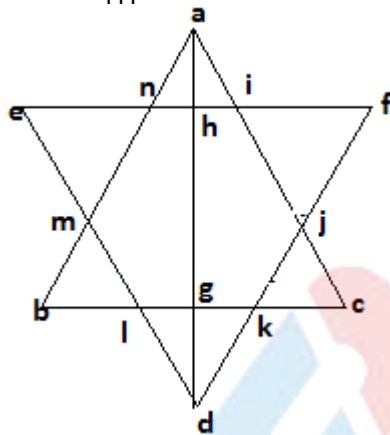
25. How many triangles are there in the given figure?



- A. 18
- B. 16
- C. 14
- D. 20

Answer ||| B

Solution |||



In the above figure, the triangles formed are as follows- abc, def, mne, bml, kdl, ckj, fji, ani, ahi, anh, dkg, gdi, dhe, dhf, abg, agc.

Total no. of triangles are 16.

Hence, option (b) is correct.

26. How many great powers (Mahajanapada) existed in the seventh and sixth centuries BCE during the life of Lord Gautama Buddha?

- A. 11
- B. 13
- C. 17
- D. 16

Answer ||| D

Solution |||

\* During the time of 6-7th century B.C there were **total 16 janpads** were existing throughout the country.

- \* These were Kasi, Kosala, Anga, Magadha, Vajji, Malla, Chedi, Vatsa, Kuru, Panchala, Machcha, Surasena, Assaka, Avanti, Gandhara and Kamboja.
- \* In the Buddhist traditions these kingdoms came to be known as 'Mahajanapadas'

27. Which of the following Articles of the Constitution of India is related to the Uniform Civil Code?

- A. Article 44
- B. Article 46
- C. Article 45
- D. Article 43

Answer ||| A

Solution |||

\* **Article 44 deals with Uniform Civil Code.**

- \* It is mentioned under Directive Principles of state Policy. It is not justiciable.
- \* A44 says that The State shall endeavour to secure for the citizens a uniform civil code throughout the territory of India.

28. Name the first female Prime Minister of the world.

- A. Indira Gandhi
- B. Sirimavo bandaranaike
- C. Golda Meir
- D. Elizabeth Domitien

Answer ||| B

Solution |||

\* **Sirima Ratwatte Dias Bandaranaike** was a Sri Lankan states woman.

\* She became the world's first non-hereditary female head of government in modern history.

\* She was elected Prime Minister of Sri Lanka in 1960. She served three terms: 1960–1965, 1970–1977 and 1994–2000.

29. Which panel set up by the Government of India has suggested the removal of complete control over Chinese industry?

- A. Mr. Krishna Panel
- B. Rang Rajan Panel
- C. Ramsevak Panel
- D. Radheshyam Panel

Answer ||| B

Solution |||

\* **The committee, led by C. Rangarajan**, Chairman of the Prime Minister's Economic Advisory Council, pitches for a stable trade policy and a moderate duty on imports and exports, but wants outright ban or quantitative restrictions done away with.

\* These recommendations are in line with the industry's demand for easing controls.

30. Where was the inauguration of Special Olympics World Games 2019?

- A. Abu Dhabi
- B. Sweden
- C. Germany
- D. Austria

Answer ||| A

Solution |||

\* The inauguration of Special Olympics World Games 2019 was held **in Abu Dhabi, United Arab Emirates from March 14–21, 2019.**

\* The Indian team comprising 284 athletes clinched 85 gold, 154 silver and 129 bronze medals at the Special Olympics World Summer Games.

31. Which is the traditional musical instrument of Limbu community of Sikkim.

- A. Chutke
- B. Naumati
- C. Chyapat-Brugg
- D. Gyurum Sili

Answer ||| C

Solution |||

\* **Chyabrung** is the appropriate option for this question.

\* Limbus has many folk musical instruments and used in their own life cycle rituals, occasions, like -"Ke" or "Chyabrung", "Negra", "Penjekom", "Murchunga", "Chethya", "Miklakom", "Binayo" etc.

\* Today their traditional music and musical instruments has been on the verge of extinction from our society.

32. In March 2019, Social Media Platforms and Internet and Mobile Association of India (IAMI) introduced \_\_\_\_\_ to the Election Commission of India for the general elections 2019.

- A. Voluntary Code of Conduct
- B. Precautionary Code
- C. List of jobs to be done
- D. Polling List Center

Answer ||| A

Solution |||

\* The social media intermediary members of the Internet and Mobile Association of India (IAMAI) have recently adopted a **voluntary code of ethics** for the upcoming general elections.

\* Under the Code, participants have voluntarily undertaken to establish a high-priority communication channel with the nodal officers designated by the ECI.

33. Name the passage which is used by pilgrims in Uttarakhand for Kailash-Mansarovar Yatra.

- A. Pensy La
- B. Kurdung
- C. Banihal Pass
- D. Lipu Lekh

Answer ||| D

Solution |||

\* **Lipulekh pass is used for pilgrimage of Kailash Mansarovar.**

\* Lipulekh is a Himalayan pass on the border between Uttarakhand, India and Tibet, China. The southern side of the pass is controlled by India but claimed by Nepal.

\* It is near their tripoint with Chinese trading town of Taklakot in Tibet.

34. Which of the following forms is an epithet of buckminsterfullerene?

- A. Phosphorus
- B. Iron
- C. Carbon
- D. Boron

Answer ||| C

Solution |||

\* **Buckminster Fullerene is an allotrope of carbon.**

- \* It comprises of C-50, C-60 carbon atoms.
- \* It contains pentagonal and hexagonal carbon cycles arranged in a football shaped.
- \* It is a radical scavenger and also has vital applications in nano technology.

35. Which of the following is aldehyde?

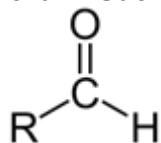
- A. Propine
- B. Propanone
- C. Propanal
- D. Propanol

Answer ||| C

Solution |||

\* **Propanal is an aldehyde.**

- \* The name of aldehyde groups is generally ends with 'al'.
- \* An aldehyde is a compound containing a functional group with the structure  $\text{-CHO}$ , consisting of a carbonyl center (a carbon double-bonded to oxygen) with the carbon atom also bonded to hydrogen and to an R group, which is any generic alkyl or side chain. Such as



36. Name the gland that controls the function of other endocrine glands.

- A. Pancreas
- B. Adrenal gland
- C. Renal gland
- D. Pituitary gland

Answer ||| D

Solution |||

\* **Pituitary gland is also known as Master gland** because it controls functioning of other glands.

- \* Pituitary gland is about the size of a pea and is situated in a bony hollow, just behind the bridge of your nose.
- \* It is attached to the base of your brain by a thin stalk.

37. Which of the following is not one of the monarchy states that existed in India in the seventh and early sixth centuries BC?

- A. Magadha
- B. Vaishali
- C. Avanti

D. Kosala

Answer ||| B

Solution |||

- \* **Vaishali was not among the 16 janpadas** present during 7th century B.C.
- \* During the time of 6-7th century B.C there were total 16 janpads were existing throughout the country.
- \* These were Kasi, Kosala, Anga, Magadha, Vajji, Malla, Chedi, Vatsa, Kuru, Panchala, Machcha, Surasena, Assaka, Avanti, Gandhara and Kamboja.

38. Who was the first woman general secretary of SAARC (South Asian Association for Regional Cooperation)?

- A. Antino Guteres
- B. Jeremiah Nymanne Kingsley
- C. Madeleine Albright
- D. Fatimath Ghiyana Saeed

Answer ||| D

Solution |||

- \* The former Maldivian Attorney-General, **Fathimath Dhiyana Saeed, was First female secretary general of SAARC.**
- \* SAARC is a regional Asian group founded in 1985 which has 7 members.

39. Which of the following was the Precursor of the Internet?

- A. APNET
- B. ANET
- C. ARPANET
- D. PANET

Answer ||| C

Solution |||

- \* **ARPANET was the network that became the basis for the Internet. Based on a concept first published in 1967.**
- \* ARPANET was developed under the direction of the U.S. Advanced Research Projects Agency (ARPA).
- \* In 1969, the idea became a modest reality with the interconnection of four university computers.

40. Which team won the Ranji Trophy final 2017?

- A. Vidarbha
- B. Punjab
- C. Mumbai
- D. Delhi

Answer ||| A

Solution |||

- \* Vidarbha won the Ranji Trophy final 2017.
- \* **The final took place between Vidarbha and Saurashtra**, starting on 3 February 2019. Vidarbha defeated Saurashtra by 78 runs in the final, to become the sixth team in the tournament's history to retain their title.



41. Which of the following biosphere reserves was first established by the Government of India?

- A. Sundarbans Biosphere Reserve
- B. Gulf of Mannar Biosphere Reserve
- C. Nanda Devi Biosphere Reserve
- D. Eucalyptus Biosphere Reserve

Answer ||| D

Solution |||

The given biosphere Researves are formed in following years-

- \* Nilgiri Biosphere Reserve - 1986
- \* Sunderbans - 1989
- \* Nanda Devi National Park & Biosphere Reserve- 1988
- \* Gulf of Mannar - 1989

42. Name the state of the following which Chandragupta I had got in the dowry from Lichhavi.

- A. Pataliputra
- B. Prayag
- C. Saket
- D. Ujjain

Answer ||| A

Solution |||

\* **Chandragupta I got Pataliputra in dowry from the Lichhavis.**

\* The Gupta Lichchhavi relation was even publicised through a particular type of gold coins "which have the names and figures of Chandragupta I and his Lichchhavi wife on the obverse and the figure of a goddess seated on a lion along with the legend Lichchhavayah on the reverse".

43. Who was the founder of the Chalukya dynasty?

- A. Pulakshen First
- B. Kirtivarman
- C. Narasimhavarman
- D. Mangalsa

Answer ||| A

Solution |||

\* **The Chalukya dynasty was established by Pulakeshin I in 543.**

\* Pulakeshin I took Vatapi (modern Badami in Bagalkot district, Karnataka) under his control and made it his capital.

\* Pulakeshin I and his descendants are referred to as "Chalukyas of Badami"

44. Which of the following public sector undertaking was given Maharatna status in February 2013?

- A. ONGC
- B. BHEL
- C. CIL



#### D. OIL

Answer ||| B

Solution |||

\* The government in 2013 has granted Maharatna status to **Bharat Heavy Electricals Ltd (BHEL) and Gas Authority of India Ltd (GAIL)**.

\* One of the eligibility criteria to be given the coveted status is that the company should have an average annual turnover over Rs 25,000 crore during the last three years.

45. In which year Project Tiger was launched in India?

A. 1982

B. 1992

C. 1979

D. 1973

Answer ||| D

Solution |||

\* **Project Tiger was first initiated in the year April 1, 1973**, by GOI and is still going on.

\* During the tiger census of 2006, a new methodology was used extrapolating site-specific densities of tigers, their co-predators and prey derived from [camera trap](#) and sign surveys using [GIS](#).

\* The government has set up a Tiger Protection Force to combat [poachers](#) and funded relocation of villagers to minimize human-tiger conflicts.

46. \_\_\_\_\_ is collective folk dance, which is done in honor of Kanchanjanga, the Patron God of the people of Sikkim.

A. Jo-Mal-Lok

B. Tendon Low Rum Fat

C. Chu-Phat

D. Kinchum-Chu-Bomsa

Answer ||| C

Solution |||

\* **Chu faat is a community dance performed in Sikkim.**

\* The dance is performed in honour of Mt. Kanchanjanga, the guardian deity of Sikkim people.

\* The dancers carrying butter lamps and bamboo leaves perform ritualistic dance in community

47. Which of the following has a very strong aroma of the fruit?

A. Methanol

B. Ethyl Acetate

C. Methyl chloride

D. Methanoic acid

Answer ||| B

Solution |||

\* **Ethyl acetate is the organic compound with the formula  $\text{CH}_3\text{-COO-CH}_2\text{-CH}_3$** , simplified to  $\text{C}_4\text{H}_8\text{O}_2$ .

\* This colorless liquid has a characteristic sweet smell and is used in glues, nail polish removers, decaffeinating tea and coffee.

48."What is the name of the first Indian budget carrier to join the International Air Transport Association (IATA)?

- A. Indigo
- B. SpiceJet
- C. Go Air
- D. Jet Airways

Answer ||| B

Solution |||

\* **SpiceJet** has joined **global airlines'** grouping **IATA** as a member, becoming the first Indian low-cost carrier to get the membership.

\* The **International Air Transport Association**(IATA) represents more than 290 airlines, including Air India, Jet Airways and Vistara.

\* The membership would help SpiceJet, which has ambitious expansion plans, to have codeshares and agreements with other carriers

49.The idea of residual powers in the Indian Constitution is derived from the \_\_\_\_\_ Constitution.

- A. South Africa
- B. America
- C. Canada
- D. Japan

Answer ||| C

Solution |||

\* Indian constitution taken following from Canada:

1. Federation with a strong Centre
2. Vesting of residuary powers in the Centre
3. Appointment of state governors by the Centre
4. Advisory jurisdiction of the Supreme Court

50."Which of the following states passed the Maintenance of Household Registers Bill in March 2019?

- A. Odisha
- B. Assam
- C. Mizoram
- D. West Bengal

Answer ||| C

Solution |||

\* **Mizoram assembly unanimously passed Mizoram Maintenance of Household Register Bill, 2019.**

\* It aims to create registers containing the names, details and photographs of every resident of the state, on a household basis, in an effort to detect illegal foreigners staying and "eating away" benefits of development schemes.

51.  $\left( \frac{\sin \theta - 2 \sin^3 \theta}{2 \cos^3 \theta - \cos \theta} \right)^2 + 1, \theta \neq 45^\circ,$  is equal to:

- A.  $\sec^2 \theta$
- B.  $2 \tan^2 \theta$
- C.  $\operatorname{cosec}^2 \theta$

D.  $\cot^2 \theta$

Answer ||| A

Solution |||

$$\begin{aligned} & \left( \frac{\sin \theta - 2 \sin^3 \theta}{2 \cos^3 \theta - \cos \theta} \right)^2 + 1 \\ &= \frac{\sin^2 \theta (1 - 2 \sin^2 \theta)^2}{\cos^2 \theta (2 \cos^2 \theta - 1)^2} + 1 \\ &= \frac{\tan^2 \theta (\cos 2\theta)^2}{(\cos 2\theta)^2} + 1 \\ &= \tan^2 \theta + 1 \\ &= \sec^2 \theta \end{aligned}$$

52. Raju's income is 20% more than his expenditure. If his income increases by 60% and his expenditure increase by 70%, then what percentage of the savings will increase / decrease?

- A. will decrease 2%
- B. will decrease 10%
- C. will increase 10%
- D. will increase 2%

Answer ||| C

Solution |||

Let Raju's expenditure = Rs 100

Then, his income = Rs. 120

Saving = Rs. 20

$$\text{New income} = 120 \times \frac{160}{100} = \text{Rs. } 192$$

$$\text{New expenditure} = \text{Rs. } 170$$

$$\text{New saving} = 192 - 170 = \text{Rs. } 22$$

$$\% \text{ increase in saving} = \frac{22-20}{20} \times 100 = 10\%$$

53. The ratio of competencies A, B and C is 4: 5: 3. On working together, all three of them complete work in 25 days. In how many days will both A and C together complete 35% of the work?

- A. 18 days
- B. 15 days
- C. 12 days
- D. 10 days

Answer ||| B

Solution |||

Ratio of efficiencies, A:B:C = 4:5:

$$(A + B + C):(A + C) = 12: 7$$

$$\frac{M_1 \times D_1}{\frac{W_1}{12 \times 25}} = \frac{M_2 \times D_2}{\frac{W_2}{7 \times D_2}}$$

$$\frac{1}{1} = \frac{35}{100}$$

$$D_2 = \frac{12 \times 25 \times \frac{35}{100}}{7} = 15$$

54. Renu bought an item for 1,240 and sold it at a loss of 25%. With that amount, she bought another item and sold it for 40% profit. What percentage of profit did Renu get?

- A. 12
- B. 5
- C.  $6\frac{2}{3}$
- D. 15

Answer ||| B

Solution |||

$$\text{CP of another item} = 1240 \times \frac{75}{100} = \text{Rs. } 930$$

$$\text{New selling price} = 930 \times \frac{140}{100} = \text{Rs. } 1302$$

$$\text{Profit \%} = \frac{1302 - 1240}{1240} \times 100 = \frac{620}{124} = 5$$

55. The table shows the production (in thousands) of different types of cars.

years/ Cars	2013	2014	2015	2016	2017
A	35	40	48	50	36
B	39	45	54	60	72
C	52	25	32	54	45
D	50	42	45	46	47
E	36	46	48	48	55

The total production of A type cars in year 2015 and C type cars in 2013 is approximately what percent of the total production of D type cars in five years?

- A. 42.4
- B. 42.8
- C. 43.5
- D. 40.2

Answer ||| C

Solution |||

$$\text{Total production of A type cars in year 2015 and C type cars in 2013} = 48 + 52 = 100$$

$$\text{Total production of D type cars in five years} = 50 + 42 + 45 + 46 + 47 = 230$$

$$\text{Required percent} = \frac{100}{230} \times 100 = \frac{1000}{23} \approx 43.5 \%$$

56. The table shows the production (in thousands) of different types of cars.

years/ Cars	2013	2014	2015	2016	2017
A	35	40	48	50	36
B	39	45	54	60	72
C	52	25	32	54	45
D	50	42	45	46	47
E	36	46	48	48	55

What is the ratio of total production of C and E type cars in the year 2013 to D in 2014 and 2016 and total production of E type cars in 2017?

- A. 8 : 13
- B. 8 : 11
- C. 13 : 32
- D. 5 : 8

Answer ||| A

Solution |||

Total production of C and E type cars in the year 2013 =  $52 + 36 = 88$

Total production of D in 2014 and 2016 and E in 2017 =  $42 + 46 + 55 = 143$

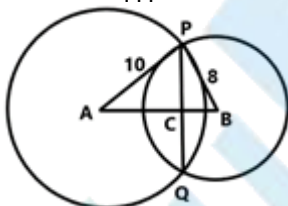
Required ratio =  $88:143 = 8:13$

57. Circles of radius 10 cm and 8 cm cut each other at points P and Q. PQ = 12 cm and the distance between the centers of the circle is x cm, then the value of x (correct to 1 decimal place):

- A. 14.8
- B. 12.8
- C. 13.9
- D. 13.3

Answer ||| D

Solution |||



$AB = x$  cm and  $PQ = 12$  cm.  $AB$  always bisects  $PQ$ . Therefore  $PC = CQ = 6$

$$AC = \sqrt{10^2 - 6^2} = \sqrt{100 - 36} = 8$$

$$BC = \sqrt{8^2 - 6^2} = \sqrt{64 - 36} = \sqrt{28} = 5.29$$

$$x = AB = AC + BC = 8 + 5.29 = 13.29 \approx 13.3 \text{ cm}$$

58. The nominal value of an article is 315. It is sold in 288. If this leads to a loss of 4%, then what percentage of the item was marked more than the cost?

- A.  $6\frac{1}{2}$   
 B. 5  
 C.  $5\frac{1}{2}$   
 D. 8

Answer ||| B

Solution |||

$$\text{Cost price of item} = 288 \times \frac{100}{96} = 300$$

$$\text{Marked price} = 315$$

$$\text{Required percent} = \frac{315-300}{300} \times 100 = 5\%$$

59. A takes 30 minutes longer than B to cover a distance of 15 km at a certain speed. However, if A doubles his speed, he covers the same distance in an hour less time than B. What is the speed of B (in km / h)?

- A. 5  
 B. 6  
 C.  $6\frac{1}{2}$   
 D.  $5\frac{1}{2}$

Answer ||| B

Solution |||

Let A's speed = a km/h, B's speed = b km/h, then

$$15 \left( \frac{1}{a} - \frac{1}{b} \right) = \frac{30}{60}$$

$$\frac{1}{a} - \frac{1}{b} = \frac{1}{30} \dots \dots (i)$$

$$15 \left( \frac{1}{b} - \frac{1}{2a} \right) = 1$$

$$-\frac{1}{2a} + \frac{1}{b} = \frac{1}{15} \dots \dots (ii)$$

Adding (i) and (ii), we get

$$\frac{1}{2a} = \frac{3}{30} = \frac{1}{10}$$

$$a = 5$$

$$\frac{1}{b} = \frac{1}{a} - \frac{1}{30} = \frac{1}{5} - \frac{1}{30} = \frac{1}{6}$$

$$b = 6$$

60. The average weight of some students in a class is 68.5 kg. If four new students of 72.2 kg, 70.8 kg, 70.3 kg, 66.7 kg are enrolled in the class, the average weight of students increases to 300 g. Initially, how many students were there in the class?

- A. 11
- B. 26
- C. 21
- D. 16

Answer ||| D

Solution |||

Let  $x$  student were there in the class initially. Then sum of the weights of  $x$  students in class =  $68.5x$ . According to question

$$68.5x + 72.2 + 70.8 + 70.3 + 66.7 = (x + 4) \left( 68.5 + \frac{300}{1000} \right)$$

$$68.5x + 280 = (x + 4) \times 68.8$$

$$68.5x + 280 = 68.8x + 275.2$$

$$0.3x = 4.8$$

$$x = 16$$

61. If  $16x^2 + 9y^2 + 4z^2 = 24(x - y + z) - 61$ , then the value of  $(xy + 2z)$  will be:

- A. 1
- B. 2
- C. 5
- D. 3

Answer ||| C

Solution |||

$$16x^2 + 9y^2 + 4z^2 = 24(x - y + z) - 61$$

$$16x^2 - 24x + 9 + 9y^2 + 24y + 16 + 4z^2 - 24z + 36 = 9 + 16 + 36 - 61$$

$$(4x - 3)^2 + (3y + 4)^2 + (2z - 6)^2 = 0$$

$$\text{iff } 4x - 3 = 0 \Rightarrow x = \frac{3}{4}$$

$$3y + 4 = 0 \Rightarrow y = -\frac{4}{3}$$

$$2z - 6 = 0 = z = 3$$

$$xy + 2z = \frac{3}{4} \times -\frac{4}{3} + 2 \times 3 = -1 + 6 = 5$$

62. If  $x$  is subtracted from each of 23, 39, 32 and 56, then the numbers obtained in this sequence are in proportion. What will be the mean proportional between  $(x + 4)$  and  $(3x + 1)$ ?

- A. 10
- B. 15
- C. 14



D. 12

Answer ||| D

Solution |||

$$\frac{23 - x}{39 - x} = \frac{32 - x}{56 - x}$$

$$\frac{23 - x}{39 - x} = \frac{32 - x}{56 - x}$$

$$23 \times 56 - 79x + x^2 = 39 \times 32 - 71x + x^2$$

$$8x = 23 \times 56 - 39 \times 32$$

$$x = 23 \times 7 - 39 \times 4$$

$$x = 161 - 156 = 5$$

Mean proportion

$$= \sqrt{(x + 4)(3x + 1)}$$

$$= \sqrt{9 \times 16} = 12$$

63. If  $[8(x + y)^3 - 27(x - y)^3] \div (5y - x) = Ax^2 + Bxy + Cy^2$ , then, value of  $(A + B + C)$  will be:

A. 26

B. 19

C. 13

D. 16

Answer ||| D

Solution |||

$$\frac{[8(x + y)^3 - 27(x - y)^3] \div (5y - x) = Ax^2 + Bxy + Cy^2}{[2(x + y) - 3(x - y)][4(x + y)^2 + 6(x + y)(x - y) + 9(x - y)^2]}$$

$$\frac{5y - x}{(5y - x)[4x^2 + 8xy + 4y^2 + 6x^2 - 6y^2 + 9x^2 - 18xy + 9y^2]}$$

$$\frac{5y - x}{5y - x} = Ax^2 + Bxy + Cy^2$$
$$19x^2 - 10xy + 7y^2 = Ax^2 + Bxy + Cy^2$$

$$A = 19, B = -10, C = 7$$

$$A + B + C = 19 - 10 + 7 = 16$$

64. A circle under a triangle ABC, whose center O is created. On increasing AO, it meets the circle on K and AD  $\perp$  BC. If  $\angle B = 80^\circ$  and  $\angle C = 64^\circ$ , then the measure of  $\angle DAK$  is:

A.  $10^\circ$

B.  $12^\circ$

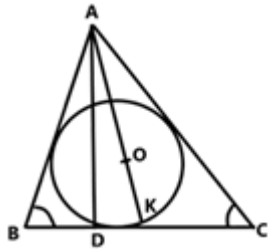
C.  $20^\circ$

D.  $8^\circ$

Answer ||| D

Solution |||





$$\angle BAC = 180^\circ - (80^\circ + 64^\circ) = 180^\circ - 144^\circ = 36^\circ$$

Since, circle is inscribed within a triangle, AK passing through the center must be angle bisector of  $\angle A$ . Therefore,

$$\angle BAK = \angle CAK = \frac{1}{2} \times 36^\circ = 18^\circ$$

Now,

$$\angle BAD = \angle ADC - \angle ABD = 90^\circ - 80^\circ = 10^\circ$$

Therefore,

$$\angle DAK = \angle BAK - \angle BAD = 18^\circ - 10^\circ = 8^\circ$$

$$\angle DAK = \frac{80^\circ - 64^\circ}{2} = 8^\circ$$

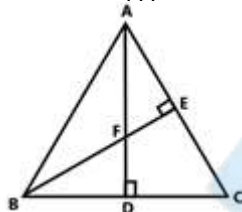
Shortcut:

65. In  $\triangle ABC$ ,  $AD \perp BC$  and  $BE \perp AC$ .  $AD$  and  $BE$  cut each other at  $F$ . If  $BF = AC$ , what will be the measure of  $\angle ABC$ ?

- A.  $60^\circ$
- B.  $45^\circ$
- C.  $50^\circ$
- D.  $70^\circ$

Answer ||| B

Solution |||



$$\triangle AEF \sim \triangle BDF \text{ [By AA]}$$

$$\Rightarrow \angle DBF = \angle EAF$$

Again,

$$\angle DBF = \angle EAF$$

$$\angle BDF = \angle ADC$$

$$\triangle BDF \sim \triangle ADC \text{ [by AA]}$$

$$\frac{BD}{AD} = \frac{DF}{DC} = \frac{BF}{AC}$$

$$\because BF = AC$$

$$\Rightarrow BD = AD, DF = DC$$

$$\Rightarrow \angle ABD = \angle BAD = 45^\circ$$

66.  $\triangle ABC$  is similar to  $\triangle DEF$ . The area of  $\triangle ABC$  is  $100 \text{ cm}^2$  and the area of  $\triangle DEF$  is  $49 \text{ cm}^2$ . If  $\triangle ABC$ 's altitude is  $5 \text{ cm}$ , then  $\triangle DEF$  will have corresponding altitude:

- A.  $4.5 \text{ cm}$
- B.  $6 \text{ cm}$
- C.  $7 \text{ cm}$
- D.  $3.5 \text{ cm}$

Answer ||| D

Solution |||

Corresponding altitude of  $\triangle DEF$

$$\frac{100}{49} = \frac{5^2}{x^2}$$

$$x = 5 \times \frac{7}{10} = 3.5$$

67. The table shows the production (in thousands) of different types of cars.

years/ Cars	2013	2014	2015	2016	2017
A	35	40	48	50	36
B	39	45	54	60	72
C	52	25	32	54	45
D	50	42	45	46	47
E	36	46	48	48	55

In the year 2013, 2014, 2015 and 2017, the total production of B type cars is how much percent less than the total production of all types of cars in the year 2017? (Correct to 1 decimal place)

- A.  $15.8$
- B.  $17.6$
- C.  $18.2$
- D.  $18.4$

Answer ||| B

Solution |||

Total production of B type of cars in 2013, 2014, 2015 and 2017

$$= 39 + 45 + 54 + 72$$

$$= 210$$

$$= 36 + 72 + 45 + 47 + 55$$

$$= 255$$

Required percent

$$= \frac{255-210}{255} \times 100 = 17.64$$

68. The table shows the production (in thousands) of different types of cars.

years/ Cars	2013	2014	2015	2016	2017
A	35	40	48	50	36
B	39	45	54	60	72
C	52	25	32	54	45
D	50	42	45	46	47
E	36	46	48	48	55

If the figures related to the production of B type cars are represented by a circle diagram (pie chart), then the central angle of the sector showing the production of cars in 2016 will be:

- A.  $72^\circ$
- B.  $60^\circ$
- C.  $96^\circ$
- D.  $80^\circ$

Answer ||| D

Solution |||

$$\text{Required angle} = \frac{60}{39+45+54+60+72} \times 360^\circ = 80^\circ$$

69. If  $0^\circ < \theta < 90^\circ$  and  $\cos^2 \theta = 3(\cot^2 \theta - \cos^2 \theta)$ , then the value of  $\left(\frac{1}{2} \sec \theta + \sin \theta\right)^{-1}$  will be:

- A.  $2(\sqrt{3} - 1)$
- B.  $\sqrt{3} + 1$
- C.  $\sqrt{3} + 2$
- D.  $2(2 - \sqrt{3})$

Answer ||| D

Solution |||

$$\cos^2 \theta = 3(\cot^2 \theta - \cos^2 \theta)$$

$$4 \cos^2 \theta = \frac{3 \cos^2 \theta}{\sin^2 \theta}$$

$$\cos^2 \theta (4 \sin^2 \theta - 3) = 0$$

$$\sin \theta = \frac{\sqrt{3}}{2} \Rightarrow \theta = 60^\circ$$

$$\left(\frac{1}{2} \sec \theta + \sin \theta\right)^{-1} = \left(\frac{1}{2} \sec 60^\circ + \sin 60^\circ\right)^{-1}$$

$$= \left(\frac{1}{2} \times 2 + \frac{\sqrt{3}}{2}\right)^{-1} = \left(\frac{2 + \sqrt{3}}{2}\right)^{-1} = \frac{2}{2 + \sqrt{3}}$$

$$= 2(2 - \sqrt{3})$$

70. If,  $\cos \theta = \frac{2p}{1+p^2}$  then  $\tan \theta$  is equal to:

- A.  $\frac{p^2}{1+p^2}$
- B.  $\frac{1-p^2}{1+p^2}$
- C.  $\frac{2p}{1-p^2}$
- D.  $\frac{1-p^2}{2p}$

Answer ||| D

Solution |||

$$\cos \theta = \frac{2p}{(1+p^2)}$$

$$\sin^2 \theta = 1 - \frac{4p^2}{1+p^4+2p^2}$$

$$\sin^2 \theta = \frac{1+p^4+2p^2-4p^2}{1+p^4+2p^2}$$

$$\sin \theta = \sqrt{\frac{(1-p^2)^2}{(1+p^2)^2}} = \frac{1-p^2}{1+p^2}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{1-p^2}{1+p^2} \times \frac{1+p^2}{2p} = \frac{1-p^2}{2p}$$

71. The value of  $5 \div 5$  of  $5 \times 2 + 2 \div 2$  of  $2 \times 5 - (5 - 2) \div 6 \times 2$ :

- A.  $\frac{9}{5}$
- B. 19
- C.  $\frac{23}{2}$
- D.  $\frac{19}{10}$

Answer ||| D

Solution |||

$$5 \div 5 \text{ of } 5 \times 2 + 2 \div 2 \text{ of } 2 \times 5 - (5 - 2) \div 6 \times 2$$

$$= 5 \div (5 \times 5) \times 2 + 2 \div (2 \times 2) \times 5 - (5 - 2) \div 6 \times 2$$

$$= \frac{5}{25} \times 2 + \frac{2}{4} \times 5 - \frac{3}{6} \times 2$$

$$= \frac{2}{5} + \frac{5}{2} - 1$$

$$= \frac{4 + 25 - 10}{10}$$

$$= \frac{19}{10}$$

72.If the number of eight digits is 789x531y, the number is divisible by 72, then the value of (5x - 3y) will be:

- A. 0
- B. -1
- C. 1
- D. 2

Answer ||| B

Solution |||

Since the given number is divisible by 72, it must be divisible by 4, 8 and 9. Since, it is divisible by 4, last two digit must be divisible by 4. So, possible values of y are 2, 6. Since the number is divisible by 8 also, last three digits must be divisible by 8. Since 312 is divisible by 8, only possible value of y is 2. Now, the number is divisible by 9, therefore sum of the digit must be divisible by 9.

$$7 + 8 + 9 + x + 5 + 3 + 1 + y$$

$$= 33 + x + 2$$

$$= 35 + x \text{ for } x = 1, \text{ this sum is divisible by 9.}$$

$$5x - 3y = 5 \times 1 - 3 \times 2 = 5 - 6 = -1$$

73.At a compounded interest rate of 10% per annum, the interest is Rs 1,623 in  $2\frac{1}{2}$  years, when interest is annually combined. What is the amount?

- A. 5,000
- B. 6,000
- C. 7,200
- D. 6,500

Answer ||| B

Solution |||

Amount in two year for the sum P

$$A = P \left( 1 + \frac{10}{100} \right)^2$$

$$A = P \times \frac{121}{100} \text{ CI in two years } = A - P = \frac{121}{100}P - P = \frac{21}{100}P$$

Now, simple interest for  $\frac{1}{2}$  year at 10%

$$P \times \frac{121}{100} \times 10 \times \frac{1}{2}$$

$$= \frac{121}{2000}P \text{ A/Q,}$$

$$\frac{21}{100}P + \frac{121}{2000}P = 1623 \frac{P(420 + 121)}{2000} = 1623$$

$$P = \frac{1623}{541} \times 2000$$

$$P = 3 \times 2000$$

$$P = 6000$$

74. If  $x + y + z = 19$ ,  $xy + yz + zx = 114$ , then the value of  $\sqrt{x^3 + y^3 + z^3 - 3xyz}$  will be:

A. 17

B. 13

C. 19

D. 21

Answer ||| C

Solution |||

$$x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$$

$$= 19[(x + y + z)^2 - 2(xy + yz + zx) - (xy + yz + zx)]$$

$$= 19[19^2 - 3 \times 114]$$

$$= 19[361 - 342]$$

$$= 19 \times 19 = 361$$

$$\sqrt{x^3 + y^3 + z^3 - 3xyz} = \sqrt{361} = 19$$

75. A rectangular tank measuring 10 m × 8 m × 6 m with a circular hole of one-meter diameter, how much iron sheets (m<sup>2</sup>) will be needed to make such a tank? (Correct to 1 decimal place)

A. 370.4

B. 371.6

C. 375.2

D. 370.8

Answer ||| C

Solution |||

Required area of sheets

= Total surface area of the tank – area of the hole

$$= 2(10 \times 8 + 8 \times 6 + 10 \times 6) - \pi \left(\frac{1}{2}\right)^2$$

$$= 2(80 + 48 + 60) - 3.14 \times \frac{1}{4}$$

$$= 2 \times 188 - 0.785$$

$$= 376 - 0.785$$

$$= 375.215$$

76.

|||Common||| **Direction:** Select the correct passive form of the given sentence.

|||End|||

Do not park your car in front of my house.

- A. My house should not be parked in front of your car.
- B. Your car need not be parked in front of my house.
- C. Your car could not be parked in front of my house.
- D. Your car should not be parked in front of my house.

Answer ||| D

Solution ||| The following rules should be considered while changing active form to passive voice:

- The places of subject and object will be interchanged in the sentence.
- Only 3rd form of the verb or Past Participle will be used as a main verb in the Passive Voice.

Therefore, **option D** correctly provides the passive form of the given sentence.

77.

|||Common||| **Direction:** Select the word which means the same as the group of words given. |||End|||

A person, animal or plant belonging originally to a place

- A. Occupant
- B. Alien
- C. Native
- D. Resident

Answer ||| C

Solution ||| The meanings of the given words are as follows:

Occupant: a person who resides or is present in a house, vehicle, seat, etc., at a given time.

Alien: belonging to a foreign country.

Native: a person born in a specified place or associated with a place by birth, whether subsequently resident there or not.

Resident: a person who lives somewhere permanently or on a long-term basis.

Therefore, **option C** is the correct answer.

78.

|||Common||| **Direction:** Select the antonym of the given word. |||End|||

ESCALATE

- A. Raise
- B. Enlarge
- C. Reduce
- D. Heighten

Answer ||| C

Solution ||| The meanings of the given words are:

Escalate: increase rapidly.

Raise: lift or move to a higher position or level.

Enlarge: make or become larger or more extensive.

Reduce: make smaller or less in amount, degree, or size.

Heighten: make or become more intense.

Therefore, **option C** is the correct answer.

79.



|||Common||| **Direction:** Select the antonym of the given word. |||End|||

TENDER

- A. Rough
- B. Warm
- C. Gentle
- D. soft

Answer ||| A

Solution ||| The meanings of the given words are:

Tender: showing gentleness, kindness, and affection.

Rough: having an uneven or irregular surface; not smooth or level.

Warm: of or at a fairly or comfortably high temperature.

Gentle: having or showing a mild, kind, or tender temperament or character.

Soft: easy to mould, cut, compress, or fold; not hard or firm to the touch.

Therefore, **option A** is the correct answer.

80.

|||Common||| **Direction:** Select the most appropriate word to fill in the blank. |||End|||

The State Government argued that it could not \_\_\_\_\_ the increase in the teachers' salaries as awarded by the court.

- A. spare
- B. get
- C. stand
- D. afford

Answer ||| D

Solution ||| The sentence implies that the State Government could not bear the increase in the teachers' salaries as awarded by the court.

'**Afford**' meaning 'have enough money to pay for' perfectly fits in the blank.

Hence, **option D** is the correct answer.

81.

|||Common||| **Direction:** Given below are four jumbled sentences. Select the option that gives their correct order. |||End|||

A) That sort of pollution, which is also widespread in other south east Asian nations, regularly kills wildlife like whales and turtles that ingest the waste.

B) Environmental groups have tagged the Philippines as one of the world's biggest ocean polluters due to its reliance on single-use plastic.

C) In Thailand also, a whale died last year after swallowing more than 80 plastic bags.

D) In the latest case, a whale with 40 kilos of plastic trash in its stomach died on Saturday in southern Philippines where it was stranded a day earlier.

- A. ABCD
- B. BADC
- C. DABC
- D. BCAD

Answer ||| B

Solution ||| The sentence B should be the first sentence because it introduces the theme of the passage i.e. 'tagging of Philippines as one of the world's biggest ocean polluters'.

Sentence A perfectly follows the sentence B as it takes the idea further of what is the pollution created by plastic as mentioned in the first sentence. DC forms a mandatory pair because both the sentences talk about the death of whales due to swallowing of plastic. Hence, the rearranged order is BADC and the correct answer is **option B**.



82.

|||Common||| **Direction:** Select the most appropriate word to fill in the blank. |||End|||  
Scientists at Cambridge University are \_\_\_\_\_ how plants can give us sustainable energy.

- A. scrutinizing
- B. investigating
- C. inspecting
- D. looking

Answer ||| B

Solution ||| The sentence implies that the scientists at Cambridge University are carrying out the research to find how plants can give us sustainable energy.

**'Investigating'** meaning 'carry out research or study into (a subject or problem, typically one in a scientific or academic field)' perfectly fits in the blank.

Hence, **option B** is the correct answer.

83.

|||Common||| **Direction:** Select the most appropriate word to fill in the blank. |||End|||  
Select the wrongly spelt word. A. Comparison

- B. Communication
- C. Competition
- D. Comparable

Answer ||| C

Solution ||| Option C has the incorrectly spelt word. Its correct spelling is 'competition' and it means 'the activity or condition of striving to gain or win something by defeating or establishing superiority over'.

84.

|||Common||| **Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. |||End|||

**I look for a better job** for the last two months, but nothing is in sight.

- A. have looked for a better job
- B. looked for a better job
- C. have been looking for a better job
- D. No improvement

Answer ||| C

Solution ||| The sentence shows a continuous activity by the speaker which started in past and it still continues. So, in this situation, present perfect continuous tense is required to form a grammatically correct sentence. The present perfect continuous (also called present perfect progressive) is a verb tense which is used to show that an action started in the past and has continued up to the present moment. The present perfect continuous usually emphasizes duration, or the amount of time that an action has been taking place. Hence, **option C** is the correct answer.

85.

|||Common||| **Direction:** Select the correct active form of the given sentence. |||End|||  
The main gate of the building was being guarded by gun-totting guards.

- A. The main gate of the building were guarding gun-totting guards.
- B. Gun-totting guards were guarding the main gate of the building.

- C. Gun-totting guards have been guarding the main gate of the building.  
D. Gun-totting guards guarded the main gate of the building.

Answer ||| B

Solution ||| The following rules should be considered while changing passive form to active voice:

- Identify the subject of the sentence - who is doing an action?
- Rewrite the sentence so the subject is performing the action.

Therefore, **option B** correctly provides the active form of the given sentence.

86.

|||Common||| **Direction:** In the sentence identify the segment which contains the grammatical error. |||End|||

Due to the Cyclone Idai vast areas of land have been flooded, roads destroyed and communications disrupting in Zimbabwe and Mosambique.

- A. vast areas of land have been flooded  
B. roads destroyed  
C. Due to the Cyclone Idai  
D. and communications disrupting

Answer ||| D

Solution ||| The fragment 'and communications disrupting' is not maintaining parallelism of the sentence. All the verbs present in the sentence must agree with each other.

'Disrupting' must be replaced with 'disrupted' to form a grammatically correct sentence.

Hence, **option D** is the correct answer.

87.

|||Common||| **Direction:** Select the most appropriate meaning of the given idiom.

|||End|||

Costs an arm and a leg

- A. rarely available  
B. easy to obtain  
C. nothing to lose  
D. very expensive

Answer ||| D

Solution ||| The idiom 'costs an arm and a leg' means 'be extremely expensive'.

For example: the coat had cost him an arm and a leg.

Hence, **option D** is the correct answer.

88.

|||Common||| **Direction:** In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

An Italian mayor has been cleaning the streets along with his councilors after their town (###Q1###) with no manual workers, it's reported. In fact, (###Q2###) was sweeping the piazza in front of the (###Q3###) church in preparation for market day, (###Q4###) the deputy mayors father and a town councilor armed with a high-pressure hose. The town Zerfaliu's last (###Q5###) retired six months ago and nobody has been hired since then. "We can't do anything - we are blocked by bureaucracy," the mayor says.

|||End|||

Select the most appropriate option for blank No. (###Q1###)

- A. leaves
- B. was left
- C. was leaving
- D. has left

Answer ||| B

Solution ||| The blank requires a past perfect tense. The past perfect tense is used to show that something happened before another action in the past.

Hence, the correct answer is **option B** i.e. '**was left**'.

89.

|||Common||| **Direction:** In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

An Italian mayor has been cleaning the streets along with his councilors after their town (###Q1###) with no manual workers, it's reported. In fact, (###Q2###) was sweeping the piazza in front of the (###Q3###) church in preparation for market day, (###Q4###) the deputy mayors father and a town councilor armed with a high-pressure hose. The town Zerfaliu's last (###Q5###) retired six months ago and nobody has been hired since then. "We can't do anything - we are blocked by bureaucracy," the mayor says.

|||End|||

Select the most appropriate option for blank No. (###Q2###).

- A. they
- B. it
- C. she
- D. he

Answer ||| D

Solution ||| The first line suggests that the Italian mayor is a male. Therefore, we need a masculine pronoun to fill in the blank 2. Hence, **option D** i.e. 'he' is the correct answer.

90. Select the most appropriate option for blank No. (###Q3###).

- A. next
- B. near
- C. neighbour
- D. local

Answer ||| D

Solution ||| The blank requires an adjective which perfectly modifies the noun 'church'. 'Local' meaning 'relating or restricted to a particular area or one's neighbourhood'. It is the correct filler for the given blank.

Hence, **option D** is the correct answer.

91.

|||Common||| **Direction:** In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

An Italian mayor has been cleaning the streets along with his councilors after their town (###Q1###) with no manual workers, it's reported. In fact, (###Q2###) was sweeping the piazza in front of the (###Q3###) church in preparation for market day, (###Q4###) the deputy mayors father and a town councilor armed with a high-pressure hose. The town Zerfaliu's last (###Q5###) retired six months ago and nobody

has been hired since then. "We can't do anything - we are blocked by bureaucracy," the mayor says.

|||End|||

Select the most appropriate option for blank No. (###Q4###)

- A. as well
- B. alongside
- C. also
- D. along

Answer ||| B

Solution ||| The sentence containing the blank implies that the mayor was sweeping the piazza in cooperation with the deputy mayor's father and a town councilor armed with a high-pressure hose.

'**Alongside**' meaning 'together and in cooperation with' perfectly fits in the blank and makes **option B** the correct answer.

92. Select the most appropriate option for blank No. (###Q5###).

- A. mayor
- B. councillor
- C. worker
- D. member

Answer ||| C

Solution ||| The first sentence has the phrase 'no manual workers' which implies that the last **worker** retired six months ago. Hence, **option C** is the correct answer.

93.

|||Common||| **Direction:** Given below are four jumbled sentences. Select the option that gives their correct order. |||End|||

- A) The elephant tusks were tracked from the Democratic Republic of Congo for two months.
  - B) Customs officials in Thailand say it's the biggest seizure in the country's history.
  - C) Four tonnes of ivory, with a market value of \$6 million - it was an impressive haul.
  - D) Officials say they were being transported to Laos, from where they believed the ivory would be sold to customers across Asia.
- A. CBAD
  - B. ABCD
  - C. ACDB
  - D. CABD

Answer ||| A

Solution ||| The sentence C should be the first sentence as it introduces the theme of the passage i.e. 'seizing of four tonnes of ivory'. Next to the sentence C should be the sentence B as it further elaborates the seizure that is mentioned in the sentence C. AD is the mandatory pair because the sentence A tells about the tracking of elephant tusks and the sentence D further throws light on its transportation. Hence, **option A** i.e.

'**CBAD**' is the correct answer.

94.

|||Common||| **Direction:** Given below are four jumbled sentences. Select the option that gives their correct order. |||End|||

- Select the wrongly spelt word. A. Exemplify
- B. Example

- C. Exhale
- D. Exempt

Answer ||| A

Solution ||| Option A has the incorrectly spelt word. The correct spelling is 'exemplify' and it means 'be a typical example of'.

95.

|||Common||| **Direction:** Select the synonym of the given word. |||End|||

GARRULOUS

- A. Talkative
- B. Concise
- C. Throaty
- D. Guttural

Answer ||| A

Solution ||| The meanings of the given words are:

Garrulous: excessively talkative, especially on trivial matters.

Talkative: fond of or given to talking.

Concise: giving a lot of information clearly and in a few words; brief but comprehensive.

Throaty: (of a voice or other sound) deep and husky.

Guttural: (of a speech sound) produced in the throat; harsh-sounding.

Hence, **option A** is the correct answer.

96.

|||Common||| **Direction:** Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement. |||End|||

If you join this job now, it proves to be good in the long run.

- A. No improvement
- B. it has proved to be good
- C. it proves good
- D. it will prove to be good

Answer ||| D

Solution ||| The sentence is an example of first conditional sentences.

The first conditional has the present simple after 'if', then the future simple in the other clause:

**if + present simple, ... will + infinitive**

It's used to talk about things which might happen in the future.

Therefore, **option D** is the correct answer.

97.

|||Common||| **Direction:** In the sentence identify the segment which contains the grammatical error. |||End|||

She got two quick promotions in order that she has good communication skills.

- A. two quick promotions
- B. in order that
- C. she has good communication skills
- D. She got

Answer ||| B

Solution ||| 'In order' means 'according to a particular sequence'. However, the sentence requires a conjunction which means 'for the reason that; since'. 'Because' is the perfect replacement of 'in order that' to make the sentence grammatically and contextually correct. Hence, **option B** is the correct answer.

98.

|||Common||| **Direction:** Select the most appropriate meaning of the given idiom. |||End|||

Get out of hand

- A. get upset
- B. give up something
- C. get out of control
- D. to complete a task

Answer ||| C

Solution ||| If a situation gets out of hand, it cannot be controlled any longer.

For example: Two men in the club had an argument that **got out of hand** and the police were called.

Hence, **option C** is the correct answer.

99.

|||Common||| **Direction:** Select the synonym of the given word. |||End|||

TILT

- A. Support
- B. Cross
- C. Straighten
- D. Slant

Answer ||| D

Solution ||| The meanings of the words are:

Tilt: move or cause to move into a sloping position.

Support: bear all or part of the weight of; hold up.

Cross: a mark, object, or figure formed by two short intersecting lines or pieces (+ or ×).

Straighten: make or become straight.

Slant: slope or lean in a particular direction; diverge or cause to diverge from the vertical or horizontal.

Hence, **option D** is the correct answer.

100.

|||Common||| **Direction:** Select the word which means the same as the group of words given. |||End|||

A person without a settled home or regular work who wanders from place to place and lives by begging.

- A. vagrant
- B. truant
- C. itinerant
- D. migrant

Answer ||| A

Solution ||| The meanings of the words are:

Vagrant: a person without a settled home or regular work who wanders from place to place and lives by begging.

Truant: a pupil who stays away from school without leave or explanation.

Itinerant: travelling from place to place.

Migrant: a person who moves from one place to another, especially in order to find work or better living conditions.

Hence, **option A** is the correct answer.