

SSC CGL T-I Similar Paper (Held on 17 Sep 2025 S1) English

Q.1 P is the sister of Q. R is the father of Q. How is R related to P?

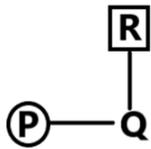
- A. Father
- B. Uncle
- C. Brother
- D. Grandfather

Answer: A

Sol: Given: P is the sister of Q. R is the father of Q.

Symbol in Diagram	Meaning
- / O	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given information blood relation diagram will be.



So, R is **father** of P.
Thus, correct option is (a).

Q.2 Find the odd one out:

- A. Copper
- B. Iron
- C. Gold
- D. Plastic

Answer: D

Sol: Copper, iron and gold are metals.

Plastic is a non-metal.
So, **plastic** is odd one out.
Thus, correct option is (d).

Q.3 A 20 L mixture contains milk and water in the ratio 2:3. How much milk must be added to make the ratio 4:3?

- A. 10 L
- B. 8 L
- C. 5 L
- D. 9 L

Answer: B

Sol: Given: A 20 L mixture contains milk and water in the ratio 2:3.

Solution:

Milk : Water = 2 : 3

Total mixture = 20 L

Milk = $\frac{2}{5} \times 20 = 8$ L

Water = $\frac{3}{5} \times 20 = 12$ L

Let (x) L milk be added.

New ratio = $\frac{8+x}{12} = \frac{4}{3}$

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$$3(8 + x) = 48$$

$$8 + x = 16$$

$$x = 8$$

Required milk = **8 L**

So, **8 L** milk must be added to make the ratio 4:3.

Thus, correct option is (b).

Q.4 If $+$ = \times , $-$ = \div , \times = $+$, \div = $-$, then find:

$$24 + 6 - 2 \times 4 \div 2 = ?$$

- A. 76
- B. 72
- C. 78
- D. 74

Answer: D

Sol: Given: $24 + 6 - 2 \times 4 \div 2 = ?$

Given Sign $+ - \times \div$

New Sign $\times \div + -$

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	\div
Multiplication	\times
Addition	$+$
Subtraction	$-$

New equation: $24 \times 6 \div 2 + 4 - 2 = ?$

$$24 \times 3 + 4 - 2 = ?$$

$$72 + 4 - 2 = ?$$

$$76 - 2 = ?$$

$$? = \mathbf{74}$$

Thus, correct option is (d).

Q.5 Select the letter-cluster from among the given options that can replace the question mark (?) in the following series.

CFG, EHI, GJK, ILM, ?

- A. KNO
- B. JMN
- C. JMO
- D. KMN

Answer: A

Sol: Given: CFG, EHI, GJK, ILM, ?

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Logic: Letters are increasing + 2 place.

$$C + 2 = E, E + 2 = G, G + 2 = I, I + 2 = K$$

$$F + 2 = H, H + 2 = J, J + 2 = L, L + 2 = N$$

$$G + 2 = I, I + 2 = K, K + 2 = M, M + 2 = O$$

So, the missing term is **KNO**.

Thus, correct option is (a).

Q.6 Which of the following is/are identical to the address given?

1. Rohit Kumar, Flat 12A, Sunrise Apartments, Andheri East, Mumbai - 400069
2. Rohit Kumar, Flat 12A, Sunrise Apartments, Andheri East, Mumbai - 400069

- 3. Rohit Kumar, Flat 12-A, Sunrise Apartments, Andheri East, Mumbai - 400069
- 4. Rohit Kumar, Flat 12A, Sunrise Apartment, Andheri East, Mumbai - 400069

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

Answer: A

Sol: Given:

- 1. Rohit Kumar, Flat 12A, Sunrise Apartments, Andheri East, Mumbai - 400069
- 2. Rohit Kumar, Flat 12A, Sunrise Apartments, Andheri East, Mumbai - 400069
- 3. Rohit Kumar, Flat 12-A, Sunrise Apartments, Andheri East, Mumbai - 400069
- 4. Rohit Kumar, Flat 12A, Sunrise Apartment, Andheri East, Mumbai - 400069

Now, we check each options.

Option (a): 1 and 2

Both addresses are exactly the same.

Option (b): 1 and 3

Address 3 has 12-A instead of 12A, so it is **not** identical.

Option (c): 2 and 4

Address 4 has Apartment instead of Apartments, so it is **not** identical.

Option (d): 3 and 4

Both addresses differ from the given address, so this option is **incorrect**.

Thus, correct option is (a).

Q.7 If '+' means 'x', '-' means '÷', 'x' means '+' and '÷' means '-'. Find the value of: $10 \div 4 + 6 \times 32 - 8 = ?$

- A. -6
- B. -8
- C. -10
- D. -12

Answer: C

Sol: Given: $10 \div 4 + 6 \times 32 - 8 = ?$

Given Sign + - x ÷

New Sign x ÷ + -

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], , ()$
Orders, of	$(power), \sqrt{(root), of}$
Division	\div
Multiplication	\times
Addition	$+$
Subtraction	$-$

New equation: $10 - 4 \times 6 + 32 \div 8 = ?$

$$10 - 4 \times 6 + 4 = ?$$

$$10 - 24 + 4 = ?$$

$$14 - 24 = ?$$

$$? = - 10$$

Thus, correct option is (c).

Q.8 The following equation is correct. Which two signs should be interchanged to correct it?

$$24 - 6 \div 3 \times 2 + 4 = 24$$

- A. - and ÷
- B. x and +
- C. ÷ and x
- D. - and +

Answer: D

Sol: Given: $24 - 6 \div 3 \times 2 + 4 = 24$

Using **BODMAS** rule.

Operation preference wise	Symbol
Brackets	$[], (), ()$
Orders, of	$(power), \sqrt{(root)}, of$
Division	\div
Multiplication	\times
Addition	$+$
Subtraction	$-$

Now, we check each options.

Option (a): - and \div

New equation: $24 \div 6 - 3 \times 2 + 4 = 24$

$4 - 3 \times 2 + 4 = 24$

$4 - 6 + 4 = 24$

$8 - 6 = 24$

$2 \neq 24$

Option (b): \times and $+$

New equation: $24 - 6 \div 3 + 2 \times 4 = 24$

$24 - 2 + 2 \times 4 = 24$

$24 - 2 + 8 = 24$

$32 - 2 = 24$

$30 \neq 24$

Option (c): \div and \times

New equation: $24 - 6 \times 3 \div 2 + 4 = 24$

$24 - 18 \div 2 + 4 = 24$

$24 - 9 + 4 = 24$

$28 - 9 = 24$

$19 \neq 24$

Option (d): - and $+$

New equation: $24 + 6 \div 3 \times 2 - 4 = 24$

$24 + 2 \times 2 - 4 = 24$

$24 + 4 - 4 = 24$

$28 - 4 = 24$

$24 = 24$

Thus, correct option is (d).

Q.9 ROADMAP is to ORADPAM as JOURNEY is to:

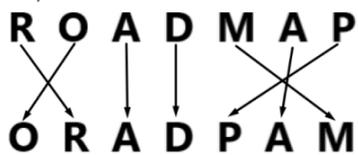
- A. OJURYEN
- B. UOJRNEY
- C. UOJRENY
- D. OJURNEY

Answer: A

Sol: Given: ROADMAP is to ORADPAM as JOURNEY is to:

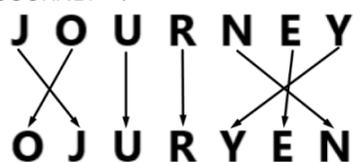
Logic: Position of letters are interchanged.

For, ROADMAP - ORADPAM



Similarly,

JOURNEY - ?



So, JOURNEY is to **OJURYEN**.

Thus, correct option is (a).

Q.10 If $3 \# 2 = 13$, $4 \# 3 = 25$, then $5 \# 4 = ?$

- A. 39
- B. 41
- C. 43
- D. 45

Answer: B

Sol: Given: If $3 \# 2 = 13$, $4 \# 3 = 25$

Logic: 1st number² + 2nd number² = 3rd number

For, $3 \# 2 = 13$

$$3^2 + 2^2 = 9 + 4 = 13$$

For, $4 \# 3 = 25$

$$4^2 + 3^2 = 16 + 9 = 25$$

Similarly,

$$5 \# 4 = ?$$

$$5^2 + 4^2 = 25 + 16 = \mathbf{41}$$

Thus, correct option is (b).

Q.11 Statements:

$$A > B = C, D \leq E < B, F > A$$

Conclusions:

I. $F > C$

II. $D < A$

- A. Only I is true
- B. Only II is true
- C. Both I and II are true
- D. Neither I nor II is true

Answer: C

Sol: Statements:

$$A > B = C, D \leq E < B, F > A$$

Conclusions:

I. $F > C$

From $F > A$ and $A > B = C \implies F > A > C$.

Conclusion I is **true**.

II. $D < A$

From $D < B$ and $B < A \implies D < A$.

Conclusion II is **true**.

So, **Both I and II are true**.

Thus, correct option is (c).

Q.12 Rearrange the letters to form the name of a fruit:

- A. lpeap
- B. appel
- C. papple
- D. apple

Answer: D

Sol: Explanation of all options:

Option (a): lpeap

Letters are not in the correct order to form a fruit name.

Option (b): appel

Spelling is incorrect; letters are misplaced.

Option (c): papple

Extra p is misplaced; spelling is incorrect.

Option (d): apple

Correct rearrangement forming the fruit name apple.

Thus, correct option is (d).

Q.13 Statement:

The price of petrol has increased.

Conclusions:

I. Transportation costs may rise.

II. People will stop using vehicles.

- A. Only I follows

- B. Only II follows
- C. Both follow
- D. Neither follows

Answer: A

Sol: Statement:

The price of petrol has increased.

Conclusions:

I. Transportation costs may rise.

This logically follows. Petrol is a major input for transportation, so an increase in petrol price can increase transport costs.

II. People will stop using vehicles.

This does not logically follow. Even if petrol prices rise, people may reduce usage or look for alternatives, but they will not completely stop using vehicles.

So, **Only I follows.**

Thus, correct option is (a).

Q.14 Statement:

Online education provides flexibility but requires reliable internet access.

Assumptions:

I. Students have access to the internet.

II. Flexibility improves learning outcomes.

III. Internet connectivity is essential for online education.

- A. Only I and III are implicit
- B. Only II and III are implicit
- C. Only I is implicit
- D. All are implicit

Answer: A

Sol: Statement:

Online education provides flexibility but requires reliable internet access.

Assumptions:

I. Students have access to the internet.

This is **implicit**. Talking about online education assumes that students can access the internet; otherwise, online education wouldn't be possible.

II. Flexibility improves learning outcomes.

This is **not** implicit. The statement only says online education provides flexibility, not that flexibility necessarily improves learning outcomes.

III. Internet connectivity is essential for online education.

This is **implicit**. The statement explicitly mentions that online education requires reliable internet access, which assumes internet connectivity is essential.

So, **Only I and III are implicit.**

Thus, correct option is (a).

Q.15 Pointing to a girl, a woman said, "She is the daughter of my brother's wife." How is the girl related to the woman?

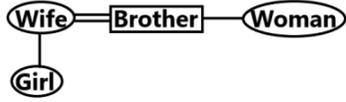
- A. Mother
- B. Niece
- C. Sister
- D. Cousin

Answer: B

Sol: Given: Pointing to a girl, a woman said, "She is the daughter of my brother's wife."

Symbol in Diagram	Meaning
- / 0	Female
+ / □	Male
=	Married Couple
—	Siblings
	Difference Of Generation

From the given information blood relation diagram will be.



So, the girl is **niece** of the woman.
Thus, correct option is (b).

Q.16 Identify the relation between Statement I and Statement II.

Statement I:

The company's sales increased this year.

Statement II:

The company expanded its distribution network.

- A. I is the cause and II is the effect
- B. II is the cause and I is the effect
- C. Both are independent
- D. No relation

Answer: B

Sol: Statement I:

The company's sales increased this year. This describes a result or outcome—it tells us what happened but not the reason.

Statement II:

The company expanded its distribution network.

This describes an action/cause—expanding distribution helps reach more customers.

Relation: Because expanding the distribution network can lead to higher sales, **Statement II is the cause and Statement I is the effect.**

Thus, correct option is (b).

Q.17 What will come at the place of question mark? 7, 13, 25, 49, ?

- A. 95
- B. 97
- C. 99
- D. 101

Answer: B

Sol: Given: 7, 13, 25, 49, ?

Logic: Numbers are multiply by 2 and - 1 place.

$$7 \times 2 - 1 = 13$$

$$13 \times 2 - 1 = 25$$

$$25 \times 2 - 1 = 49$$

$$49 \times 2 - 1 = 97$$

So, the missing term is **97**.

Thus, correct option is (b).

Q.18 If 20% of a number is 40, what is the number?

- A. 160
- B. 180
- C. 200
- D. 240

Answer: C

Sol: Given: If 20% of a number is 40.

Solution:

20% of a number = 40

$$\text{Number} = \frac{40 \times 100}{20} = \mathbf{200}$$

So, **200** is the number.

Thus, correct option is (c).

Q.19 Choose the address that is the same as the one given below.

No. 21, Green Park Residency, Bhopal, Madhya Pradesh - 462001

- A. No. 21, Green Park Residency, Bhopal, MP - 462001
- B. No. 21, Green Park Residency, Bhopal, Madhya Pradesh - 462001
- C. No. 12, Green Park Residency, Bhopal, Madhya Pradesh - 462001
- D. No. 21, Green Park Residency, Indore, Madhya Pradesh - 462001

Answer: B

Sol: Given:

No. 21, Green Park Residency, Bhopal, Madhya Pradesh - 462001

Now check each options.

Option (a): No. 21, Green Park Residency, Bhopal, MP - 462001

"MP" is used instead of Madhya Pradesh, so it is not exactly the same.

Option (b): No. 21, Green Park Residency, Bhopal, Madhya Pradesh - 462001

Matches the given address exactly in all details.

Option (c): No. 12, Green Park Residency, Bhopal, Madhya Pradesh - 462001

House number is 12 instead of 21.

Option (d): No. 21, Green Park Residency, Indore, Madhya Pradesh - 462001

City is Indore instead of Bhopal.

So, **No. 21, Green Park Residency, Bhopal, Madhya Pradesh - 462001** is same.

Thus, correct option is (b).

Q.20 If $7 * 2 = 98$ and $9 * 3 = 243$, then $5 * 4 = ?$

- A. 100
- B. 120
- C. 125
- D. 140

Answer: A

Sol: Given: If $7 * 2 = 98$ and $9 * 3 = 243$

Logic: $(1\text{st number})^2 \times 2\text{nd number} = 3\text{rd number}$

For, $7 * 2 = 98$

$$(7)^2 \times 2 = 49 \times 2 = 98$$

For, $9 * 3 = 243$

$$(9)^2 \times 3 = 81 \times 3 = 243$$

Similarly,

$$5 * 4 = ?$$

$$(5)^2 \times 4 = 25 \times 4 = \mathbf{100}$$

Thus, correct option is (a).

Q.21 What comes next? 2, 4, 12, 48, ?

- A. 230
- B. 240
- C. 220
- D. 384

Answer: B

Sol: Given: 2, 4, 12, 48, ?

Logic: Numbers are multiply by natural number from 2.

$$2 \times 2 = 4$$

$$4 \times 3 = 12$$

$12 \times 4 = 48$
 $48 \times 5 = 240$
 So, the missing term is **240**.
 Thus, correct option is (b).

Q.22 Statement:

Crime rates decreased after better street lighting.

Conclusions:

- I. Visibility reduces crime.
- II. Criminals prefer darkness.

- A. Only I follows
- B. Only II follows
- C. Both follow
- D. Neither follows

Answer: C

Sol: Statement:

Crime rates decreased after better street lighting.

Conclusions:

- I. Visibility reduces crime.
Better street lighting improves visibility, which helps reduce crime — this **follows** from the statement.
 - II. Criminals prefer darkness.
If crime decreases after better lighting, it implies criminals prefer darkness — this also **follows**.
- So, **Both follow**.

Thus, correct option is (c).

Q.23 If CAT is coded as BZS, how is DOG coded?

- A. CNF
- B. CPF
- C. DNF
- D. BNF

Answer: A

Sol: Given: If CAT is coded as BZS.

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Logic: Letters are decreasing - 1 place.

For, CAT - BZS

C - 1 = B, A - 1 = Z, T - 1 = S

Similarly,

DOG - ?

D - 1 = C, O - 1 = N, G - 1 = F

So, DOG is coded as **CNF**.

Thus, correct option is (a).

Q.24 What comes next?

BDF, EGI, HJL, ?

- A. LNP
- B. KNO
- C. MPR
- D. KMO

Answer: D

Sol: Given: BDF, EGI, HJL, ?

1	2	3	4	5	6	7	8	9	10	11	12	13
A	B	C	D	E	F	G	H	I	J	K	L	M
Z	Y	X	W	V	U	T	S	R	Q	P	O	N
26	25	24	23	22	21	20	19	18	17	16	15	14

Logic: Letters are increasing + 3 place.
 $B + 3 = E$, $E + 3 = H$, $H + 3 = K$
 $D + 3 = G$, $G + 3 = J$, $J + 3 = M$
 $F + 3 = I$, $I + 3 = L$, $L + 3 = O$
 So, the missing term is **KMO**.
 Thus, correct option is (d).

Q.25 Find the odd one out:

Mahatma Gandhi, Subhash Chandra Bose, Jawaharlal Nehru, Bhagat Singh, Rani Lakshmbai

- A. Mahatma Gandhi
- B. Subhash Chandra Bose
- C. Jawaharlal Nehru
- D. Bhagat Singh

Answer: C

Sol: Mahatma Gandhi, Subhash Chandra Bose, Bhagat Singh and Rani Lakshmbai were freedom fighters or revolutionaries. Jawaharlal Nehru was the only one who became the Prime Minister of India. So, Jawaharlal Nehru is odd one out. Thus, correct option is (c).

Q.26 Which dynasty is credited with early fortifications around the Delhi region before the Sultanate period?

- A. Paramaras
- B. Chahamanas
- C. Tomaras
- D. Palas

Answer: C

Sol: The correct answer is **(C) Tomaras**

Explanation:

- The Tomara dynasty is credited with establishing the first city in the Delhi region, known as 'Dhillika'.
- Anangpal Tomar, a prominent ruler of this dynasty, is often cited as the founder of Delhi in the 8th century and built the citadel of **Lal Kot**.
- These early fortifications formed the nucleus around which subsequent rulers, including the Chauhans and later the Delhi Sultans, expanded their capitals.
- The Tomaras were originally feudatories of the Gurjara-Pratihars before becoming independent.

Information Booster:

- **Iron Pillar of Delhi:** Though much older (Gupta period), the Tomaras are believed to have moved the famous Iron Pillar to its current location in the Qutb complex.
- **Succession:** The Tomaras were defeated by the Chahamanas (Chauhans) of Ajmer in the mid-12th century, who then occupied Delhi.
- **Suraj Kund:** An ancient reservoir in Haryana, near Delhi, is also attributed to the Tomara king Surajpal.

Additional Knowledge:

- **Paramaras (Option A):** A Rajput dynasty that ruled the Malwa region (Central India), with their capital at Dhar and Ujjain; Raja Bhoj was their most famous ruler.
- **Chahamanas (Option B):** Also known as Chauhans, they ruled from Ajmer. Prithviraj Chauhan expanded Lal Kot into Qila Rai Pithora, but they came after the Tomaras in Delhi.
- **Palas (Option D):** A powerful empire based in the Bengal and Bihar regions known for their patronage of Buddhism; they were not involved in the early fortification of Delhi.

Q.27 In Hindustani music, the term describing the permitted notes and their sequence in a raga is:

- A. Tala
- B. Bandish
- C. Aroha–Avaroha
- D. Laya

Answer: C

Sol: The correct answer is **(C) Aroha–Avaroha**

Explanation:

- In Hindustani Classical Music, every Raga is defined by a specific set of musical notes (Swaras) and the order in which they are played or sung.
- **Aroha** refers to the ascending scale of notes in a Raga, while **Avaroha** refers to the descending scale.
- Together, they establish the structure, boundaries, and melodic character of the Raga, determining which notes are emphasized, omitted, or played in a specific sequence (Vakra).
- The movement between notes in a raga is not just a linear scale but involves specific ornaments and phrasing that distinguish one raga from another even if they share the same notes.

Information Booster:

- **Vadi and Samvadi:** These are the most important and second most important notes in a raga, often called the 'King' and 'Queen' of the raga.
- **Thaat:** Hindustani music uses a system of 10 parent scales (Thaats) to classify ragas, a system standardized by Vishnu Narayan Bhatkhande.
- **Pakad:** A catchphrase or a specific sequence of notes that summarizes the essence of a raga.

Additional Knowledge:

- **Tala (Option A):** This refers to the rhythmic cycle or beat pattern in Indian music, not the sequence of notes.
- **Bandish (Option B):** A fixed, melodic composition in a particular raga, set to a specific tala, which serves as the basis for improvisation.
- **Laya (Option D):** This refers to the tempo or speed of the music (e.g., Vilambit/slow, Madhya/medium, Drut/fast).

Q.28 The Green Revolution in India mainly focused on:

- Pulses
- Oilseeds
- Wheat and rice
- Cotton

Answer: C

Sol: The correct answer is **(C) Wheat and rice**

Explanation:

- The Green Revolution, initiated in the mid-1960s, aimed to achieve self-sufficiency in food grains in India.
- It focused heavily on High-Yielding Variety (HYV) seeds, particularly for **wheat** (initially) and later **rice**.
- Developed by M.S. Swaminathan (in India) and Norman Borlaug (internationally), the movement utilized chemical fertilizers, modern irrigation, and pesticides to boost production.
- The most significant impact was seen in the states of Punjab, Haryana, and Western Uttar Pradesh.

Information Booster:

- **Father of Green Revolution:** Norman Borlaug is the global father, while M.S. Swaminathan is the father of the Green Revolution in India.
- **Impact:** It transformed India from a 'ship-to-mouth' economy (dependent on food aid like PL 480 from the USA) to a leading food exporter.
- **Negative Aspects:** Over-reliance on wheat and rice led to a decline in the cultivation of coarse cereals and pulses, soil degradation, and depletion of groundwater.

Additional Knowledge:

- **Pulses (Option A):** Despite being a major protein source, pulses did not see a 'revolution' during this phase, leading to what is sometimes called the 'protein gap'.
- **Oilseeds (Option B):** The 'Yellow Revolution' was specifically launched in the late 1980s to increase oilseed production.
- **Cotton (Option D):** The 'Silver Fibre Revolution' is associated with cotton production, whereas the Green Revolution was strictly about food crops.

Q.29 Consider the following statements about the Hubble Space Telescope (HST):

1. It operates mainly in the visible, ultraviolet, and near-infrared wavelengths.
2. It is placed in a geostationary orbit above the Earth.
3. It has contributed to measuring the rate of expansion of the Universe.

Which of the above statements is/are correct?

- Only 1 and 2
- Only 1 and 3
- Only 2 and 3
- All 1, 2 and 3

Answer: B

Sol: The correct answer is **(B) Only 1 and 3**

Explanation:

- Statement 1 is **Correct**: Unlike the James Webb Space Telescope (which is primarily infrared), Hubble observes the universe in the ultraviolet, visible, and near-infrared regions of the electromagnetic spectrum.
- Statement 2 is **Incorrect**: Hubble is in **Low Earth Orbit (LEO)**, approximately 547 kilometers above the Earth, not a geostationary orbit (which is at ~35,786 km).
- Statement 3 is **Correct**: One of Hubble's primary missions was to determine the 'Hubble Constant,' which measures the rate at which the universe is expanding. Its data led to the discovery of Dark Energy.

Information Booster:

- **Launch:** Hubble was launched in 1990 aboard the Space Shuttle Discovery (STS-31).
- **Collaboration:** It is a project of international cooperation between NASA and the ESA (European Space Agency).
- **Maintenance:** It is unique because it was designed to be repaired and upgraded in space by astronauts during five Servicing Missions.

Additional Knowledge:

- **Geostationary Orbit (Relating to Option A/C/D):** Satellites in this orbit stay above the same spot on Earth, which is useful for communications and weather monitoring, but not for deep-space telescopes that need to move or avoid Earth's glare.
- **James Webb (Comparison):** While Hubble orbits Earth, the James Webb Space Telescope orbits the Sun at the second Lagrange point (L2), nearly 1.5 million kilometers away.

Q.30 Statement 1: Inflation reduces purchasing power.
Statement 2: Inflation always benefits savers.

- A. Only Statement 1 is correct
- B. Only Statement 2 is correct
- C. Both are correct
- D. Neither is correct

Answer: A

Sol: The correct answer is **(A) Only Statement 1 is correct**

Explanation:

- Statement 1 is **Correct**: Inflation is the rate at which the general level of prices for goods and services is rising. As prices rise, every unit of currency buys fewer goods; thus, the **purchasing power** of the consumer decreases.
- Statement 2 is **Incorrect**: Inflation generally **hurts savers** and benefits **debtors**. If the rate of inflation is higher than the interest rate on savings, the 'real' value of the saved money decreases over time.

Information Booster:

- **CPI and WPI:** In India, inflation is primarily measured through the Consumer Price Index (CPI) and the Wholesale Price Index (WPI).
- **Deflation:** The opposite of inflation, where prices decrease, which can also be harmful as it may lead to lower production and higher unemployment.
- **Targeting:** The RBI has an inflation target of 4% (with a tolerance band of +/- 2%).

Additional Knowledge:

- **Beneficiaries of Inflation:** Borrowers (debtors) benefit because they repay their loans with money that is worth less than when they borrowed it.
- **Losers of Inflation:** Fixed-income earners, savers, and creditors are generally the losers because the real value of their income or assets diminishes.

Q.31 Read the following statements about photosynthesis:

1. Chlorophyll absorbs light energy.
2. It occurs only at night.
3. Oxygen is released as a by-product.

Which are correct?

- A. 1 and 3 only
- B. 2 and 3 only
- C. 1 only
- D. 1, 2 and 3

Answer: A

Sol: The correct answer is **(A) 1 and 3 only**

Explanation:

- Statement 1 is **Correct**: Chlorophyll is a green pigment found in chloroplasts that is essential for photosynthesis as it captures/absorbs light energy (mostly from the sun).
- Statement 2 is **Incorrect**: Photosynthesis requires light energy, so the 'Light-Dependent Reactions' occur during the day. While some plants (CAM plants) fix CO₂ at night, the primary process of energy production happens during daylight.
- Statement 3 is **Correct**: During the process, water molecules are split (photolysis), and **Oxygen (O₂)** is released into the atmosphere as a by-product, which is vital for aerobic life.

Information Booster:

- **Equation:** $6\text{CO}_2 + 6\text{H}_2\text{O} + \text{light} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$
- **Site:** The process primarily takes place in the leaves, specifically in the mesophyll cells within chloroplasts.
- **Two Phases:** Light reactions (in thylakoids) and Dark reactions/Calvin Cycle (in the stroma).

Additional Knowledge:

- **Respiration:** Plants respire both day and night (taking in oxygen and releasing CO₂), but photosynthesis (releasing oxygen) happens only when light is available.
- **Analysis:** Since statement 2 is scientifically false, any option containing '2' (B and D) is eliminated. Since 1 and 3 are both facts, A is the correct choice.

Q.32 Assertion (A): GST created a unified tax system.
Reason (R): It replaced multiple indirect taxes.

- A. Both A and R are true and R explains A
- B. Both true but R not explanation
- C. A true, R false
- D. A false, R true

Answer: A

Sol: The correct answer is **(A) Both A and R are true and R explains A**

Explanation:

- **Assertion (A)** is true because the Goods and Services Tax (GST) was introduced with the motto 'One Nation, One Tax', creating a common national market.
- **Reason (R)** is also true and is the direct cause of A. GST subsumed various indirect taxes like Excise Duty, VAT, Service Tax, and Luxury Tax, thereby unifying the tax structure and removing the cascading effect of taxes.
- It was implemented on **1st July 2017** via the 101st Constitutional Amendment Act.

Information Booster:

- **Components:** GST has three components: CGST (Central), SGST (State), and IGST (Integrated - for inter-state trade).
- **GST Council:** A constitutional body (Article 279A) chaired by the Union Finance Minister that makes recommendations on GST rates and regulations.
- **Exclusions:** Petroleum products, alcohol for human consumption, and electricity are currently outside the purview of GST.

Additional Knowledge:

- **Cascading Effect:** This refers to 'tax on tax'. By allowing Input Tax Credit (ITC), GST ensures tax is only paid on the 'Value Added' at each stage of the supply chain.
- **Option B/C/D Analysis:** Since the reason provided (replacement of multiple taxes) directly leads to the outcome (unified system), R is the correct explanation for A, making Option A the only valid choice.

Q.33 Liberalisation refers to:

- A. Increased government control
- B. Reduction of trade barriers
- C. Nationalisation
- D. Currency demonetisation

Answer: B

Sol: The correct answer is **(B) Reduction of trade barriers**

Explanation:

- **Liberalisation** in an economic context refers to the loosening of government regulations and restrictions in exchange for greater participation by private entities.
- It involves the removal of 'License Raj' (licensing requirements), reduction of tariffs, and the elimination of quotas or trade barriers that restrict the movement of goods and services between countries.

• In India, this was a key part of the **1991 Economic Reforms** (LPG - Liberalisation, Privatisation, and Globalisation) introduced by the Narasimha Rao government and Finance Minister Manmohan Singh.

Information Booster:

- **New Economic Policy 1991:** Aimed at making the Indian economy more market-oriented and service-oriented.
- **FDI:** Liberalisation often leads to increased Foreign Direct Investment (FDI) as rules for foreign companies are relaxed.
- **Deregulation:** It also involves deregulating interest rates and giving more autonomy to the private sector in decision-making.

Additional Knowledge:

- **Increased government control (Option A):** This is the opposite of liberalisation; it is often termed 'Socialism' or 'Command Economy' practices.
- **Nationalisation (Option C):** This refers to the process of the government taking control/ownership of private assets (e.g., Bank Nationalisation in 1969), which is contrary to liberalisation.
- **Currency demonetisation (Option D):** This is the act of stripping a currency unit of its status as legal tender (as seen in India in 2016), which is a monetary policy tool and not synonymous with liberalisation.

Q.34 Which of the following pairs is correctly matched?

- A. Wood's Despatch — Promotion of English education system
- B. Hunter Commission — Abolition of universities
- C. Sadler Commission — Focus on primary schooling only
- D. Raleigh Commission — Vernacular press control

Answer: A

Sol: The correct answer is **(A) Wood's Despatch — Promotion of English education system**

Explanation:

- **Wood's Despatch (1854):** Known as the 'Magna Carta of English Education in India', it recommended the spread of English education and established a system of departments of public instruction in five provinces.
- It encouraged the use of vernacular languages in primary schools but promoted English as the medium of instruction for higher education.
- It also led to the establishment of the first universities in India (Calcutta, Bombay, and Madras) in 1857.

Information Booster:

- **Macaulay's Minute (1835):** Preceded Wood's Despatch and aimed at creating a class of Indians 'English in taste, in opinions, in morals, and in intellect'.
- **Sargent Plan (1944):** Aimed at creating a system of education in India similar to that in Britain within 40 years.

Additional Knowledge:

- **Hunter Commission (Option B):** Appointed in 1882 to review the progress of education since Wood's Despatch; it focused on **primary and secondary education**, not the abolition of universities.
- **Sadler Commission (Option C):** Appointed in 1917 to look into the problems of **Calcutta University**; it recommended a 10+2+3 pattern of education, not just primary schooling.
- **Raleigh Commission (Option D):** Appointed in 1902 to inquire into the condition and prospects of **universities** in India; it led to the Universities Act of 1904. It had nothing to do with the Vernacular Press (which was related to the Vernacular Press Act of 1878).

Q.35 The Human Development Index mainly considers:

- A. Income, health, and education
- B. Population growth
- C. Inflation rate
- D. Export levels

Answer: A

Sol: The correct answer is **(A) Income, health, and education**

Explanation:

- The **Human Development Index (HDI)** is a statistical tool used to measure a country's overall achievement in its social and economic dimensions.
- It is based on three key dimensions: **1. Long and healthy life** (measured by Life Expectancy at birth), **2. Knowledge** (measured by Mean Years of Schooling and Expected Years of Schooling), and **3. A decent standard of living** (measured by GNI per capita in PPP terms).
- It was created by Pakistani economist **Mahbub ul Haq** and Indian economist **Amartya Sen** and is published annually by the UNDP.

Information Booster:

- **UNDP:** United Nations Development Programme is the publisher of the Human Development Report.
- **Scale:** The HDI is expressed on a scale from 0 to 1. Closer to 1 indicates higher human development.
- **India's Rank:** As per the 2022/2023 report, India was ranked 134th out of 193 countries.

Additional Knowledge:

- **Population growth (Option B):** While important for demographics, it is not a direct component used to calculate the HDI value.
- **Inflation rate (Option C):** This is a macroeconomic indicator of price stability, not a measure of human capability or development in the HDI framework.
- **Export levels (Option D):** Measures trade performance but does not reflect the well-being or educational attainment of the population.

Q.36 Match the dance with state:

1. Bhangra A. Gujarat
2. Garba B. Punjab
3. Lavani C. Maharashtra
4. Yakshagana D. Karnataka

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

Answer: A

Sol: The correct answer is **(A) 1-B 2-A 3-C 4-D**

Explanation:

- **Bhangra (1-B):** An energetic folk dance originating from the **Punjab** region, traditionally performed by farmers during the Vaisakhi festival to celebrate the harvest.
- **Garba (2-A):** A circular folk dance from **Gujarat**, performed during the nine-day Navratri festival, usually around a centrally lit lamp or a picture/statue of Goddess Shakti.
- **Lavani (3-C):** A popular folk dance of **Maharashtra** known for its powerful rhythm and traditional attire (nine-yard saree), often performed to the beats of a Dholki.
- **Yakshagana (4-D):** A traditional theater form from **Karnataka** that combines dance, music, dialogue, costume, make-up, and stage techniques with a unique style and form.

Information Booster:

- **Gidda:** This is the female counterpart to Bhangra in Punjab.
- **UNESCO Status:** Garba was recently included in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2023.
- **Dandiya Raas:** Another famous dance from Gujarat often performed alongside Garba.

Additional Knowledge:

- **Option B Analysis:** Incorrectly matches Bhangra with Gujarat.
- **Option C Analysis:** Incorrectly matches Garba with Maharashtra and Lavani with Gujarat.
- **Option D Analysis:** Incorrectly matches Bhangra with Karnataka and Yakshagana with Maharashtra.

Q.37 Consider the following statements about the Fifth Schedule of the Indian Constitution:

1. It deals with the administration and control of Scheduled Areas and Scheduled Tribes.
 2. The Governor of a state with Scheduled Areas can issue regulations to restrict land transfer from tribals to non-tribals.
- Which of the above statements is/are correct?

- A. Only 1
- B. Only 2
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C

Sol: The correct answer is **(C) Both 1 and 2**

Explanation:

- Statement 1 is **Correct:** The Fifth Schedule contains provisions regarding the administration and control of Scheduled Areas and Scheduled Tribes in any state except the four states of Assam, Meghalaya, Tripura, and Mizoram (which are covered under the Sixth Schedule).
- Statement 2 is **Correct:** The Governor is vested with significant powers under the Fifth Schedule. He/she can make regulations for the peace and good government of a Scheduled Area, specifically to prohibit or restrict the transfer of land by or among members of the Scheduled Tribes and regulate the business of money-lending.

Information Booster:

- **Tribes Advisory Council (TAC):** Each state having scheduled areas must establish a TAC to advise on matters pertaining to the welfare and advancement of the Scheduled Tribes in the state.
- **Presidential Power:** The President of India has the power to declare an area as a 'Scheduled Area' and can also alter its boundaries.
- **Report:** The Governor must submit an annual report to the President regarding the administration of Scheduled Areas.

Additional Knowledge:

- **Sixth Schedule:** It differs from the Fifth Schedule as it provides for 'Autonomous District Councils' (ADCs) with much broader legislative and judicial powers in specific Northeast states.
- **Analysis:** Because both statements accurately describe the constitutional role and scope of the Fifth Schedule, Option C is the only correct choice.

Q.38 *Perini Shivatandavam*, a vigorous dance tradition associated with warrior rituals and later revived in the 20th century by Nataraja Ramakrishna, is primarily linked to which Indian state?

- A. Odisha
- B. Telangana
- C. Tamil Nadu
- D. Karnataka

Answer: B

Sol: The correct answer is **(B) Telangana**

Explanation:

- **Perini Shivatandavam** (or Perini Thandavam) is an ancient dance form that originated in the **Kakatiya dynasty** of Telangana.
- It was historically performed by warriors before they went to the battlefield as a way to invoke Lord Shiva and gain strength and courage.
- The dance is characterized by 'Prerana' (inspiration) and is performed to the beat of drums. The movements are vigorous, rhythmic, and masculine in nature.
- It had almost disappeared after the fall of the Kakatiyas until it was revived in the 20th century by the renowned dance scholar **Dr. Nataraja Ramakrishna**, who reconstructed the dance based on sculptures in the Ramappa Temple.

Information Booster:

- **Ramappa Temple:** The temple (a UNESCO World Heritage site) contains exquisite carvings that provided the visual evidence for Nataraja Ramakrishna to revive the lost movements of Perini.
- **Warrior Dance:** It is also known as the 'Dance of Warriors'.
- **Revivalist:** Nataraja Ramakrishna is also credited with the propagation of *Andhra Natyam*.

Additional Knowledge:

- **Odisha (Option A):** Famous for *Odissi* (classical) and *Chhau* (martial/folk) dances.
- **Tamil Nadu (Option C):** Known for *Bharatanatyam*, one of the oldest classical dance forms.
- **Karnataka (Option D):** Famous for *Yakshagana* (dance-drama) and *Dollu Kunitha* (drum dance).

Q.39 Read the following statements carefully:

Statement 1: The dockyard at Lothal indicates maritime trade activity.

Statement 2: Harappans used standardized weights for commerce.

Which of the following is/are correct?

- A. Only S1
- B. Only S2
- C. Both S1 and S2 are correct
- D. Neither S1 nor S2 is correct

Answer: C

Sol: The correct answer is **(C) Both S1 and S2 are correct**

Explanation:

- Statement 1 is **Correct:** Lothal, located in modern-day Gujarat, featured a massive brick structure identified as a dockyard. This connected the city to an old course of the Sabarmati river, facilitating trade with Mesopotamia (Sumeria) and Egypt.
- Statement 2 is **Correct:** The Indus Valley Civilization was highly sophisticated in its commercial practices. They used a standardized system of weights and measures, mostly based on the **binary system** (1, 2, 4, 8, 16, 32, 64) for lower denominations and a **decimal system** for higher ones. Weights were typically made of a stone called chert and were generally cubical in shape.

Information Booster:

- **Bead Making:** Lothal was also a major center for bead making, and finished products were exported across the Arabian Sea.
- **Seals:** Harappan seals (made of steatite) have been found in Mesopotamia, and Mesopotamian seals have been found in Harappan sites, proving extensive long-distance trade.
- **Urban Planning:** Both statements highlight the advanced nature of Harappan urban life, characterized by organized commerce and engineering.

Additional Knowledge:

- **Lothal Excavation:** It was excavated by S.R. Rao in 1954.
- **Incorrect Options Analysis:** Since both statements are historically verified facts of the Indus Valley Civilization, options A, B, and D are incorrect as they imply at least one statement is false.

Q.40 The annual cultural festival that showcases the traditions of multiple Naga tribes is organized to coincide with the Statehood Day of Nagaland. This festival is scheduled every year beginning on which date?

- A. 1 December
- B. 15 January
- C. 26 November
- D. 5 March

Answer: B

Sol: The correct answer is **(A) 1 December**

Explanation:

- The festival described is the **Hornbill Festival**, known as the 'Festival of Festivals' in Nagaland.
- It is held annually from **1st to 10th December** at the Kisama Heritage Village, near Kohima.
- 1st December is significant because it marks the **Statehood Day of Nagaland** (Nagaland became the 16th state of India on Dec 1, 1963).
- The festival aims to protect and revive the rich culture of Nagaland and display its extravaganza and traditions through folk dances, songs, and indigenous games.

Information Booster:

- **Naming:** The festival is named after the Indian Hornbill, a bird that is deeply respected and featured in the folklore of most of the state's tribes.
- **Participation:** All 17 major tribes of Nagaland participate in the festival to promote inter-tribal interaction.
- **Tourism:** It is a major global tourist attraction and plays a vital role in the state's economy and cultural branding.

Additional Knowledge:

- **15 January (Option B):** Often associated with Makar Sankranti/Pongal in mainland India, but not Nagaland's Statehood Day.
- **26 November (Option C):** Celebrated as Constitution Day in India.
- **5 March (Option D):** Has no specific significance regarding Nagaland's statehood or the Hornbill Festival.

Q.41 Which Article deals with the President's ordinance-making power?

- A. Article 110
- B. Article 123
- C. Article 356
- D. Article 368

Answer: B

Sol: The correct answer is **(B) Article 123**

Explanation:

- **Article 123** of the Indian Constitution grants the President the power to promulgate ordinances during the recess of Parliament.
- An ordinance has the same force and effect as an Act of Parliament but is a **temporary law**.
- It can only be issued when both Houses (or one of them) are not in session and the President is satisfied that circumstances exist which render it necessary for him to take immediate action.
- The ordinance must be approved by Parliament within **six weeks** of its reassembly; otherwise, it ceases to operate.

Information Booster:

- **Governor's Power:** Article 213 grants similar ordinance-making powers to the Governor of a state.
- **Maximum Life:** The maximum life of an ordinance can be six months and six weeks (as the maximum gap between two sessions of Parliament is six months).
- **Judicial Review:** The President's satisfaction is not immune from judicial review if it is proved to be mala fide.

Additional Knowledge:

- **Article 110 (Option A):** Defines 'Money Bills' in the Parliament.
- **Article 356 (Option C):** Deals with the imposition of 'President's Rule' in a state due to the failure of constitutional machinery.
- **Article 368 (Option D):** Deals with the power of Parliament to amend the Constitution and the procedure therefor.

Q.42 Which of the following initiatives focuses on enhancing climate resilience in drought-prone regions through integrated watershed management and community participation?

- A. National Afforestation Programme
- B. Integrated Watershed Management Programme
- C. Green India Mission
- D. Desert Development Scheme

Answer: B

Sol: The correct answer is **(B) Integrated Watershed Management Programme**

Explanation:

- The **Integrated Watershed Management Programme (IWMP)** (now a part of PMKSY - WDC) is designed to restore ecological balance by harnessing, conserving, and developing degraded natural resources such as soil, vegetative cover, and water.
- The primary objective is to improve **climate resilience** and the livelihood of people in drought-prone and rainfed areas through the management of watersheds.
- It emphasizes 'community participation' where the local community is involved in planning, implementation, and maintenance of the watershed projects.

Information Booster:

- **PMKSY:** Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) aims to provide 'Har Khet Ko Pani' (Water for every field) and 'Per Drop More Crop'.
- **Watershed:** It is a geo-hydrological unit of an area that drains at a common point.
- **Benefits:** Reducing soil erosion, increasing groundwater recharge, and improving crop productivity.

Additional Knowledge:

- **National Afforestation Programme (Option A):** Focuses on ecological restoration of degraded forests with a people-centric approach, but its primary focus is forest cover rather than integrated water management.
- **Green India Mission (Option C):** One of the eight missions under the National Action Plan on Climate Change (NAPCC), focusing on increasing forest/tree cover and improving ecosystem services.
- **Desert Development Scheme (Option D):** Specifically targets the control of desertification and conservation of natural resources in identified desert areas, but the broad 'integrated watershed' approach is most synonymous with IWMP.

Q.43 Which Mughal structure is known for its extensive use of red sandstone combined with white marble decoration?

- A. Jama Masjid, Delhi
- B. Agra Fort
- C. Bibi Ka Maqbara
- D. Moti Masjid

Answer: B

Sol: The correct answer is **(B) Agra Fort**

Explanation:

- **Agra Fort**, largely built by Emperor Akbar, is a prime example of the transition in Mughal architecture where **red sandstone** was the primary material, but marble was used for decorative inlay and interior structures.
- While the massive outer walls and gates (like Delhi Gate) are red sandstone, later additions by Shah Jahan within the fort (like the Khas Mahal and Diwan-i-Khas) shifted toward pure white marble.
- The contrast between the rugged red sandstone and the delicate marble work is a hallmark of this period.

Information Booster:

- **UNESCO Site:** Agra Fort was designated a UNESCO World Heritage site in 1983.
- **Architectural Transition:** Akbar's period is known as the 'Red Sandstone Era', while Shah Jahan's period is called the 'Age of Marble'.
- **Humayun's Tomb:** This was actually the first major Mughal structure to use red sandstone and white marble in such a significant, balanced combination.

Additional Knowledge:

- **Jama Masjid, Delhi (Option A):** Built by Shah Jahan, it uses red sandstone and white marble strips, but it is more famous for its scale and minarets than the specific 'fortification' style of the earlier period.
- **Bibi Ka Maqbara (Option C):** Located in Aurangabad, it was built by Azam Shah (son of Aurangzeb) and is known as the 'Taj of the Deccan'. It uses less marble and more lime plaster due to declining Mughal resources.
- **Moti Masjid (Option D):** There are several (in Agra Fort, Lahore Fort, and Red Fort), but they are almost entirely made of **white marble**, not a combination with sandstone.

Q.44 Which of the following statements about the Asian Games is/are correct?

1. They are regulated by the Olympic Council of Asia.
2. They are held every four years.

- A. Only 1
B. Only 2
C. Both 1 and 2 are correct
D. Neither 1 nor 2

Answer: C

Sol: The correct answer is **(C) Both 1 and 2 are correct**

Explanation:

- Statement 1 is **Correct:** The **Olympic Council of Asia (OCA)** is the governing body for all sports in Asia and is responsible for organizing the Asian Games.
- Statement 2 is **Correct:** Like the Olympics, the Asian Games are a multi-sport event held every four years among athletes from all over Asia.
- The first Asian Games were held in **New Delhi, India**, in 1951. Since then, they have grown to become the second-largest multi-sport event in the world after the Olympic Games.

Information Booster:

- **19th Asian Games:** These were held in Hangzhou, China (delayed to 2023), where India achieved its best-ever tally of 107 medals.
- **Symbol:** The symbol of the Asian Games is a bright sun with 16 rays and a white circle in the middle.
- **Motto:** The official motto is 'Ever Onward'.

Additional Knowledge:

- **International Olympic Committee (IOC):** While the OCA regulates the Asian Games, the IOC regulates the Olympic Games globally.
- **Analysis:** As both statements are fundamental facts regarding the governance and frequency of the Asian Games, Option C is the accurate choice.

Q.45 India's first individual Olympic gold medal in athletics was won in:

- A. Tokyo Olympics
B. Rio Olympics
C. Paris Olympics
D. Beijing Olympics

Answer: A

Sol: The correct answer is **(A) Tokyo Olympics**

Explanation:

- **Neeraj Chopra** won the gold medal in the men's Javelin Throw at the **Tokyo 2020 Olympics** (held in 2021 due to the pandemic).
- This was a historic moment as it was India's **first-ever Olympic gold medal in athletics** (track and field events).
- His winning throw was recorded at 87.58 meters.
- Before this, India's only individual Olympic gold had come from Abhinav Bindra (Shooting) in 2008.

Information Booster:

- **Golden Boy:** Neeraj Chopra's victory made him the second Indian to win an individual Olympic gold medal.
- **National Javelin Day:** In honor of his feat, the Athletics Federation of India declared August 7 (the day he won) as 'National Javelin Day'.
- **Background:** Neeraj Chopra is also a Subedar in the Indian Army.

Additional Knowledge:

- **Rio Olympics (Option B):** India won two medals (P.V. Sindhu - Silver, Sakshi Malik - Bronze), but no gold.
- **Paris Olympics (Option C):** Refers to the 2024 games; Neeraj Chopra won a Silver medal in this edition.
- **Beijing Olympics (Option D):** This is where Abhinav Bindra won India's first individual gold, but it was in Shooting, not athletics.

Q.46 In athletics, the term "foul line" is commonly associated with:

- A. High jump
B. Shot put
C. Marathon
D. Hurdles

Answer: B

Sol: The correct answer is **(B) Shot put**

Explanation:

- In **Shot put** (and other throwing events like Discus), the athlete must stay within a designated circular area.
- The 'foul line' (or the edge of the circle/stop board) marks the boundary. If an athlete steps on or over this line (the rim of the circle) during or after the throw before the shot hits the ground, the attempt is declared a **foul** and is not measured.
- Specifically, the front of the circle has a 'stop board' to prevent the athlete's foot from going over.

Information Booster:

- **The Circle:** The diameter of the shot put circle is 2.135 meters (7 feet).
- **Exit:** After a throw is completed and the shot has landed, the athlete must exit from the rear half of the circle to avoid a foul.
- **Other Foul Conditions:** The shot must land within the designated 'sector' (an angle of about 34.92 degrees) to be valid.

Additional Knowledge:

- **High jump (Option A):** Uses a 'take-off area' and a crossbar. A foul occurs if the bar is knocked down or if the athlete touches the ground beyond the plane of the bar.
- **Marathon (Option C):** This is a long-distance road race (42.195 km) where 'foul lines' are not a standard technical term for performance measurement.
- **Hurdles (Option D):** Involves jumping over barriers. A disqualification can occur for lane infringements or deliberately knocking down hurdles with hands, but it doesn't use a 'foul line' in the same context as throwing events.

Q.47 The National Games 2022 in India were hosted by:

- A. Kerala
- B. Maharashtra
- C. Gujarat
- D. Punjab

Answer: C

Sol: The correct answer is **(C) Gujarat**

Explanation:

- The **36th National Games** were held in 2022 across six cities in **Gujarat**: Ahmedabad, Gandhinagar, Surat, Vadodara, Rajkot, and Bhavnagar.
- This was significant as the National Games were being held after a gap of seven years (the previous edition was in Kerala in 2015).
- The official mascot was 'Savaj', an Asiatic lion, reflecting the wildlife heritage of Gujarat.
- The theme of the games was 'Celebrating Unity Through Sports'.

Information Booster:

- **Winner:** The **Services Sports Control Board (SSCB)** topped the medal tally and won the Raja Bhalindra Singh Trophy.
- **Best Athletes:** Sajjan Prakash (Swimming) was named the Best Male Athlete, and Hashika Ramachandra (Swimming) was named the Best Female Athlete.
- **Next Games:** The 37th National Games (2023) were hosted by Goa.

Additional Knowledge:

- **Kerala (Option A):** Hosted the 35th National Games in 2015.
- **Maharashtra (Option B):** Often a top performer in the games but was not the host for the 2022 edition. Maharashtra won the maximum number of medals overall in 2022 (though Services won more Gold).
- **Punjab (Option D):** A powerhouse of Indian sports, it has hosted the games in the past (e.g., 2001) but not in 2022.

Q.48 Who authored the book "Ignited Minds"?

- A. R. Narayan
- B. A.P.J. Abdul Kalam
- C. Vikram Seth
- D. Amartya Sen

Answer: B

Sol: The correct answer is **(B) A.P.J. Abdul Kalam**

Explanation:

- **Ignited Minds: Unleashing the Power Within India** is a motivational book written by the late Dr. A.P.J. Abdul Kalam, the 11th President of India.
- Published in 2002, the book is dedicated to an intermediate school student named Snehal Thakkar, who asked him a question about who our enemy is during an interaction.
- The book explores the potential of India's youth and calls for a second green revolution and a transformation of India into a developed nation by 2020.
- It emphasizes that the 'fire' within the youth is the most powerful resource to propel the nation forward.

Information Booster:

- **Other Books by Dr. Kalam:** Wings of Fire (autobiography), India 2020, Indomitable Spirit, and My Journey: Transforming Dreams into Actions.
- **Missile Man:** Dr. Kalam is known as the 'Missile Man of India' for his work on the development of ballistic missile and launch vehicle technology (Agni and Prithvi missiles).
- **Bharat Ratna:** He was awarded India's highest civilian honor, the Bharat Ratna, in 1997.

Additional Knowledge:

- **R.K. Narayan (Option A):** A famous novelist known for his works set in the fictional South Indian town of Malgudi, such as 'Swami and Friends' and 'The Guide'.
- **Vikram Seth (Option C):** A renowned poet and novelist known for 'A Suitable Boy' and 'The Golden Gate'.
- **Amartya Sen (Option D):** A Nobel Prize-winning economist and philosopher known for 'The Argumentative Indian' and 'Development as Freedom'.

Q.49 Minimum age to become a member of Rajya Sabha is:

- A. 25
- B. 30
- C. 35
- D. 40

Answer: B

Sol: The correct answer is **(B) 30**

Explanation:

- According to **Article 84** of the Indian Constitution, a person must be at least 30 years of age to be qualified for a seat in the Rajya Sabha (Council of States).
- The Rajya Sabha is the 'Upper House' of the Parliament of India and represents the States and Union Territories.
- This higher age requirement (compared to Lok Sabha) is intended to ensure that the House consists of more experienced and seasoned individuals who can act as a 'House of Elders' to provide a check on impulsive legislation from the lower house.

Information Booster:

- **Term:** Unlike the Lok Sabha, the Rajya Sabha is a permanent body and not subject to dissolution. Members are elected for a term of six years.
- **Retirement:** One-third of the members retire every second year.
- **Chairman:** The Vice-President of India is the ex-officio Chairman of the Rajya Sabha.

Additional Knowledge:

- **25 Years (Option A):** This is the minimum age required to become a member of the Lok Sabha (House of the People) and the State Legislative Assemblies (Vidhan Sabha).
- **35 Years (Option C):** This is the minimum age required to hold the office of the President, Vice-President, or the Governor of a State.
- **40 Years (Option D):** There is no constitutional office or legislative body in India that specifically requires a minimum age of 40 for membership.

Q.50 India and Bhutan mainly coordinate on hydropower development and management of shared river systems through which bilateral arrangement?

- A. India–Bhutan Energy Dialogue
- B. Joint Group of Experts on Hydropower
- C. South Asian Power Pool
- D. Himalayan River Commission

Answer: B

Sol: The correct answer is **(B) Joint Rivers Commission**

Explanation:

- The **Indo-Bangladesh Joint Rivers Commission (JRC)** was established in 1972 following the independence of Bangladesh.
- Its primary purpose is to maintain liaison between the two countries to maximize benefits from common river systems and to resolve disputes related to water sharing, flood control, and irrigation.
- India and Bangladesh share 54 common rivers, making this bilateral mechanism crucial for ecological and economic stability in the region.
- The Ganges Water Treaty of 1996 is one of the most significant outcomes of diplomatic efforts between the two nations.

Information Booster:

- **Teesta Dispute:** Currently, the sharing of Teesta river water remains a major point of discussion within the JRC framework.
- **Kushiyara River:** In 2022, both nations signed an interim water-sharing agreement for the Kushiyara river, the first such major agreement in 25 years.
- **Functions:** The JRC works on flood forecasting, bank protection works, and common basin management.

Additional Knowledge:

- **SAARC Tribunal (Option A):** SAARC does not have a formal judicial tribunal for settling bilateral water disputes; it focuses more on regional cooperation.

- **WTO Mechanism (Option C):** The World Trade Organization handles international trade disputes, not environmental or river water sharing issues.
- **UN Water Council (Option D):** While the UN provides frameworks (like the 1997 Watercourses Convention), India and Bangladesh rely on their specific bilateral JRC rather than a 'UN Water Council' for direct resolution.

Q.51 The area of a triangle is 25 cm^2 . If a similar triangle has sides three times the corresponding sides of the first triangle, find its area.

- A. 75 cm^2
- B. 150 cm^2
- C. 225 cm^2
- D. 300 cm^2

Answer: C

Sol: Given:

Area of first triangle = 25 cm^2

Sides of second triangle are three times the corresponding sides of the first triangle

Formula Used:

$$\frac{\text{Area}_1}{\text{Area}_2} = \left(\frac{\text{Corresponding side}_1}{\text{Corresponding side}_2} \right)^2$$

Solution:

Ratio of corresponding sides = $1 : 3$

Ratio of areas = $1^2 : 3^2 = 1 : 9$

Let area of second triangle = x

$$\frac{25}{x} = \frac{1}{9}$$

$$x = 25 \times 9 = 225$$

$\text{Area of the second triangle} = 225 \text{ cm}^2$

Q.52 From an external point P, two tangents PA and PB are drawn to a circle. If the length of PA is 15 cm, find the length of PB.

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

Answer: C

Sol: Given:

From an external point P, two tangents PA and PB are drawn to a circle.

$PA = 15 \text{ cm}$

Formula Used:

Tangents drawn from an external point to a circle are equal in length.

$PA = PB$

Solution:

$PB = PA = 15 \text{ cm}$

$PB = 15 \text{ cm}$

Q.53 If $\sin A + \cos A = 7/5$, find $\sin 2A$.

- A. $9/25$
- B. $24/25$
- C. $7/10$
- D. $12/25$

Answer: B

Sol: Given:

$$\sin A + \cos A = \frac{7}{5}$$

Formula Used:

$$(\sin A + \cos A)^2 = \sin^2 A + \cos^2 A + 2 \sin A \cos A$$

$$\sin^2 A + \cos^2 A = 1$$

$$\sin 2A = 2 \sin A \cos A$$

Solution:

$$\begin{aligned} (\sin A + \cos A)^2 &= \left(\frac{7}{5}\right)^2 \\ &= \frac{49}{25} \end{aligned}$$

$$1 + \sin 2A = \frac{49}{25}$$

$$\begin{aligned} \sin 2A &= \frac{49}{25} - 1 \\ &= \frac{24}{25} \end{aligned}$$

Final Answer:

$$\frac{24}{25}$$

Q.54 If $A : B = 4 : 5$, $B : C = 6 : 7$, and $C : D = 10 : 11$, find the compound ratio $A : B : C : D$.

- A. $48 : 60 : 70 : 77$
- B. $4 : 5 : 7 : 11$
- C. $24 : 30 : 35 : 44$
- D. $8 : 10 : 14 : 11$

Answer: A

Sol: Given:

$$A : B = 4 : 5$$

$$B : C = 6 : 7$$

$$C : D = 10 : 11$$

Solution:

$$A : B = 4 : 5$$

$$B : C = 6 : 7$$

$$\text{LCM of 5 and 6} = 30$$

$$A : B = 24 : 30$$

$$B : C = 30 : 35$$

$$A : B : C = 24 : 30 : 35$$

$$C : D = 10 : 11$$

$$\text{LCM of 35 and 10} = 70$$

$$A : B : C = 48 : 60 : 70$$

$$C : D = 70 : 77$$

$$A : B : C : D = 48 : 60 : 70 : 77$$

Final Answer:

$$48 : 60 : 70 : 77$$

Q.55 $27^3 + 18^3 - 45^3 + 108$ is equal to:

- A. -65502
- B. 0
- C. -46656
- D. 1

Answer: A

Sol: Given:

$$27^3 + 18^3 - 45^3 + 108$$

Formula Used:

$$a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$$

$$\text{If } a + b + c = 0, \text{ then } a^3 + b^3 + c^3 = 3abc$$

Solution:

$$\text{Let } a = 27, b = 18, c = -45$$

$$a + b + c = 27 + 18 - 45 = 0$$

$$\Rightarrow a^3 + b^3 + c^3 = 3abc$$

$$27^3 + 18^3 - 45^3 = 3 \times 27 \times 18 \times (-45)$$

$$= -65610$$

Now add 108 :

$$-65610 + 108 = -65502$$

$$\boxed{-65502}$$

Q.56 A line L is the perpendicular bisector of the line segment joining points P(4, 6) and Q(10, 2). What is the y-intercept of line L?

- A. 4
- B. -6.5
- C. 6
- D. 7

Answer: B

Sol:

Given:

$$P(4, 6), Q(10, 2)$$

Line L is the perpendicular bisector of PQ

Formula Used:

$$\text{Midpoint } M \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\text{Slope } m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$\text{Slope of perpendicular line } m_{\perp} = -\frac{1}{m}$$

$$\text{Point-slope form: } y - y_1 = m(x - x_1)$$

Solution:

Midpoint of PQ :

$$M = \left(\frac{4 + 10}{2}, \frac{6 + 2}{2} \right) = (7, 4)$$

Slope of PQ :

$$m_{PQ} = \frac{2 - 6}{10 - 4} = \frac{-4}{6} = -\frac{2}{3}$$

Slope of line L :

$$m_L = \frac{3}{2}$$

Equation of line L through (7, 4) :

$$y - 4 = \frac{3}{2}(x - 7)$$

$$y = \frac{3}{2}x - \frac{21}{2} + \frac{8}{2}$$

$$y = \frac{3}{2}x - \frac{13}{2}$$

Y-intercept (put $x = 0$) :

$$y = -\frac{13}{2}$$

$$\boxed{-\frac{13}{2}}$$

Q.57 If the radius of a cone is doubled and its height is reduced to half, how does the volume change?

- A. Becomes half of the original
- B. Becomes double of the original
- C. Remains unchanged
- D. Becomes four times the original

Answer: B

Sol: Given:

Let original radius of the cone = r
Let original height of the cone = h

New radius $r_1 = 2r$
New height $h_1 = \frac{h}{2}$

Formula Used:

Volume of a cone = $\frac{1}{3}\pi r^2 h$

Solution:

Original volume:

$$V = \frac{1}{3}\pi r^2 h$$

New volume:

$$V_1 = \frac{1}{3}\pi(2r)^2 \left(\frac{h}{2}\right)$$

$$V_1 = \frac{1}{3}\pi \cdot 4r^2 \cdot \frac{h}{2}$$

$$V_1 = \frac{1}{3}\pi \cdot 2r^2 h$$

$$V_1 = 2 \left(\frac{1}{3}\pi r^2 h\right)$$

$$V_1 = 2V$$

The volume becomes twice the original volume

Q.58 If $\cot A = 3$, find the value of $(\tan A + \cot A)$.

- A. $10/3$
- B. $4/3$
- C. $13/3$
- D. $3/10$

Answer: A

Sol: Given:

$\cot A = 3$

Formula Used:

$$\tan A = \frac{1}{\cot A}$$

Solution:

$$\tan A = \frac{1}{3}$$

$$\tan A + \cot A = \frac{1}{3} + 3$$

$$= \frac{1+9}{3}$$

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

Final Answer:

$$\frac{10}{3}$$

Q.59 What is the minimum number of cuts required to divide a cube into 27 equal smaller cubes?

- A. 4
- B. 5
- C. 6
- D. 3

Answer: C

Sol: Given:

A cube is to be divided into 27 equal smaller cubes.

Formula / Concept Used:

If a cube is divided into n^3 smaller cubes, then each edge is divided into n equal parts.
Minimum cuts are made parallel to the faces of the cube.

Solution:

$27 = 3^3$, so each edge must be divided into 3 equal parts.
To divide an edge into 3 parts, 2 cuts are required in one direction.
Since a cube has 3 dimensions:
Total cuts = $2 + 2 + 2 = 6$

Q.60 A triangle can have:

- A. Two obtuse angles
- B. One acute angle and two right angles
- C. Only one obtuse angle
- D. Three angles each equal to 70°

Answer: C

Sol: Given:

Different angle combinations of a triangle

Formula Used:

Sum of angles of a triangle = 180°

Solution:

Option A: Two obtuse angles $> 180^\circ$ Not possible
Option B: Two right angles = 180° Not possible
Option C: One obtuse and two acute angles = 180° Possible
Option D: $70^\circ + 70^\circ + 70^\circ = 210^\circ$ Not possible

Final Answer:

Only one obtuse angle

Q.61 If $a = 0.01$, $b = 0.02$, $c = -0.03$ and $a + b + c = 0$, find $(a^3 + b^3 + c^3) \div (3abc)$.

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

Answer: C

Sol: Given:

$a = 0.01$, $b = 0.02$, $c = -0.03$
 $a + b + c = 0$

Formula Used:

If $a + b + c = 0$, then $a^3 + b^3 + c^3 = 3abc$

Solution:

$a = 0.01$, $b = 0.02$, $c = -0.03$
 $a + b + c = 0.01 + 0.02 - 0.03 = 0$
$$\frac{a^3 + b^3 + c^3}{3abc}$$

$$= \frac{3abc}{3abc}$$

$$= 1$$

Q.62 A circle is inscribed in a right-angled triangle whose perpendicular sides are 9 cm and 12 cm. Find the radius of the inscribed circle.

- A. 2 cm
- B. 3 cm
- C. 4 cm
- D. 5 cm

Answer: B

Sol: Given:

A right-angled triangle with perpendicular sides $a = 9$ cm, $b = 12$ cm

Formula Used:

Hypotenuse: $c = \sqrt{a^2 + b^2}$

Radius of inscribed circle in a right-angled triangle:

$$r = \frac{a + b - c}{2}$$

Solution:

Find the hypotenuse:

$$\begin{aligned} c &= \sqrt{9^2 + 12^2} \\ &= \sqrt{81 + 144} \\ &= \sqrt{225} = 15 \text{ cm} \end{aligned}$$

Find the radius of the inscribed circle:

$$\begin{aligned} r &= \frac{9 + 12 - 15}{2} \\ &= \frac{6}{2} = 3 \text{ cm} \end{aligned}$$

$$\boxed{r = 3 \text{ cm}}$$

Q.63 Simplify:

$$\sqrt{17 + 12\sqrt{2}}$$

- A. $4 + \sqrt{2}$
- B. $2 + 3\sqrt{2}$
- C. $3 + 2\sqrt{2}$
- D. $5 + \sqrt{4}$

Answer: C

Sol: Given:

$$\sqrt{17 + 12\sqrt{2}}$$

Formula Used:

$$(\sqrt{m} + \sqrt{n})^2 = m + n + 2\sqrt{mn}$$

Solution:

$$\begin{aligned} \sqrt{17 + 12\sqrt{2}} &= \sqrt{m} + \sqrt{n} \\ m + n + 2\sqrt{mn} &= 17 + 12\sqrt{2} \\ m + n &= 17 \\ 2\sqrt{mn} &= 12\sqrt{2} \\ \sqrt{mn} &= 6\sqrt{2} \\ mn &= 72 \\ m = 9, n &= 8 \end{aligned}$$

$$\begin{aligned} \sqrt{17 + 12\sqrt{2}} &= \sqrt{9} + \sqrt{8} \\ &= 3 + 2\sqrt{2} \end{aligned}$$

Final Answer:

$$3 + 2\sqrt{2}$$

Q.64 If $\cos\theta = 5/13$ and θ lies in the first quadrant, find the value of $\sin\theta$.

- A. 12/13
- B. 5/12
- C. 13/12
- D. 12/5

Answer: A

Sol: Given:

$$\cos \theta = \frac{5}{13}$$

θ lies in the first quadrant

Formula Used:
 $\sin^2 \theta + \cos^2 \theta = 1$

Solution:

$$\begin{aligned} \sin^2 \theta &= 1 - \cos^2 \theta \\ &= 1 - \left(\frac{5}{13}\right)^2 \\ &= 1 - \frac{25}{169} \\ &= \frac{144}{169} \end{aligned}$$

θ is in first quadrant

$$\begin{aligned} \sin \theta &= \sqrt{\frac{144}{169}} \\ &= \frac{12}{13} \end{aligned}$$

Final Answer:
 $\frac{12}{13}$

Q.65 A sector of a circle subtends an angle of 90° at the centre and has radius 6 cm. Another sector of the same circle subtends an angle of $\pi/2$ radians. Find the ratio of the areas of the two sectors.

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

Answer: C

Sol: Given:

$$r = 6 \text{ cm}$$

Angle of first sector:
 $\theta_1 = 90^\circ = \frac{\pi}{2}$ radians

Angle of second sector:
 $\theta_2 = \frac{\pi}{2}$ radians

Formula Used:
 Area of a sector = $\frac{1}{2}r^2\theta$ (θ in radians)

Solution:

Area of first sector:

$$\begin{aligned} A_1 &= \frac{1}{2} \times 6^2 \times \frac{\pi}{2} \\ &= \frac{1}{2} \times 36 \times \frac{\pi}{2} = 9\pi \end{aligned}$$

Area of second sector:

$$\begin{aligned} A_2 &= \frac{1}{2} \times 6^2 \times \frac{\pi}{2} \\ &= 9\pi \end{aligned}$$

Ratio of areas:
 $A_1 : A_2 = 9\pi : 9\pi = 1 : 1$

1 : 1

Q.66 Find the value of

$$x = \sqrt{15 + \sqrt{15 + \sqrt{15 + \dots}}}$$

- A. 3
- B. 2
- C. $\frac{1 + \sqrt{61}}{2}$
- D. 4

Answer: C

Sol: Given:

$$x = \sqrt{15 + \sqrt{15 + \sqrt{15 + \dots}}}$$

Formula Used:

If $x = \sqrt{a + x}$
then, $x^2 = a + x$

Solution:

Let

$$x = \sqrt{15 + \sqrt{15 + \sqrt{15 + \dots}}}$$

Since the radical repeats infinitely,

$$x = \sqrt{15 + x}$$

Squaring:

$$x^2 = 15 + x$$

$$x^2 - x - 15 = 0$$

Solve using quadratic formula:

$$x = \frac{1 \pm \sqrt{1 + 60}}{2}$$

$$x = \frac{1 \pm \sqrt{61}}{2}$$

Since ($x > 0$),

$$x = \frac{1 + \sqrt{61}}{2}$$

Q.67 A shopkeeper buys 9 pens for the marked price of 8 pens. He sells each pen after allowing a discount of 5% on the marked price. Find his profit percentage.

- A. 10%
- B. 11.25%
- C. 6.875%
- D. 15%

Answer: C

Sol: Formula Used:

$$\text{Profit \%} = \left(\frac{\text{Profit}}{\text{Cost Price}} \right) \times 100$$

Solution:

Let the marked price (MP) of 1 pen = ₹100

Shopkeeper buys 9 pens for the marked price of 8 pens

=> Cost Price (CP) of 9 pens = $8 \times 100 = ₹800$

Discount = 5%

=> Selling Price (SP) of 1 pen = 95% of MP = ₹95

=> SP of 9 pens = $9 \times 95 = ₹855$

Profit = SP - CP = $855 - 800 = ₹55$

Profit % = $\left(\frac{55}{800}\right) \times 100$

= 6.875%

Profit Percentage = 6.875%

Q.68 If $x + y = 7$ and $xy = 10$, find: $(x^3 + y^3)^2 - 9x^2y^2(x + y)^2$

- A. 24011
- B. -26411
- C. 12255
- D. -12251

Answer: B

Sol: Given:

$$x + y = 7$$

$$xy = 10$$

Formula Used:

$$x^3 + y^3 = (x + y)^3 - 3xy(x + y)$$

Solution:

$$x^3 + y^3 = 7^3 - 3(10)(7)$$

$$= 343 - 210$$

$$= 133$$

$$(x^3 + y^3)^2 = 133^2$$

$$= 17689$$

$$9x^2y^2(x + y)^2 = 9(10^2)(7^2)$$

$$= 9(100)(49)$$

$$= 44100$$

$$\text{Required expression} = 17689 - 44100$$

$$= -26411$$

Final Answer:

$$-26411$$

Q.69 Find the slope of the line $4x - 5y = 10$.

- A. 4/5
- B. -5/4
- C. 5/4
- D. -4/5

Answer: A

Sol: Given:

$$4x - 5y = 10$$

Formula Used:

$$\text{slope} = -\frac{a}{b}$$

Solution:

$$4x - 5y - 10 = 0$$

$$a = 4, b = -5$$

$$\text{slope} = -\frac{4}{-5}$$

$$= \frac{4}{5}$$

Final Answer:

$$\frac{4}{5}$$

Q.70 ₹800 is lent at a certain rate of simple interest. After 4 months, another ₹1200 is lent at a rate which is twice the original rate. If the total simple interest after 1 year is ₹96, find the original rate.

- A. 4%
- B. 5%
- C. 8%
- D. 7%

Answer: A

Sol: Given:

$$P_1 = ₹800$$

$$T_1 = 1 \text{ year}$$

$$P_2 = ₹1200$$

Second sum is lent after 4 months

$$\Rightarrow T_2 = 1 - \frac{4}{12} = \frac{2}{3} \text{ year}$$

$$\text{Total Simple Interest} = ₹96$$

Formula Used:

$$\text{Simple Interest} = \frac{P \times R \times T}{100}$$

Solution:

Let original rate = $R\%$ p.a.

\Rightarrow Rate for second sum = $2R\%$ p.a.

Interest on first sum:

$$SI_1 = \frac{800 \times R \times 1}{100} = 8R$$

Interest on second sum:

$$SI_2 = \frac{1200 \times 2R \times \frac{2}{3}}{100}$$

$$= \frac{1200 \times 4R}{300} = 16R$$

Total Interest:

$$8R + 16R = 96$$

$$24R = 96$$

$$R = 4$$

$$\text{Original Rate} = 4\% \text{ per annum}$$

Q.71 A tower casts a shadow of 15 meters on the ground. If the height of the tower is $15\sqrt{3}$ meters, find the angle of elevation of the sun.

- A. 30°
- B. 45°
- C. 60°
- D. 75°

Answer: C

Sol: Given:

$$\text{Height of tower} = 15\sqrt{3}\text{m}$$

$$\text{Length of shadow} = 15\text{m}$$

Formula Used:

$$\tan \theta = \frac{\text{Opposite}}{\text{Adjacent}}$$

Solution:

$$\begin{aligned}\tan \theta &= \frac{15\sqrt{3}}{15} \\ &= \sqrt{3} \\ \theta &= 60^\circ\end{aligned}$$

Final Answer:
60°

Q.72 The volume of a hemisphere is numerically equal to three times its curved surface area. Find the radius of the hemisphere.

- A. 9 cm
- B. 10.5 cm
- C. 12 cm
- D. 14 cm

Answer: A

Sol: Given:

Volume of the hemisphere is numerically equal to three times its curved surface area

Formula Used:

$$\text{Volume of a hemisphere} = \frac{2}{3}\pi r^3$$

$$\text{Curved surface area of a hemisphere} = 2\pi r^2$$

Solution:

Let the radius of the hemisphere be r

$$\frac{2}{3}\pi r^3 = 3 \times 2\pi r^2$$

$$\frac{2}{3}\pi r^3 = 6\pi r^2$$

Dividing both sides by πr^2 :

$$\frac{2}{3}r = 6$$

$$r = 6 \times \frac{3}{2}$$

$$r = 9$$

$$\boxed{r = 9 \text{ cm}}$$

Q.73 A sum of ₹12000 is divided into two parts and lent at 6% and 11% simple interest respectively. If the total annual interest earned is ₹960, find the amount lent at 11%.

- A. ₹5000
- B. ₹4800
- C. ₹7000
- D. ₹8000

Answer: B

Sol: Given:

Total sum = ₹12000

Let the amount lent at 11% p.a. be x

Then the amount lent at 6% p.a. = 12000 - x

Total annual simple interest = ₹960

Formula Used:

$$\text{Simple Interest} = \frac{P \times R \times T}{100}$$

Solution:

Interest at 11% :

$$\frac{11x}{100}$$

Interest at 6% :

$$\frac{6(12000 - x)}{100}$$

Total interest:

$$\frac{11x}{100} + \frac{6(12000 - x)}{100} = 960$$

Multiplying both sides by 100 :

$$11x + 6(12000 - x) = 96000$$

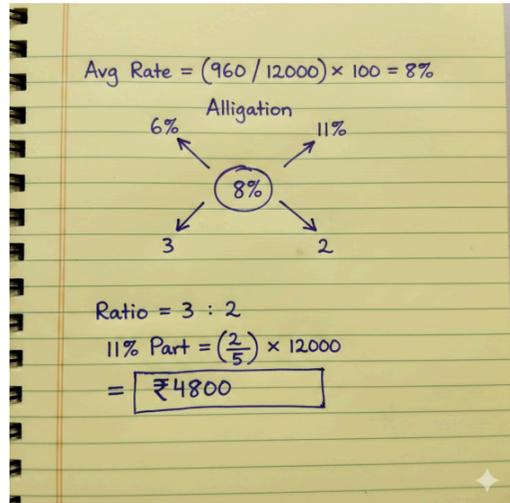
$$11x + 72000 - 6x = 96000$$

$$5x = 24000$$

$$x = 4800$$

Amount lent at 11% = ₹4800

Exam Hall Method:



Q.74 Pipe A can fill a tank in 18 minutes and Pipe B can fill it in 36 minutes. Both are opened together. After 6 minutes, the rate of Pipe A becomes half and Pipe B's rate becomes double. How many more minutes are required to fill the tank?

- A. 5 min
- B. 6 min
- C. 7 min
- D. 8 min

Answer: B

Sol: Given:

Pipe A can fill the tank in 18 minutes

Pipe B can fill the tank in 36 minutes

After 6 minutes:

Rate of Pipe A becomes half

Rate of Pipe B becomes double

Formula Used

Work = Rate × Time

Assume total work = LCM of given times

Solution:

LCM of 18 and 36 = 36 units

Initial rate of Pipe A = $\frac{36}{18} = 2$ units/min

Initial rate of Pipe B = $\frac{36}{36} = 1$ unit/min

Combined initial rate = 2 + 1 = 3 units/min

Work done in first 6 minutes = 3 × 6 = 18 units

Remaining work = 36 - 18 = 18 units

New rate of Pipe A (half) = 1 unit/min

New rate of Pipe B (double) = 2 units/min

New combined rate = 1 + 2 = 3 units/min

Time to complete remaining work = $\frac{18}{3} = 6$ minutes

Additional time required = 6 minutes

Q.75 A hollow iron sphere with an outer radius of 14 cm is melted and recast into 64 identical solid spheres, each of radius 3.5 cm. Find the inner radius (nearest to the integer) of the original sphere.

- A. 10 cm
- B. 11 cm
- C. 12 cm
- D. 9 cm

Answer: A

Sol: Given:

Outer radius of hollow sphere $R = 14$ cm

Number of solid spheres = 64

Radius of each solid sphere $r = 3$ cm

Let inner radius of hollow sphere = x cm

Formula Used:

$$\text{Volume of a sphere} = \frac{4}{3}\pi r^3$$

$$\text{Volume of a hollow sphere} = \frac{4}{3}\pi(R^3 - x^3)$$

Solution:

$$\text{Volume of hollow sphere} = \frac{4}{3}\pi(14^3 - x^3)$$

$$\text{Total volume of 64 solid spheres} = 64 \times \frac{4}{3}\pi(3)^3$$

Since volumes are equal:

$$\frac{4}{3}\pi(14^3 - x^3) = 64 \times \frac{4}{3}\pi \times 27$$

Cancelling $\frac{4}{3}\pi$ from both sides:

$$14^3 - x^3 = 64 \times 27$$

$$2744 - x^3 = 1728$$

$$x^3 = 2744 - 1728 = 1016$$

$$x = \sqrt[3]{1016} = 10$$

Inner radius of the original sphere = 10 cm

Q.76 A sentence is provided in direct speech. From the four given options, choose the one that most accurately conveys the sentence in its corresponding indirect speech.

He said to me, "You ought to study harder."

- A. He said me that I ought to study harder.
- B. He told me that I ought to study harder.
- C. He told me that you ought to study harder.
- D. He told that I ought to study harder.

Answer: B

Sol:

The correct option is (b).

To change the given sentence from Direct to Indirect Speech, we must apply the standard reporting rules for advice/obligation with "ought to". In Direct Speech: **He said to me** indicates the listener ("me"), so in Indirect Speech we must use **told + object**.

- **Reporting verb rule:** "said to" changes to "told" when an object is present. Hence, "He said to me" becomes "He told me".
- **Pronoun rule:** The speaker says "You" to "me"; in Indirect Speech, "you" changes according to the listener, i.e., it becomes "I".
- **Modal rule:** "Ought to" usually does not change in Indirect Speech because it already expresses obligation/advice in a fixed way.

Therefore, the correct indirect form is: **He told me that I ought to study harder.**

Why other options are incorrect:

- **Option (A):** "said me" is grammatically incorrect; we use "said to me" or "told me".
- **Option (C):** Pronoun is not changed correctly; "you" should become "I" because the advice is given to "me".
- **Option (D):** "told" must take an object (told *someone*); "He told that" is incorrect here.

So the correct answer is (b)

Q.77 Select the most appropriate synonym of the given word: EXIGUOUS

- A. Meagre
- B. Immense
- C. Redundant
- D. Plentiful

Answer: A

Sol:

The correct option is (a).

The word **exiguous** means very small in amount, scanty, or insufficient. It is used for quantities that are **hardly enough** for a need. (Hindi meaning: अल्प / बहुत कम)

Example (given word): The village survived on an exiguous supply of water during the drought.

The synonym that matches this meaning is **meagre**, which means very small in quantity, poor, or scanty. (Hindi meaning: कम / अल्प) It correctly conveys the sense of "exiguous".

Example (correct word): He lived on a meagre salary but managed his expenses wisely.

Synonyms of exiguous: scanty, paltry, negligible, meagre.

Antonyms of exiguous: abundant, ample, plentiful, copious.

Meanings of other options:

- **Option (B) Immense:** extremely large (Hindi: विशाल).
- **Option (C) Redundant:** unnecessary; more than needed (Hindi: अनावश्यक).
- **Option (D) Plentiful:** available in large quantity (Hindi: प्रचुर).

So the correct answer is (a)

Q.78 Find the word that is spelled correctly and means the quality of being harshly sarcastic.

- A. Causticity
- B. Causticity
- C. Caustyciti
- D. Costicity

Answer: A

Sol:

The correct option is (a).

The required word should be spelled correctly and should mean **the quality of being harshly sarcastic**. The correct spelling is **Causticity**, which means caustic nature—biting sarcasm or corrosive sharpness in speech. (Hindi meaning: तीखी व्यंग्यात्मकता / कटाक्ष)

Example: The causticity of his remarks offended everyone in the meeting.

Why other options are incorrect: They are misspellings and do not represent the standard word.

Meanings of all the given options (with spelling status):

- **Option (A) Causticity:** harsh sarcasm; biting quality (Hindi: कटाक्ष) – **correctly spelt**.
- **Option (B) Causticity:** incorrect spelling (intended word: causticity) (Hindi: गलत वर्तनी).
- **Option (C) Caustyciti:** incorrect spelling (Hindi: गलत वर्तनी).
- **Option (D) Costicity:** incorrect spelling; changes the root and is not the required word (Hindi: गलत वर्तनी).

Part of speech note: "Causticity" is a **noun** formed from the adjective "caustic" + "-ity", showing a quality/state.

So the correct answer is (a)

Q.79 A sentence is provided in indirect speech. From the four given options, choose the one that most accurately conveys the sentence in its corresponding direct speech.

The envoy said that only after the truce would talks commence.

- A. "Talks commence only after the truce," said the envoy.
- B. "Only after the truce, talks would commence," said the envoy.
- C. "Only after the truce will talks commence," said the envoy.
- D. "Talks would commence once the truce is declared," said the envoy.

Answer: C

Sol:

The correct option is (c).

We must convert the given Indirect Speech into Direct Speech. The indirect sentence is: **The envoy said that only after the truce would talks commence.** Here, "said" is in past tense, but the message is a statement and can be presented in Direct Speech as a quoted sentence with the correct future sense.

- **Core meaning:** Talks will begin **only after** the truce.
- **Modal structure in Indirect Speech:** "would commence" here represents **future-in-the-past**, i.e., what was expected/declared to happen after another event.
- **Direct Speech rendering:** In direct statement form, the most natural and grammatically correct version is "**Only after the truce will talks commence,**" because it clearly expresses the future action ("will commence") with the fronted adverbial phrase "Only after the truce".

Why option (C) is best: It preserves the emphasis "Only after the truce" and uses correct future tense "will commence" to express the announced condition.

Why other options are incorrect:

- **Option (A):** Uses present simple "commence" without "will", which weakens the announced future sense and sounds less accurate as reported content.
- **Option (B):** Keeps "would" in Direct Speech, which is not appropriate here because in direct form the envoy's statement would normally be framed as "will". Also the comma placement makes it awkward.
- **Option (D):** Changes the original wording and adds "is declared", which is not stated in the given sentence; it alters the exact meaning and structure.

So the correct answer is (c)

Q.80 Select the most appropriate antonym of the given word. Abrogate

- A. Rescind
- B. Annul
- C. Ratify
- D. Repeal

Answer: C

Sol:

The correct option is (c).

Abrogate means to отмен/abolish formally, especially a law, treaty, or agreement; to cancel officially. (Hindi meaning: रद्द करना / निरस्त करना)

Example (given word): The government decided to abrogate the outdated regulation.

The antonym must express the opposite idea: to **approve, confirm, or make valid**. **Ratify** means to formally approve or validate (a treaty, contract, or agreement). (Hindi meaning: अनुमोदित करना / पुष्टि करना) Hence, it is the correct antonym.

Example (correct word): The parliament ratified the international agreement after a long debate.

Synonyms of abrogate: repeal, annul, rescind, revoke.

Antonyms of abrogate: ratify, approve, confirm, validate.

Meanings of other options:

- **Option (A) Rescind:** to revoke/cancel officially (Hindi: रद्द करना) – synonym of abrogate.
- **Option (B) Annul:** to declare invalid; cancel (Hindi: निरस्त करना) – synonym of abrogate.
- **Option (D) Repeal:** to revoke a law (Hindi: कानून रद्द करना) – synonym of abrogate.

So the correct answer is (c)

Q.81 Choose the correct one-word substitute for: "Extremely ancient; belonging to a very remote period."

- A. Antiquated
- B. Medieval
- C. Antediluvian
- D. Obsolete

Answer: C

Sol:

The correct option is (c).

The phrase "Extremely ancient; belonging to a very remote period" refers to something from an age so old that it feels **prehistoric** or **before recorded history**. The precise one-word substitute is **antediluvian**, which literally means "before the flood" and is used figuratively to mean extremely old-fashioned or very ancient. (Hindi meaning: अत्यंत प्राचीन / महाप्राचीन)

Example: The museum displayed antediluvian tools that predated modern civilization.

Why other options are incorrect (meanings):

- **Option (A) Antiquated:** old-fashioned; out of date (Hindi: पुराना / अप्रचलित)—not necessarily "extremely ancient", often used for styles/ideas.
- **Option (B) Medieval:** relating to the Middle Ages (Hindi: मध्ययुगीन)—a specific historical period, not "very remote" in the extreme sense.
- **Option (D) Obsolete:** no longer used; outdated (Hindi: अप्रचलित)—focuses on disuse, not extreme antiquity.

So the correct answer is (c)

Q.82 Select the most appropriate synonym of the given word: LUMINOUS

- A. Gloomy
- B. Murky
- C. Opaque
- D. Resplendent

Answer: D

Sol:

The correct option is (d).

Luminous means giving off light, shining, or glowing brightly; it can also mean intellectually bright or clear. (Hindi meaning: चमकीला / प्रकाशमान)

Example (given word): The luminous moon lit up the entire landscape.

The best synonym among the options is **resplendent**, which means shining brilliantly, dazzling, or splendidly bright. (Hindi meaning: दीप्तिमान / अत्यंत चमकदार) It directly matches the sense of "luminous".

Example (correct word): She appeared resplendent in her traditional attire under the stage lights.

Synonyms of luminous: radiant, shining, brilliant, resplendent.

Antonyms of luminous: dark, dim, gloomy, opaque.

Meanings of other options:

- **Option (A) Gloomy:** dark; depressing (Hindi: उदास / अंधकारमय).
- **Option (B) Murky:** dark and dirty; unclear (Hindi: धुंधला / मटमैला).
- **Option (C) Opaque:** not transparent; not letting light pass through (Hindi: अपारदर्शी).

So the correct answer is (d)

Q.83 Choose the correct meaning of idiom:

To chew over an idea

- A. Eat noisily
- B. Wander aimlessly in thought
- C. Think deeply and repeatedly
- D. Prepare aggressively for conflict

Answer: C

Sol:

The correct option is (c).

The idiom “to chew over an idea” means to think about something carefully for a long time, considering it again and again before deciding. It suggests slow, repeated mental processing, just as chewing is slow and repetitive. (Hindi idiom/meaning: किसी विचार को अच्छी तरह से सोच-विचार करना / मन ही मन मंथन करना)

Example: Before accepting the offer, he chewed over the idea for several days.

Why option (C) is correct: “Think deeply and repeatedly” expresses both elements—depth and repetition—which are central to the idiom.

Why other options are incorrect:

- **Option (A):** Takes the phrase literally; idioms are not interpreted word-for-word.
- **Option (B):** “Wander aimlessly” means unfocused thinking, but “chew over” means focused reconsideration.
- **Option (D):** Refers to aggression/preparation for conflict, which is unrelated to careful thinking.

Other related idioms and meanings:

- “**Think it over**”: consider carefully (Hindi: सोच-विचार करना).
- “**Mull over**”: ponder for some time (Hindi: मनन करना).
- “**Turn over in one’s mind**”: repeatedly think about (Hindi: बार-बार मन में लाना).

So the correct answer is (c)

Q.84 Choose the correct one-word substitute for: “A person who advocates reform or improvement.”

- A. Traditionalist
- B. Reactionary
- C. Reformer
- D. Absolutist

Answer: C

Sol:

The correct option is (c).

A person who advocates reform or improvement is someone who supports changes to make a system better and more effective. The correct one-word substitute is **reformer**, meaning a person who works to bring improvement by removing faults or by introducing new methods. (Hindi meaning: सुधारक)

Example: The social reformer fought against outdated practices and promoted education.

Meanings of the other options:

- **Option (A) Traditionalist:** a person who prefers old traditions and resists change (Hindi: परंपरावादी).
- **Option (B) Reactionary:** a person who opposes political or social reform; wants to return to earlier conditions (Hindi: प्रतिक्रियावादी).
- **Option (D) Absolutist:** a person who believes in absolute principles or absolute authority (Hindi: निरंकुशतावादी / कट्टर सिद्धांतवादी).

So the correct answer is (c)

Q.85 Rearrange the following sentences in correct order to make a logical passage.

1. The plan is approved after consent from all partners.
2. First, a preliminary outline is drafted.
3. Then modifications are made after consultations.
4. Finally, implementation starts according to schedule.

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

Answer: A

Sol:

The correct option is (a).

To form a logical passage, we must arrange the steps in the natural sequence of planning and execution. The passage describes a process: drafting, consulting/modifying, approval, and implementation.

- **Sentence (2) must come first:** It begins with the marker "First" and introduces the initial stage: a preliminary outline is drafted.
- **Sentence (3) follows logically:** After drafting an outline, consultations happen and modifications are made. The connector "Then" supports this second step.
- **Sentence (1) comes next:** Approval happens after partners give consent, which is reasonable only after drafting and modifying the plan.
- **Sentence (4) must be last:** "Finally" clearly indicates the last stage—implementation starts according to schedule.

Thus, the correct order is 2-3-1-4, which matches option (A).

So the correct answer is (a)

Q.86 Rearrange the following sentences to form a coherent paragraph:

1. A core concept in this paradigm is the "class," which serves as a template for creating objects.
2. Object-Oriented Programming (OOP) is a paradigm built around "objects," which contain data as well as methods.
3. This enables a developer to define the structure and behavior of programs in an object-based manner.
4. A key benefit is that it mirrors real-world entities, making large systems easier to maintain and debug.

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

Answer: A

Sol:

The correct option is (a).

To form a coherent paragraph, we must start with the definition of the topic and then proceed from the general concept to specific components and finally to benefits.

- **Sentence (2) should come first:** It introduces the topic "Object-Oriented Programming (OOP)" and defines it as a paradigm built around objects. This is the proper opening for the paragraph.
- **Sentence (1) follows:** After introducing OOP and objects, it explains a core concept of the paradigm—the "class"—which is essential to creating objects. This is a natural next step because it expands the concept.
- **Sentence (3) comes next:** The pronoun "This" refers back to the concept just explained (OOP using objects/classes). It states the consequence/utility: developers can define structure and behavior in an object-based manner.
- **Sentence (4) should be last:** It provides a concluding benefit: mirroring real-world entities makes large systems easier to maintain and debug. Benefits typically appear after explanation.

Therefore, the correct sequence is 2, 1, 3, 4, i.e., option (A).

So the correct answer is (a)

Q.87 Find the part of the sentence that contains an error:

Seldom had the tribunal entertained an appeal (1)/ so lacking in substance, nor so plainly designed (2)/ to invite publicity rather than justice. (3)/ No error (4)/

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

Answer: B

Sol:

The correct option is (b).

The error lies in part (2): “nor so plainly designed”. After a negative adverb like **seldom**, the sentence structure generally uses parallel comparison with “so... as/that” or coordination with “or” for alternatives, not “nor” in this context.

Correct idea of the sentence: The tribunal rarely entertained an appeal that was **so lacking in substance or so plainly designed** to invite publicity rather than justice.

- **Rule (parallelism with negatives):** When we use a negative sense such as “seldom/rarely/never”, we maintain parallel structure: “so + adjective ... or so + adjective ...”.
- **Why “nor” is wrong here:** “Nor” is typically used with “neither” or in a clear “not... nor...” pairing. Here the sentence is not framed as “not... nor...” but as a comparison under “seldom”. Hence, “or” is preferred for correct coordination.

Corrected sentence (idea): Seldom had the tribunal entertained an appeal so lacking in substance, **or** so plainly designed to invite publicity rather than justice.

Example (similar structure): Rarely have I seen a report so poorly written **or** so carelessly edited.

So the correct answer is (b)

Q.88 Change the following from active to passive:

They were broadcasting the match at 8 pm.

- A. The match is broadcast at 8 pm.
- B. The match was broadcast at 8 pm.
- C. The match was being broadcast at 8 pm.
- D. The match has been broadcast at 8 pm.

Answer: C

Sol:

The correct option is (c).

The given sentence is in **Past Continuous Tense** (were broadcasting). While converting Active Voice to Passive Voice, we keep the same tense and move the object to the subject position.

Active sentence: They were broadcasting the match at 8 pm.

Identify parts:

- **Subject:** They
- **Verb (Past Continuous):** were broadcasting
- **Object:** the match

Structure rule:

- **Active (Past Continuous):** Subject + was/were + V1 + ing + Object
- **Passive (Past Continuous):** Object + was/were + **being** + V3 + (by + subject)

Therefore, "the match" becomes the subject and the passive form becomes: **The match was being broadcast at 8 pm (by them)**. This matches option (C).

Why other options are incorrect:

- **Option (A):** Present tense; does not match past continuous.
- **Option (B):** Simple past passive; loses the continuous aspect ("was being").
- **Option (D):** Present perfect passive; incorrect tense for the given time-specific past continuous action.

So the correct answer is (c)

Q.89 Choose the correct option:

The sociologist's conclusions were so contentious that they were initially ____.

- A. dismissed
- B. applauded
- C. endorsed
- D. implemented

Answer: A

Sol:

The correct option is (a).

The sentence says the conclusions were **so contentious**, meaning they were highly controversial, likely to cause disagreement, and difficult for people to accept. (Contentious: विवादास्पद) When conclusions are controversial, the usual immediate reaction is to **reject** or **set aside** them rather than praise or approve them.

The word **dismissed** means rejected as unworthy of consideration or treated as not important. (Hindi meaning: खारिज करना) Hence it fits the context best.

Example: The proposal was dismissed by the committee due to insufficient evidence.

Why other options are incorrect:

- **Option (B) applauded:** praised strongly (Hindi: प्रशंसा करना), which contradicts "contentious".
- **Option (C) endorsed:** approved or supported publicly (Hindi: समर्थन/अनुमोदन करना), again opposite to the likely initial reaction.
- **Option (D) implemented:** put into effect (Hindi: लागू करना), which is an action taken after acceptance, not when something is controversial.

So the correct answer is (a)

Q.90 Find the part of the sentence that contains an error:

The revised guideline states (1)/ that every employee must comply with (2)/ the conduct policy (3)/ regardless of their designation. (4)/

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

Answer: D

Sol:

The correct option is (d).

The error is in part (4): "**regardless of their designation.**" In strict competitive-exam grammar, "**every employee**" is treated as **singular**. Therefore, the possessive pronoun should also be singular for formal agreement, i.e., **his/her** (or "his or her"), not "their".

Rule (Subject-pronoun agreement): A singular indefinite subject like **each/every/everyone** generally takes a singular pronoun in formal grammar.

Correct form (formal exam style): The revised guideline states that every employee must comply with the conduct policy **regardless of his/her designation.**

Example: Every candidate must bring **his or her** admit card to the examination center.

Note: In modern informal English, singular "they/their" is common, but many SSC/Banking questions still prefer strict singular agreement for correctness.

So the correct answer is (d)

Q.91 Convert the sentence provided below from its passive voice structure to an active voice structure:

A decision has been made to get the manuscript reviewed by an external committee.

- A. An external committee has reviewed the manuscript.
- B. The manuscript is being reviewed by an external committee.
- C. They have decided to get the manuscript reviewed by an external committee.
- D. The manuscript was reviewed by the committee as per the decision.

Answer: C

Sol:

The correct option is (c).

The given sentence is passive-like in sense: "A decision has been made..." where the doer (subject) is not mentioned. To convert it into Active Voice, we must introduce an appropriate subject (commonly "they/we/the authorities") and keep the tense.

Given structure: "A decision has been made to get the manuscript reviewed by an external committee."

- **Tense:** Present Perfect (has been made).
- **Meaning:** Someone has taken the decision; the manuscript will be reviewed by an external committee (causative structure: get + object + V3).

Active conversion rule: When the agent is unknown, we use a general subject like "they". Also, we keep the present perfect tense: **have decided**.

Correct active sentence: They have decided to get the manuscript reviewed by an external committee. This is exactly option (C).

Why other options are incorrect:

- **Option (A):** Changes meaning; it states the review has already happened, which is not necessarily implied.
- **Option (B):** Remains passive and changes the structure to continuous; does not convert to active.
- **Option (D):** Changes tense to past and alters meaning by adding extra phrasing.

So the correct answer is (c)

Q.92 Choose the most suitable option to replace the highlighted part of the sentence:

She is confident to clear the interview.

- A. of to clear
- B. that she clears
- C. of clearing the interview
- D. on clearing interview

Answer: C

Sol:

The correct option is (c).

The highlighted part "to clear" is grammatically incorrect with the adjective **confident**. The correct collocation is **confident of + V-ing** or **confident that + clause**. Here, the simplest correct replacement among the given options is "of clearing the interview".

Correct sentence: She is confident of clearing the interview.

Grammatical rule used:

- **Adjective + preposition pattern:** "confident" is commonly followed by **of** when a gerund is used: confident of doing something.

- **Alternative pattern:** “confident that + subject + verb” can also be used, but the option must be fully correct in tense and structure.

Example (rule): He is confident of winning the match.

Why other options are incorrect:

- **Option (A):** “of to clear” is incorrect because “of” is followed by a gerund (V-ing), not an infinitive.
- **Option (B):** “that she clears” is grammatically possible in some contexts, but it is less natural here and may require “will clear” depending on intended future meaning; the given option does not match the best standard replacement.
- **Option (D):** “on clearing interview” is incorrect collocation; “confident on” is not standard, and the article “the” is missing before interview.

Information booster: Similar adjective patterns: “fond of + V-ing”, “capable of + V-ing”, “afraid of + V-ing”.

So the correct answer is (c)

Q.93 What concern does the passage raise about Yoga’s worldwide popularity?

Read the following passage and answer the questions based on the passage:

India’s heritage of wellness traditions—seen in Yoga, Ayurveda, Siddha, and Unani—forms a layered blend of philosophy, physiology, and metaphysical thought. Rather than remaining frozen in time, these systems have continuously adapted, negotiating their place within local practice and global health conversations. Central to this worldview is the belief that the body is not merely a biological machine but a field of interlinked rhythms and energies. Yoga, shaped by Patanjali’s Yoga Sutras, is not simply a set of postures; it is a comprehensive discipline intended to align body, mind, and consciousness. In contemporary settings, however, Yoga has often been commercialized, especially outside India, where its philosophical grounding is frequently reduced to fitness routines or stress-management tools. While this shift has expanded global appeal, it also triggers concerns about cultural appropriation and loss of intellectual depth.

Ayurveda views illness as an imbalance of the tridosha—vata, pitta, and kapha—forces said to govern bodily function. It emphasizes prakriti (constitution), ahara (diet), and dinacharya (daily regimen) as pillars of preventive care. Unlike allopathy’s symptom-focused interventions, Indian traditional medicine aims to restore equilibrium within the body’s internal ecology. This approach resonates with modern interest in personalized, preventive medicine, though the biomedical community often remains skeptical due to differences in method and proof. Government support for AYUSH reflects renewed institutional attention, yet critics warn against unquestioning promotion, pointing to limited standardized clinical trials, inconsistency in diagnostic frameworks, and difficulties in evidence-based validation. Moreover, commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. The relationship between these systems and modern healthcare is therefore both hopeful and complex. Integrative models—especially in chronic care, mental health, and palliative support—may work, but they require epistemic humility and strict regulation. The risk lies in either glorifying these traditions as cure-alls or dismissing them as unscientific leftovers. Their future relevance depends on preserving philosophical depth while applying transparent, rigorous scrutiny, through dialogue rather than extremes.

- A. Lack of studios
- B. Dilution of its philosophical foundation
- C. Shortage of practitioners
- D. Excess control by Indian agencies

Answer: B

Sol:

The correct option is (b).

Context of the passage: The passage states that Yoga, shaped by Patanjali’s Yoga Sutras, is a comprehensive discipline to align body, mind, and consciousness. However, in contemporary global settings, Yoga has often been commercialized, and its philosophical grounding is reduced to fitness routines or stress-management tools.

Why option (B) is correct: The main concern raised is the **dilution of Yoga’s philosophical foundation** and the resulting loss of intellectual depth, along with worries about cultural appropriation. This exactly matches option (B).

Other options are incorrect because:

- **Option (A):** The passage does not mention lack of studios as a problem.
- **Option (C):** There is no mention of shortage of practitioners; the issue is commercialization and reductionism.
- **Option (D):** The passage does not discuss excessive control by Indian agencies; it discusses commercialization outside India and philosophical reduction.

So the correct answer is (b)

Q.94 Which option best represents the Ayurvedic view of illness, as discussed?

Read the following passage and answer the questions based on the passage:

India's heritage of wellness traditions—seen in Yoga, Ayurveda, Siddha, and Unani—forms a layered blend of philosophy, physiology, and metaphysical thought. Rather than remaining frozen in time, these systems have continuously adapted, negotiating their place within local practice and global health conversations. Central to this worldview is the belief that the body is not merely a biological machine but a field of interlinked rhythms and energies. Yoga, shaped by Patanjali's Yoga Sutras, is not simply a set of postures; it is a comprehensive discipline intended to align body, mind, and consciousness. In contemporary settings, however, Yoga has often been commercialized, especially outside India, where its philosophical grounding is frequently reduced to fitness routines or stress-management tools. While this shift has expanded global appeal, it also triggers concerns about cultural appropriation and loss of intellectual depth.

Ayurveda views illness as an imbalance of the tridosha—vata, pitta, and kapha—forces said to govern bodily function. It emphasizes prakriti (constitution), ahara (diet), and dinacharya (daily regimen) as pillars of preventive care. Unlike allopathy's symptom-focused interventions, Indian traditional medicine aims to restore equilibrium within the body's internal ecology. This approach resonates with modern interest in personalized, preventive medicine, though the biomedical community often remains skeptical due to differences in method and proof. Government support for AYUSH reflects renewed institutional attention, yet critics warn against unquestioning promotion, pointing to limited standardized clinical trials, inconsistency in diagnostic frameworks, and difficulties in evidence-based validation. Moreover, commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. The relationship between these systems and modern healthcare is therefore both hopeful and complex. Integrative models—especially in chronic care, mental health, and palliative support—may work, but they require epistemic humility and strict regulation. The risk lies in either glorifying these traditions as cure-alls or dismissing them as unscientific leftovers. Their future relevance depends on preserving philosophical depth while applying transparent, rigorous scrutiny, through dialogue rather than extremes.

- A. Destroying pathogens through antibiotics
- B. Using synthetic drugs for instant relief
- C. Rebalancing the body through lifestyle and routine
- D. Correcting genetic defects directly

Answer: C

Sol:

The correct option is (c).

Context of the passage: Ayurveda is described as a system where illness is seen as an imbalance of the tridosha (vata, pitta, kapha). It emphasizes constitution (prakriti), diet (ahara), and daily regimen (dinacharya), and aims to restore equilibrium in the body's internal ecology rather than merely suppress symptoms.

Why option (C) is correct: "Rebalancing the body through lifestyle and routine" directly reflects Ayurveda's approach: it focuses on restoring balance using lifestyle, diet, and daily practices, which are repeatedly highlighted in the passage as pillars of preventive care.

Other options are incorrect because:

- **Option (A):** Antibiotics and pathogen destruction belong to modern allopathic biomedical treatment and are not described as the Ayurvedic view.
- **Option (B):** "Synthetic drugs for instant relief" reflects symptom-focused interventions, which the passage contrasts with Ayurveda.
- **Option (D):** "Correcting genetic defects directly" is unrelated to the passage and not part of the Ayurvedic explanation.

So the correct answer is (c)

Q.95 What risk linked to institutional promotion of AYUSH is mentioned in the passage?

Read the following passage and answer the questions based on the passage:

India's heritage of wellness traditions—seen in Yoga, Ayurveda, Siddha, and Unani—forms a layered blend of philosophy, physiology, and metaphysical thought. Rather than remaining frozen in time, these systems have continuously adapted, negotiating their place within local practice and global health conversations. Central to this worldview is the belief that the body is not merely a biological machine but a field of interlinked rhythms and energies. Yoga, shaped by Patanjali's Yoga Sutras, is not simply a set of postures; it is a comprehensive discipline intended to align body, mind, and consciousness. In contemporary settings, however, Yoga has often been commercialized, especially outside India, where its philosophical grounding is frequently reduced to fitness routines or stress-management tools. While this shift has expanded global appeal, it also triggers concerns about cultural appropriation and loss of intellectual depth.

Ayurveda views illness as an imbalance of the tridosha—vata, pitta, and kapha—forces said to govern bodily function. It emphasizes prakriti (constitution), ahara (diet), and dinacharya (daily regimen) as pillars of preventive care. Unlike allopathy's symptom-focused interventions, Indian traditional medicine aims to restore equilibrium within the body's internal ecology. This approach resonates with modern interest in personalized, preventive medicine, though the biomedical community often remains skeptical due to differences in method and proof. Government support for AYUSH reflects renewed institutional attention, yet critics warn against unquestioning promotion, pointing to limited standardized clinical trials, inconsistency in diagnostic frameworks, and difficulties in evidence-based validation. Moreover, commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. The relationship between these systems and modern healthcare is therefore both hopeful and complex. Integrative models—especially in chronic care, mental health, and palliative support—may work, but they require epistemic humility and strict regulation. The risk lies in either glorifying these traditions as cure-alls or dismissing them as unscientific leftovers. Their future relevance depends on preserving philosophical depth while applying transparent, rigorous scrutiny, through dialogue rather than extremes.

- A. Rising production costs

- B. Increased rural joblessness
- C. Traditional knowledge holders being sidelined
- D. Dependence on foreign investors

Answer: C

Sol:

The correct option is (c).

Context of the passage: The passage discusses government support for AYUSH and notes that while institutional attention is increasing, critics caution against unquestioning promotion. It points to issues like limited standardized clinical trials, inconsistent diagnostic frameworks, and difficulties with evidence-based validation. It also highlights a commercial risk.

Why option (C) is correct: The passage explicitly states that commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. This is a direct risk linked to institutional and commercial promotion around AYUSH.

Other options are incorrect because:

- **Option (A):** Rising production costs are not mentioned in the passage.
- **Option (B):** Rural joblessness is unrelated to the discussion and not stated.
- **Option (D):** Dependence on foreign investors is not discussed as a risk in the passage.

So the correct answer is (c)

Q.96 What position does the author take regarding combining traditional medicine with modern healthcare?

Read the following passage and answer the questions based on the passage:

India's heritage of wellness traditions—seen in Yoga, Ayurveda, Siddha, and Unani—forms a layered blend of philosophy, physiology, and metaphysical thought. Rather than remaining frozen in time, these systems have continuously adapted, negotiating their place within local practice and global health conversations. Central to this worldview is the belief that the body is not merely a biological machine but a field of interlinked rhythms and energies. Yoga, shaped by Patanjali's Yoga Sutras, is not simply a set of postures; it is a comprehensive discipline intended to align body, mind, and consciousness. In contemporary settings, however, Yoga has often been commercialized, especially outside India, where its philosophical grounding is frequently reduced to fitness routines or stress-management tools. While this shift has expanded global appeal, it also triggers concerns about cultural appropriation and loss of intellectual depth.

Ayurveda views illness as an imbalance of the tridosha—vata, pitta, and kapha—forces said to govern bodily function. It emphasizes prakriti (constitution), ahara (diet), and dinacharya (daily regimen) as pillars of preventive care. Unlike allopathy's symptom-focused interventions, Indian traditional medicine aims to restore equilibrium within the body's internal ecology. This approach resonates with modern interest in personalized, preventive medicine, though the biomedical community often remains skeptical due to differences in method and proof. Government support for AYUSH reflects renewed institutional attention, yet critics warn against unquestioning promotion, pointing to limited standardized clinical trials, inconsistency in diagnostic frameworks, and difficulties in evidence-based validation. Moreover, commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. The relationship between these systems and modern healthcare is therefore both hopeful and complex. Integrative models—especially in chronic care, mental health, and palliative support—may work, but they require epistemic humility and strict regulation. The risk lies in either glorifying these traditions as cure-alls or dismissing them as unscientific leftovers. Their future relevance depends on preserving philosophical depth while applying transparent, rigorous scrutiny, through dialogue rather than extremes.

- A. Traditional systems should replace allopathy
- B. Modern medicine must reject tradition
- C. Integration can work with humility and regulation
- D. Both should remain strictly separate

Answer: C

Sol:

The correct option is (c).

Context of the passage: The author explains that Indian wellness traditions like Yoga and Ayurveda have deep philosophical foundations and have adapted over time. However, their interaction with modern healthcare is complicated: there is hope for integration, but it must be handled carefully with proper scientific scrutiny and regulation.

Why option (C) is correct: The passage clearly supports integration, but with conditions. It states that integrative models may work, especially in chronic care and mental health, but they require **epistemic humility** (respect for different knowledge systems without arrogance) and **strict regulation**. This directly matches: "Integration can work with humility and regulation."

Other options are incorrect because:

- **Option (A):** The author does not say traditional systems should replace allopathy; instead, he warns against extremes and promotes dialogue.
- **Option (B):** The passage criticizes complete dismissal of tradition as "unscientific leftovers," so rejection is not the author's position.
- **Option (D):** The author does not argue for strict separation; he supports cautious integration with checks and balance.

So the correct answer is (c)

Q.97 . According to the passage, what is essential for the continued relevance of Yoga and traditional medicine in India?

Read the following passage and answer the questions based on the passage:

India's heritage of wellness traditions—seen in Yoga, Ayurveda, Siddha, and Unani—forms a layered blend of philosophy, physiology, and metaphysical thought. Rather than remaining frozen in time, these systems have continuously adapted, negotiating their place within local practice and global health conversations. Central to this worldview is the belief that the body is not merely a biological machine but a field of interlinked rhythms and energies. Yoga, shaped by Patanjali's Yoga Sutras, is not simply a set of postures; it is a comprehensive discipline intended to align body, mind, and consciousness. In contemporary settings, however, Yoga has often been commercialized, especially outside India, where its philosophical grounding is frequently reduced to fitness routines or stress-management tools. While this shift has expanded global appeal, it also triggers concerns about cultural appropriation and loss of intellectual depth.

Ayurveda views illness as an imbalance of the tridosha—vata, pitta, and kapha—forces said to govern bodily function. It emphasizes prakriti (constitution), ahara (diet), and dinacharya (daily regimen) as pillars of preventive care. Unlike allopathy's symptom-focused interventions, Indian traditional medicine aims to restore equilibrium within the body's internal ecology. This approach resonates with modern interest in personalized, preventive medicine, though the biomedical community often remains skeptical due to differences in method and proof. Government support for AYUSH reflects renewed institutional attention, yet critics warn against unquestioning promotion, pointing to limited standardized clinical trials, inconsistency in diagnostic frameworks, and difficulties in evidence-based validation. Moreover, commercial packaging of Ayurvedic products can marginalize traditional knowledge holders, turning living traditions into market commodities. The relationship between these systems and modern healthcare is therefore both hopeful and complex. Integrative models—especially in chronic care, mental health, and palliative support—may work, but they require epistemic humility and strict regulation. The risk lies in either glorifying these traditions as cure-alls or dismissing them as unscientific leftovers. Their future relevance depends on preserving philosophical depth while applying transparent, rigorous scrutiny, through dialogue rather than extremes.

- A. Unquestioning patriotism
- B. Complete scientific dismissal
- C. A dialogic integration of tradition and modernity
- D. Reliance only on foreign approval

Answer: C

Sol:

The correct option is (c).

Context of the passage: The author argues that the future relevance of Yoga and traditional medicine depends on a balance: preserving philosophical depth while also applying transparent, rigorous scrutiny. The passage repeatedly warns against two extremes—blind glorification and complete dismissal—and suggests dialogue as the sustainable path.

Why option (C) is correct: "A dialogic integration of tradition and modernity" captures the passage's concluding emphasis: traditions should remain meaningful by maintaining their intellectual/philosophical depth, while also engaging with modern standards of evidence and regulation through dialogue, not extremes.

Other options are incorrect because:

- **Option (A):** The passage warns against unquestioning promotion; it does not support blind patriotism.
- **Option (B):** The passage explicitly criticizes dismissing traditions as "unscientific leftovers," so complete dismissal is rejected.
- **Option (D):** The author does not suggest dependence on foreign approval; the focus is on rigorous scrutiny and respectful integration.

So the correct answer is (c)

Q.98 Choose the correct spelling of a word meaning "light, witty talk or banter."

- A. Persiflage
- B. Persiflaige
- C. Persiphlege
- D. Persiflagee

Answer: A

Sol:

The correct option is (a).

The word meaning "light, witty talk or banter" is correctly spelled as **Persiflage**. It refers to playful, teasing, or lightly mocking conversation. (Hindi meaning: हँसी-मजाक भरी बातचीत / हल्का व्यंग्य)

Example: The interview was filled with friendly persiflage that made the atmosphere relaxed.

Meanings of all the given options:

- Option (A) Persiflage: light, witty banter (Hindi: हल्का-फुल्का मजाक) – correct spelling.
- Option (B) Persiflaige: incorrect spelling (Hindi: गलत वर्तनी).
- Option (C) Persiphlege: incorrect spelling (Hindi: गलत वर्तनी).
- Option (D) Persiflagee: incorrect spelling (Hindi: गलत वर्तनी).

Part of speech note: "Persiflage" is used as a noun (a kind of talk).

So the correct answer is (a)

Q.99 A sentence is provided in direct speech. From the four given options, choose the one that most accurately conveys the sentence in its corresponding indirect speech.

The researcher said, "We have been observing this phenomenon for months."

- The researcher said they had been observing that phenomenon for months.
- The researcher said they have been observing this phenomenon for months.
- The researcher said that they were observing that phenomenon.
- The researcher said that we had observed this phenomenon.

Answer: A

Sol:

The correct option is (a).

We must convert Direct Speech to Indirect Speech. The direct sentence is: **The researcher said, "We have been observing this phenomenon for months."** The reporting verb is in the past ("said"), so the tense in the reported clause generally shifts back (backshift) according to standard rules.

Step-by-step conversion:

- **Reporting verb:** "said" remains "said" because it is a statement (no object is given that requires "told").
- **Pronoun change:** "We" changes to "they" (as reported by a third person narrator).
- **Tense backshift:** Present Perfect Continuous ("have been observing") changes to Past Perfect Continuous ("had been observing") when the reporting verb is in past tense.
- **Demonstrative change:** "this" generally changes to "that" in indirect speech (this phenomenon → that phenomenon), especially when the report is not in the same immediate context.

Thus, the correct indirect sentence is: **The researcher said they had been observing that phenomenon for months.** This matches option (A).

Why other options are incorrect:

- **Option (B):** No backshift is applied ("have been observing" stays present perfect continuous), which is not standard with past reporting verb.
- **Option (C):** Changes the tense to past continuous ("were observing"), which loses the duration/continuity implied by "have been observing for months".
- **Option (D):** Keeps "we" and changes meaning; also "had observed" (past perfect simple) does not correctly express the ongoing action.

So the correct answer is (a)

Q.100 Select the sentence containing the homonym of the highlighted word:

The bishop denounced the act as simony, citing church law.

- The cleric was charged with simony for selling sacred offices.
- Historians noted that simony corrupted many medieval appointments.
- The chemist measured the simony of the compound under pressure.
- Simony was condemned repeatedly by reform councils.

Answer: C

Sol:

The correct option is (c).

The highlighted word **simony** in the given sentence refers to the religious offence of buying or selling church offices or sacred things for money. (Hindi meaning: धार्मिक पदों/वस्तुओं की खरीद-फरोख्त का अपराध)

A **homonym** is a word that has the same spelling or pronunciation as another word but a different meaning. In this question, we need the sentence where “**simony**” is used in a **different sense** (i.e., not the church-related offence), indicating a different meaning for the same form.

Why option (C) is correct: “The chemist measured the simony of the compound under pressure.” Here, “simony” is presented as if it were a scientific property/measurement, which is clearly a different meaning from the religious offence. Therefore, it represents the homonym usage intended by the question.

Why other options are incorrect:

- **Option (A):** Uses “simony” in the same church-related meaning (selling sacred offices).
- **Option (B):** Still refers to corruption in medieval church appointments, i.e., the same meaning.
- **Option (D):** Again uses “simony” in the same ecclesiastical context.

So the correct answer is (c)
