CBT-1 Full Mock Test 1

Q.1 If the ratio of two numbers is 17 : 6 and the product of their LCM and their HCF is 102, then the sum of the reciprocals of the LCM and the HCF is:

A. $\frac{103}{109}$
B. $\frac{103}{105}$
C. $\frac{103}{102}$
D. $\frac{103}{132}$

Answer: C

Sol: **Given:**

Ratio of two numbers = 17 : 6 (coprime).

$\text{LCM} \times \text{HCF} = 102$

Formula Used:

If numbers are in ratio m : n with hcf(m ,n) = 1, then numbers = mH, nH where H = HCF.

LCM(mH , nH) = mnH.

For any two numbers:

LCM $\times$ HCF = product of numbers

Solution:

Let the numbers be (17H) and (6H).

$\text{LCM} = 17 \times 6 \times H = 102$H, HCF = H

Given $\text{LCM} \times \text{HCF} =$102:

(102H)$\times$H = 102

$102H^2 = 102$

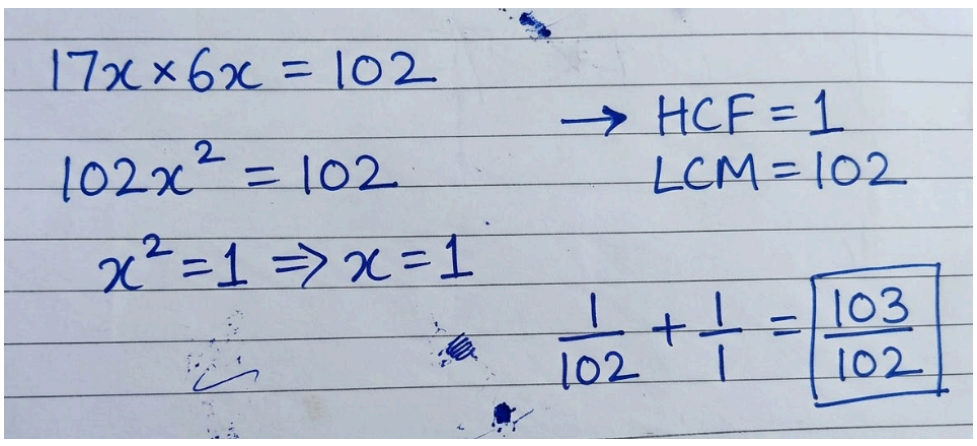
H = 1

So HCF = 1, LCM = 102.

Sum of reciprocals:

$$\frac{1}{\text{LCM}} + \frac{1}{\text{HCF}} = \frac{1}{102} + 1 = \frac{103}{102}.$$

Exam Hall Method:



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Q.2 **A.**

(i) All cats are animals.
(ii) No animal is a plant.
(iii) No cat is a plant.

B.

(i) Some students are athletes.
(ii) All athletes are disciplined.
(iii) Some students are disciplined.

C.

(i) All squares are rectangles.
(ii) Some rectangles are not parallelograms.
(iii) All squares are parallelograms.

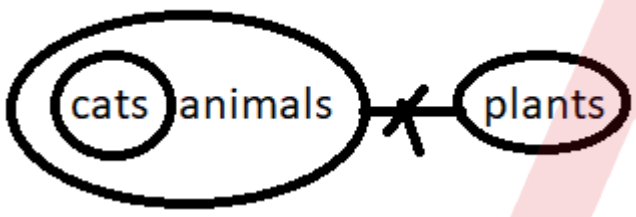
You are given 3 sets of arguments, each containing three sentences. Select the set(s) in which the third statement is a logical conclusion of the first two statements.

A. Only A
B. Only B
C. Only A and B
D. Only B and C

Answer: C

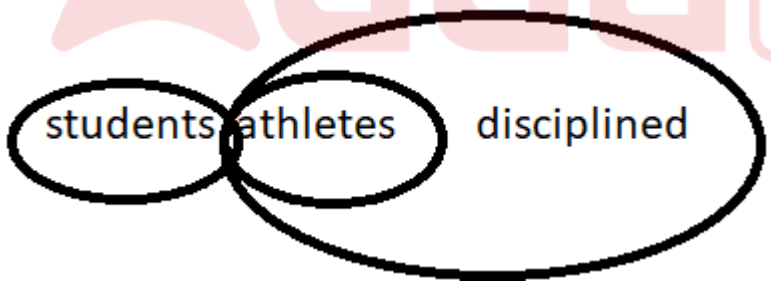
Sol: Set A:

- (i) All cats are animals.
- (ii) No animal is a plant.



- From (i) and (ii), it logically follows that no cat is a plant.
- Hence, the third statement is a logical conclusion of the first two.

Set B:

- (i) Some students are athletes.
- (ii) All athletes are disciplined.
- From (i) and (ii), it logically follows that some students are disciplined.
- Hence, the third statement is a logical conclusion of the first two.
- 

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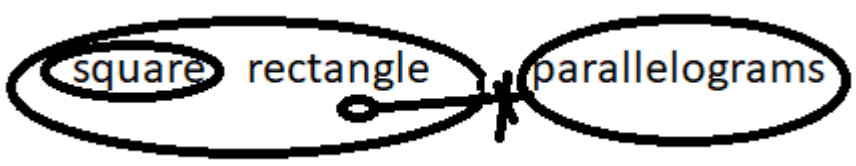
Set C:

- (i) All squares are rectangles.
- (ii) Some rectangles are not parallelograms.
- From (i) and (ii), we cannot conclude that all squares are parallelograms.
- Hence, the third statement does not logically follow.
- 

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Correct answer: (c) Only A and B

Q.3 Read the given statement and courses of action carefully. A course of action is a step or administrative decision to be taken for improvement, follow up or further action in regard to the problem, policy, etc. Assuming that the information given in the statement is true, decide which of the given courses of action logically follow(s) from the statement.

Statement:

Some serious and substantial mistakes were found in the financial account statements of a private limited company.

Courses of Action:

I. A team of experts should be assigned to find the root cause of the mistakes in the accounts of the private limited company and suggest remedial action.

II. All the involved employees should be thoroughly investigated.

A. Neither I nor II follows.
B. Only I follows.
C. Only II follows.
D. Both I and II follows.

Answer: D

Sol: **Statement**:

Some serious and substantial mistakes were found in the financial account statements of a private limited company.

Courses of Action:

I. A team of experts should be assigned to find the root cause of the mistakes in the accounts of the private limited company and suggest remedial action.

Yes, this is a logical and practical step.

II. All the involved employees should be thoroughly investigated.

Yes, since mistakes are "serious and substantial," checking employees' role is necessary.

So, **Both I and II follows.**

Thus, correct option is (d).

Q.4 Which of these is NOT a factor that contributed to the making of Indian Constitution?

A. Industrial Revolution
B. Parliamentary democracy in Britain
C. Socialist revolution in Russia
D. Bill of Rights in the US

Answer: A

Sol: **The correct answer is (A) Industrial Revolution**
Explanation:

The **Industrial Revolution** was not a direct factor in the making of the Indian Constitution. While it had significant global economic and social effects, particularly on the Western world, its influence on the Indian Constitution was indirect, as it wasn't a primary source of inspiration for the drafting of India's Constitution. The main influences on the Indian Constitution came from political and legal developments, as well as social movements.

Information Booster:

1. **Parliamentary democracy in Britain**: The Indian Constitution was heavily inspired by the British parliamentary system, including its structure of governance and the idea of representative democracy.

2. **Socialist revolution in Russia**: The principles of **social justice** and **welfare of the working class**, influenced by the **Russian Revolution**, found their way into the Indian Constitution, particularly in the directive principles and the aim to secure social and economic justice.

3. **Bill of Rights in the US**: The **Bill of Rights** in the United States served as a reference for the inclusion of fundamental rights and civil liberties in the Indian Constitution, particularly in ensuring the protection of individual freedoms.

Additional Information:

- **Industrial Revolution**: While the **Industrial Revolution** led to significant changes in society, economy, and technology, it was more of an external influence on global trade and industry rather than a guiding principle for India's constitutional framework.

- **Parliamentary democracy in Britain** and **Bill of Rights in the US** influenced India's **democratic values** and **fundamental rights** framework.

- The **Socialist Revolution in Russia** influenced the inclusion of **economic justice** in the form of directives for the welfare of the people.

Q.5 **Two pipes, A and B, can fill a tank in 12 hours and 16 hours, respectively. A third pipe, C, can empty the tank in 20 hours. If all three are opened together but pipe C is closed after 4 hours, how long will it take to fill the tank completely? (Rounded to one decimal place)**

A. 9.1 hours
B. 4.2 hours
C. 8.2 hours
D. 6.4 hours

Answer: C

Sol: **Given:**
Pipe A fills in 12 hours

Pipe B fills in 16 hours

Pipe C empties in 20 hours

All three work together for 4 hours, then A and B continue

Formula Used:

Work rate = $\frac{Capacity}{Time}$

Solution:

Let Total capacity = LCM of 12, 16, and 20 = 240 units

Then:

A's rate = $\frac{240}{12}$ = 20 units/hour

B's rate = $\frac{240}{16}$ = 15 units/hour

C's rate(emptying) = $\frac{240}{20}$ = 12 units/hour

Net rate = 20 + 15 - 12 = 23 units/hour

In 4 hours: 23 × 4 = 92 units filled

Remaining work = 240 - 92 = 148 units

Now only A and B are open:

Net rate = 20 + 15 = 35 units/hour

Time to fill remaining 148 units = $\frac{148}{35}$ = 4.2 hours

Total Time = 4 + 4.2 = 8.2 hours

Q.6 **In three positive numbers, the ratio of first and second is 2:3, ratio of second and third is 7:3. The product of first and third is 8064. What is the sum of the three numbers?**

A. 352
B. 308
C. 360
D. 400

Answer: A

Sol: **Given:**

Ratio of first and second = 2:3

Ratio of second and third = 7:3

Product of first and third = 8064

Solution:

Let the three numbers be x , y , and z.

From the ratios, $\frac{x}{y} = \frac{2}{3}$ and $\frac{y}{z} = \frac{7}{3}$

$x = \frac{2}{3}y, \quad z = \frac{3}{7}y$

Now,

$$x \times z = \left(\frac{2}{3}y\right) \times \left(\frac{3}{7}y\right) = \frac{2}{3} \times \frac{3}{7} \times y^2 = \frac{6}{21}y^2 = \frac{2}{7}y^2$$

Set this equal to the given product:

$$\frac{2}{7}y^2 = 8064$$

$$y^2 = 8064 \times \frac{7}{2} = 28224$$

y = $\sqrt{28224} = 168$

x = $\frac{2}{3} \times 168 = 112, \quad z = \frac{3}{7} \times 168 = 72$

Sum of the three numbers:

x + y + z = 112 + 168 + 72 = 352

The sum of the three numbers is **352**.

Q.7 **After 11 innings, the average score per innings of a batsman is 52. After 13 innings, the average increased to 54. If the batsman scored 16 more runs in the 13th innings than the previous innings, then how many runs did he score in the 12th innings?**

A. 54
B. 57
C. 56
D. 55

Answer: B

Sol: **Given:**
The average score after 11 innings = 52
The average score after 13 innings = 54
The Batsman scored 16 more runs in the 13th innings than the previous innings
Formula Used:
$$\text{Average} = \frac{\text{Sum of observations}}{\text{Number of observations}}$$
Solution:
Let the score of batsman in 12th innings be x
Let the score of batsman in 13th innings more than the previous innings be (x + 16)
The average score after 11 innings = (52 × 11) = 572
The average score after 13 innings = (54 × 13) = 702
According to the question
=> (572 + x + x + 16) = 702
=> (588 + 2x) = 702
=> 2x = (702 – 588)
=> 2x = 114
=> $x = \frac{114}{2}$
=> x = 57
∴ He scored 57 runs in his 12th innings

Q.8 **SMPS is the acronym for**

A. Store Mode Power Supply
B. Single Mode Power Supply
C. Switch Mode Power Supply
D. Start Mode Power Supply

Answer: C

Sol: **SMPS** stands for **Switch Mode Power Supply**, which is a type of **power supply unit** used in **computers and electronic devices**. It converts **AC power** into **DC power** efficiently by using **high-speed switching circuits**, making it more **energy-efficient** and **compact** than traditional power supplies.
Important Key Points:
1. **SMPS** converts **AC to DC** for computer components.
2. It uses **switching regulators** for **high efficiency**.
3. It produces **less heat** compared to linear power supplies.
4. Commonly used in **desktops**, **laptops**, and many **electronic devices**.
Knowledge Booster:
· **Option a** is incorrect because **Store Mode Power Supply** is not a recognized term.
· **Option b** is incorrect because **Single Mode Power Supply** does not describe SMPS operation.
· **Option d** is incorrect because **Start Mode Power Supply** is not related to power conversion technology.

Q.9 **Which two signs should be interchanged to make the given equation correct?**
25 – 5 * 50/10 + 35 = 155

A. – and *
B. * and +
C. + and –
D. * and /

Answer: A

Sol: The correct answer is (a) − and *
Explanation:
Given equation:
25 - 5 × 50/10 + 35 = 155
Now interchange − and ×:
→ 25 × 5 - 50/10 + 35
Apply BODMAS:
=125 – 5 + 35 = 155

Q.10 **Select the term that will come next in the following series.**
JPQ, LRS, NTU, ?

A. POT
B. PVW
C. POR
D. QPT

Answer: B

Sol:
+2 pattern follows for each letter.
J (+2) L (+2) N (+2) P,
P (+2) R (+2) T (+2) V,
Q (+2) S (+2) U (+2) W.
So, the answer is PVW.

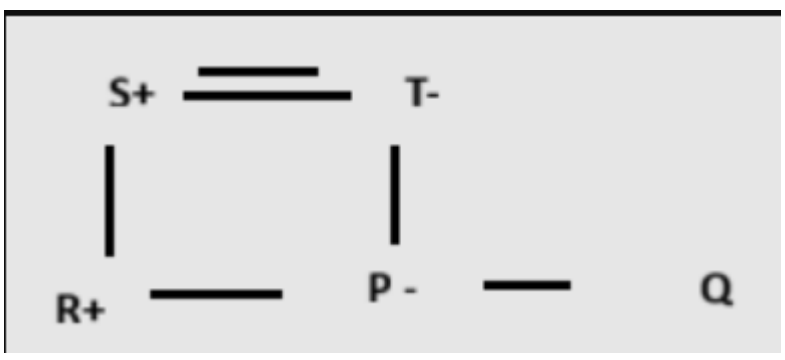
Q.11 **In a family, P is the sister of Q; R is the brother of P; S is the father of R and T is the mother of Q. Which of the following statements cannot be determined from the information given?**

A. T is the wife of S.
B. P is the daughter of T.
C. R is the son of S.
D. Q is the son of S.

Answer: D

Sol: **Given** - P is the sister of Q; R is the brother of P; S is the father of R and T is the mother of Q

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



We cannot determine the gender of Q. Hence, option (d) is not correct.

Q.12 National income can be expressed as _____.

A. NNP at market prices + Indirect taxes
B. NNP at market prices – (Indirect taxes – Subsidies)
C. NNP at market prices + (Indirect taxes – Subsidies)
D. NNP at market prices – (Indirect taxes + Subsidies)

Answer: B

Sol: **The correct answer is (B) NNP at market prices – (Indirect taxes – Subsidies)**
Explanation:

- **National Income** is defined as **NNP at factor cost**.
- We know:

NNP at Factor Cost (National Income)=NNP at Market Prices–(Indirect Taxes – Subsidies)\text{NNP at Factor Cost (National Income)} = \text{NNP at Market Prices} – (\text{Indirect Taxes – Subsidies})

- **Why?**
  - **NNP at market prices** includes the effect of market prices, which contain **indirect taxes** and exclude the effect of **subsidies**.
  - To arrive at **factor cost**, we remove **indirect taxes** (since they raise prices artificially) and add **subsidies** (since they lower prices artificially).

Information Booster:

- **GDP (Gross Domestic Product):** Market value of all final goods and services produced within a country.
- **GNP (Gross National Product):** GDP + Net factor income from abroad.
- **NNP (Net National Product):** GNP – Depreciation.
- **NNP at Market Price:** Includes indirect taxes and excludes subsidies.
- **NNP at Factor Cost = National Income.**

Additional Knowledge (Options Breakdown):

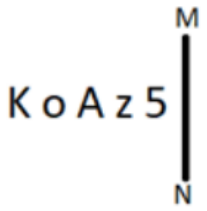
(A) NNP at market prices + Indirect taxes → Incorrect, because this overestimates national income.

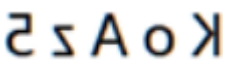
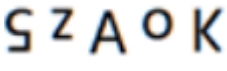
(B) NNP at market prices – (Indirect taxes – Subsidies) → Correct, gives **NNP at factor cost (National Income)**.

(C) NNP at market prices + (Indirect taxes – Subsidies) → Incorrect, this inflates national income further.

(D) NNP at market prices – (Indirect taxes + Subsidies) → Incorrect, as subsidies should be added, not subtracted.

Q.13 Select the correct mirror image of the given figure when the mirror is placed at MN as shown below.



A. 
B. 
C. 
D. 

Answer: A

Sol: When the mirror is placed to the right side of the alphabets, then:

Thus, option A is correct.

Letters	Mirror Images	Letters	Mirror Images	Letters	Mirror Images	Letters	Mirror Images
a	ɐ	h	ɥ	o	o	v	v
b	d	i	ᴉ	p	q	w	w
c	ɔ	j	ɾ	q	p	x	x
d	b	k	ʞ	r	ɹ	y	ʎ
e	ɘ	l	l	s	s	z	z
f	ɟ	m	ɯ	t	ʇ		
g	ƃ	n	u	u	n		

Letters	Mirror Images	Letters	Mirror Images	Letters	Mirror Images	Letters	Mirror Images
A	A	H	H	O	O	V	V
B	B	I	I	P	Q	W	W
C	Ɔ	J	ſ	Q	Ò	X	X
D	ᗡ	K	ʞ	R	Я	Y	Y
E	Ǝ	L	⅃	S	S	Z	Z
F	Ⅎ	M	M	T	T		
G	⅁	N	И	U	U		

Numbers	Mirror Images	Numbers	Mirror Images	Numbers	Mirror Images
1	ↂ	4	↊	7	ↁ
2	↊	5	↋	8	8
3	↋	6	9	9	6

Q.14 The value of $5 - 10 \div 5 \times 2 - [12 \div 6 \text{ of } \{5 \times 6 \div (6 - 9) + 13\} \times (8 \div 4 \text{ of } 3)]$ is

A. 5/6
B. 2/3
C. 5/9
D. 4/9

Answer: C

Sol: **Given:**

$5 - 10 \div 5 \times 2 - [12 \div 6 \text{ of } \{5 \times 6 \div (6 - 9) + 13\} \times (8 \div 4 \text{ of } 3)]$

Concept Used:

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

Solution:

$5 - 10 \div 5 \times 2 - [12 \div 6 \text{ of } \{5 \times 6 \div (6 - 9) + 13\} \times (8 \div 12)]$

$= 5 - 10 \div 5 \times 2 - \left[12 \div 6 \text{ of } \{5 \times (-2) + 13\} \times \frac{2}{3}\right]$

$= 5 - 10 \div 5 \times 2 - \left[12 \div (6 \times 3) \times \frac{2}{3}\right]$

- -

$$= 5 - 10 \div 5 \times 2 - \left[12 \times \frac{1}{18} \times \frac{2}{3}\right]$$

$$= 5 - 10 \div 5 \times 2 - \frac{4}{9}$$

$$= 5 - 2 \times 2 - \frac{4}{9}$$

$$= 5 - 4 - \frac{4}{9}$$

$$= 1 - \frac{4}{9} = \frac{5}{9}$$

Q.15 **Babur assumed the title of Ghazi after the success of-**

A. Battle of Panipat
B. Battle of Khanwa
C. Battle of Kabul
D. Battle of Ghaghra

Answer: B

Sol: The correct answer is **(b) Battle of Khanwa**.
· **Babur** assumed the title of **Ghazi** after his victory in the **Battle of Khanwa** in **1527**.
· The term **Ghazi** refers to a Muslim warrior who fights against non-Muslims for the defense or expansion of Islam.
· The Battle of Khanwa was fought between Babur and **Rana Sanga** of Mewar. Despite having a smaller army, Babur's strategic use of artillery and his disciplined troops led to his victory.
· This victory was crucial for Babur as it solidified his hold on northern India and helped establish the Mughal Empire.
· After this success, Babur declared himself a **Ghazi** to signify his role as a defender and champion of Islam.
Additional Information:
· **Battle of Panipat** : Fought in **1526** against **Ibrahim Lodi**, it marked Babur's entry into India but did not result in him assuming the title of Ghazi.
· **Battle of Kabul** : Babur controlled Kabul long before entering India, and it was not significant in terms of assuming the title of Ghazi.
· **Battle of Ghaghra** : This battle took place in **1529** after Khanwa, consolidating Mughal control further but not related to Babur taking the title of Ghazi.

Q.16 **Select the option that is related to the third word in the same way as the second word is related to the fist word.**
Cricket : Umpire :: Football : ?

A. Commander
B. Whistle Blower
C. Referee
D. Arbiter

Answer: C

Sol: **Explanation:**
In the analogy "Cricket : Umpire", the umpire is the official who oversees and makes decisions during a cricket match.

Similarly, in football, the official who oversees the game and makes decisions is called the **referee**.

Thus, the relationship between cricket and umpire is analogous to the relationship between football and referee. Therefore, **Referee** is the correct answer.

Q.17 **Which pair of Article-Provision is correct?**
I. Article 40 - Organization of village panchayats
II. Article 25 - Freedom to manage religious affairs

A. Neither I nor II
B. Only I
C. Both I and II
D. Only II

Answer: B

Sol: **Correct Answer:** B) Only I
Explanation:

- **Article 40** → Directive Principle that directs the State to take steps to organize **village panchayats** and give them powers for local self-government. Correct.
- **Article 25** → Actually deals with **freedom of conscience and free profession, practice and propagation of religion**, not specifically "freedom to manage religious affairs."
- The correct article for **freedom to manage religious affairs** is **Article 26**, not Article 25.

Information Booster:

- **Article 40** → Foundation for **73rd Amendment, 1992** (Panchayati Raj Institutions).
- **Article 25** → Covers religious freedom, subject to public order, morality, and health.
- **Article 26** → Gives every religious denomination the right to manage its own affairs in matters of religion.
- **Article 27** → Prohibits compelling any person to pay taxes for promotion of any religion.
- **Article 28** → Deals with freedom from attending religious instruction in certain educational institutions.

Q.18 A is the mother of B. B is the brother of C. C is the brother of D. D is the daughter of E. How is D related to B?

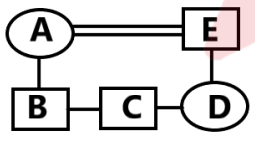
A. Sister
B. Husband
C. Brother
D. Wife

Answer: A

Sol: **Given**: A is the mother of B.
B is the brother of C.
C is the brother of D.
D is the daughter of E.

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

From the given information family diagram will be



D is the **sister** of B.
Thus, correct option is (a).

Q.19 The mean proportional of $(a - b)^3 (a + b)$, $(a - b) (a + b)^3$ is:

A. $(a^2 - b^2)^2$
B. $a^2 - b^2$
C. $(a^2 + b^2)^2$
D. $a^2 + b^2$

Answer: A

Sol: **Given:**
First number = $(a + b) (a - b)^3$
Second number = $(a + b)^3 (a - b)$
Formula Used:
Mean proportional = √(Product of numbers)
Solution:
$$\text{Mean Proportional} = \sqrt{(a+b)(a-b)^3 \times (a+b)^3(a-b)}$$

$$=> \sqrt{(a+b)(a-b)^2(a-b)(a+b)^2(a+b)(a-b)}$$

$$=> \sqrt{(a-b)^4(a+b)^4}$$

$$=> (a-b)^2(a+b)^2$$

$$=> [(a-b)(a+b)]^2$$

$$=> (a^2-b^2)^2$$

Q.20 Which edition of the National Games was held in the year 2025?

A. 40th
B. 36th
C. 38th
D. 35th

Answer: C

Sol: The correct answer is (c) 38th

Explanation:
• The 38th edition of the National Games was held in 2025(**Uttarakhand)**.
• The event featured participants from all Indian states and union territories.
• It aimed to promote grassroots sports and identify talent for international events.
• Hosted in multiple venues with disciplines ranging from athletics to indigenous games.
• The event was organized by the Indian Olympic Association in collaboration with host states.

Information Booster:
• The National Games are India's premier multi-sport event, like a domestic Olympics.
• Goa hosted the 37th National Games in 2023.

Q.21 What characters should you prefer and use in a password to make it a stronger one ?

A. Only alphabets
B. Combination of alphabets and digits
C. Combination of alphabets and special characters
D. Combination of alphabets, digits and special characters

Answer: D

Sol: The correct answer is **(d) Combination of alphabets, digits and special characters**

Explanation:
• A strong password uses a **mix of uppercase and lowercase letters**, **numbers**, and **special symbols** (like @, #, $, %, etc.).
• Such combinations make passwords **harder to guess or crack** using brute-force attacks.
• Passwords should also be at least **8–12 characters long** for better security.

Information Booster:
• Avoid using **personal details** like names or birthdates in passwords.
• Use **two-factor authentication (2FA)** for enhanced account protection.
• Regularly **change passwords** and avoid reusing them across sites.
• A good example of a strong password: **A7@bC9!xY2**.
• Password managers can help in creating and storing complex passwords safely.

Q.22 When difference between compound and simple interest for three years is Rs. 217 at 10% interest per annum, the principal is Rs. _____

A. 7420
B. 6425
C. 8200
D. 7000

Answer: D

Sol: **Given:**

Difference (CI – SI) for 3 years = Rs 217

Rate = 10% p.a.

Formula Used:

Difference of CI - SI for three year

CI – SI (3 yr)} = $3P\left(\frac{r}{100}\right)^2 + P\left(\frac{r}{100}\right)^3$

$=P \times \left(\frac{r}{100}\right)^2 \times \left(3 + \frac{r}{100}\right)$

Solution:

Applying the formula;

$217 = P \times \left(\frac{10}{100}\right)^2 \times \left(3 + \frac{10}{100}\right)$

$217 = P \times (0.10)^2 \times (3 + 0.10)$

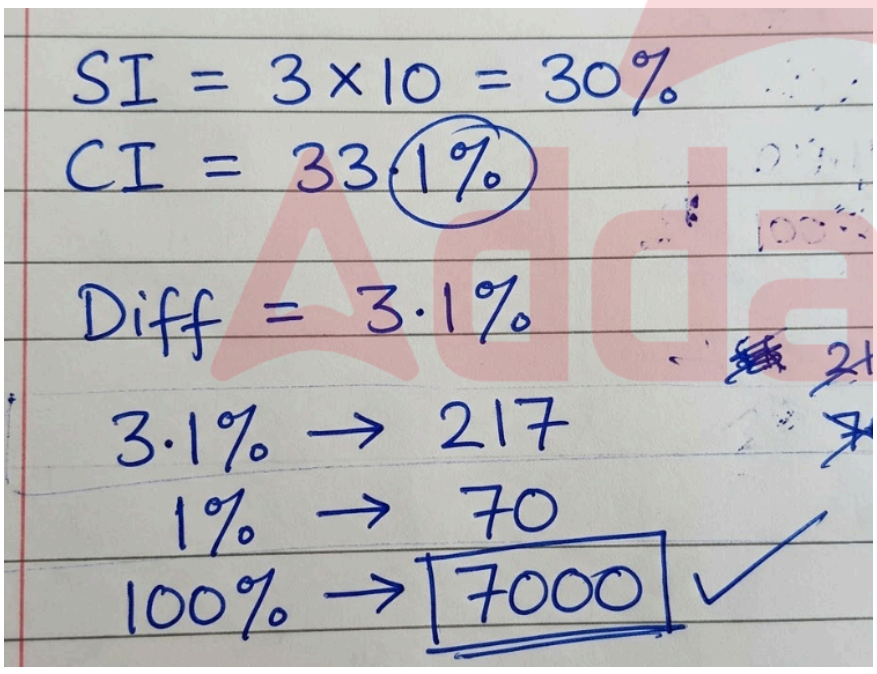
$217 = P \times (0.01) \times (3.1)$

$217 = 0.031P$

$P = \frac{217}{0.031} = 7000$

Thus, the principal is Rs 7000.

Exam hall Method:



Q.23 **Terylene is a polymer of:**

A. Ethylene glycol and phthalic acid
B. Ethylene glycol and terephthalic acid
C. Glycerol and terephthalic acid
D. Phenol and formaldehyde

Answer: B

Sol:

The correct answer is (b) Ethylene glycol and terephthalic acid.
Explanation Terylene (Dacron) is a polyester formed by condensation polymerization between ethylene glycol (a diol) and terephthalic acid (a diacid).
It's widely used in synthetic fibers and plastic bottles.
Additional Information

· Option {a} is incorrect as phthalic acid gives different polymers.
· Option {c} is incorrect as glycerol has three OH groups and gives different products.
· Option {d} is incorrect as phenol-formaldehyde gives Bakelite.

Q.24 **What is the term used to describe species that are confined to a specific region and NOT found anywhere else?**

A. Native species
B. Exotic species
C. Indigenous species
D. Endemic species

Answer: D

Sol: The correct answer is (d) Endemic species
Explanation:
• Endemic species are organisms that are found only in a particular geographic area and nowhere else in the world.
• They evolve in isolation, often due to geographic barriers such as mountains or oceans.
• Endemism can occur in both plants and animals.
• These species are highly vulnerable to extinction.
• Conservation efforts focus on endemic species due to their limited distribution.
Information Booster:
• Examples of endemic species in India include the Nilgiri Tahr and the Lion-tailed macaque.
• The Western Ghats and Andaman-Nicobar Islands are major endemic hotspots in India.
Additional Knowledge:
Native species (Option a)
• These species naturally occur in a particular region but may also be found elsewhere.
• Not necessarily restricted to one location.
• Example: Banyan tree in India.
Exotic species (Option b)
• Species introduced from another region or country.
• Also called alien or invasive species.
• May harm native biodiversity, e.g., Lantana, Water Hyacinth.
Indigenous species (Option c)
• Similar to native species — naturally found in a region.
• Broader than endemic, as they may exist in multiple regions.

Q.25 **Chitrakot Falls is a natural waterfall known as Niagara Falls of India, located on the _____ river in the state of Chhattisgarh, India.**

A. Varahi River
B. Indravati River
C. Mandovi River
D. Chandravanka River

Answer: B

Sol: The correct answer is: **(b) Indravati River**
Explanation:
- **Chitrakote Falls**, often called the **"Niagara Falls of India"**, is located on the **Indravati River** in **Bastar district**, **Chhattisgarh**.
- It is the **widest waterfall** in India and is known for its scenic beauty and horseshoe shape.

Information Booster:
- The waterfall is approximately **29 meters (95 feet)** in height.
- It is located near **Jagdalpur** in the Bastar region.
- Chitrakote is most spectacular during the **monsoon season** when water volume is high.
- The Indravati River is a tributary of the **Godavari River**.
- The area is surrounded by dense forests and tribal culture, making it a popular tourist destination.

Additional Information:
- **(a) Varahi River:** Flows in **Odisha**, unrelated to Chitrakote Falls.
- **(c) Mandovi River:** Located in **Goa**, known for **Dudhsagar Falls**, not Chitrakote.

- **(d) Chandravanka River:** A tributary of the **Krishna River** in **Telangana**, not linked to Chitrakote.

Q.26 **select the missing pair (third letter group : fourth letter group) that is related in the same way as the first letter group is related to the second letter group and the fifth letter group is related to the sixth letter group.**
RV : PT :: ? :: DG : BE

A. VX : TV
B. GK : FJ
C. QI : PF
D. ZD : XC

Answer: A

Sol: **Given:**
RV : PT :: ? :: DG : BE
Logic: 1st -2= 3rd, 2nd - 2 = 4th

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

Set1: RV → PT
R -2 = P, V -2 = T
Set2: DG → BE
D -2 = B, G -2 = E
Apply the same logic to options:
Option A: VX → TV
V -2 = T, X -2 = V (**Matches**)
Option B: GK → FJ
G -2 = E, K -2 = I (Doesn't match)
Option C: QI → PF
Q -2 = O, I -2 = G (Doesn't match)
Option D: ZD → XC
Z -2 = X, D -2 = B (Doesn't match)
Thus, the correct option is (a).

Q.27 **A is married to Z. Z has 3 children L, M and N. Z is not the father of the children. P is the mother of A. L is the husband of D. M has 2 daughters H and J. How is Z related to P?**

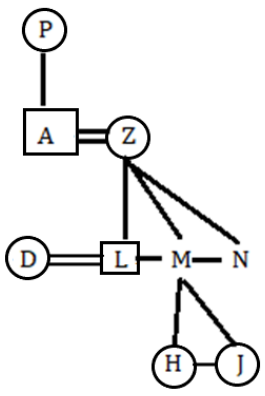
A. Daughter
B. Daughter in law
C. Son
D. Mother

Answer: B

Sol: **Given:**
A is married to Z.
Z has 3 children L, M and N.
Z is not the father of the children.
P is the mother of A. L is the husband of D.
M has 2 daughters H and J.

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

From the given information relationship diagram will be



So, Z is P's **daughter-in-law.**
Thus, the correct option is: (b)

Q.28 _____ layer lies below the crust.

A. Mantle
B. Rocks
C. Core
D. None of these

Answer: A

Sol: **The correct answer is: (a) Mantle**
Explanation:

- The **mantle** lies just beneath the Earth's crust and extends up to 2,900 km below the surface.
- It is composed mainly of silicate rocks rich in magnesium and iron.
- The mantle is semi-solid and allows slow convection, which drives plate tectonics.

Information Booster:

- The Earth's internal structure has three main layers: Crust, Mantle, Core.
- The mantle makes up about 84% of Earth's volume.
- Divided into upper mantle and lower mantle.
- The asthenosphere (part of upper mantle) is semi-molten and crucial for plate movements.
- Temperature in the mantle ranges from 500°C to 4,000°C.
- The boundary between the crust and mantle is called the Mohorovičić Discontinuity (Moho).

Additional Information:

- **Rocks**: Not a specific layer, but part of the crust and mantle compositions.
- **Core**: Lies beneath the mantle, composed mainly of iron and nickel; divided into outer (liquid) and inner (solid) core.

Q.29 **The normal average speed of a car on a road covering a certain distance is 50 km/h. On a particular day, the average speed was 1/10 less than the normal average speed, as a result of which it took 18 minutes longer to complete the journey. What is this distance of the road, in kilometres?**

A. 135
B. 120
C. 125

D. 140

Answer: A

Sol: **Given:**

Average speed of the car = 50 km/h

Formula used:

D = S × t

D = Distance

S = Speed

t = Time

Solution:

Let distance of the road be x km

According to the question,

$\frac{x}{45} - \frac{x}{50} = \frac{18}{60}[50 \times \frac{9}{10} = 45km/h]$

$\frac{(10x - 9x)}{450} = \frac{18}{60}$

x = 45 × 3

x = 135 km

∴ The distance of the road is 135 km.

Alternate Method:

Time is inversely proportional to speed

T = $\frac{1}{s}$

Speed 1 : Speed 2 = (50 : 45)

Time 1 : Time 2 = (45 : 50)

Here, 5 = 18 min [50 - 45]

So, 50 = 180 min = 3 hours

So, distance = 3×45 = 135 km

Q.30 **From the top of the platform, the angle of elevation of the top of the tower at a distance of $50\sqrt{3}$ m is 30°. If the height of the tower is 60 m, what will be the height of the platform?**

A. $20\sqrt{3}m$

B. 10 m

C. 40 m

D. $45\sqrt{3}m$

Answer: B

Sol: **Given:**

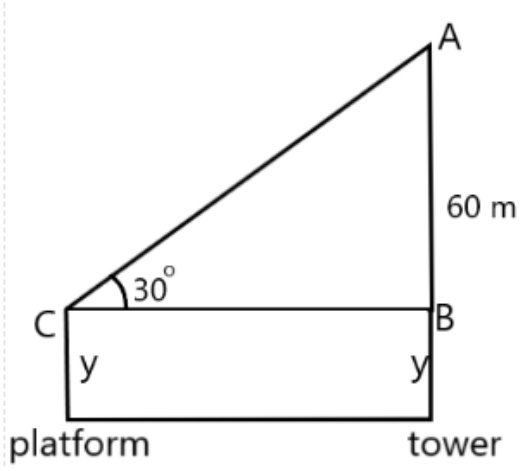
Horizontal distance from platform to tower = $50\sqrt{3}\mathrm{m}$

Angle of elevation from platform top to tower top = 30°

Height of tower = 60 m

Solution:

Let the height of the tower be y m.



In triangle ABC,

$$\frac{AB}{BC} = \tan 30^\circ$$

$$\frac{(60-y)}{50\sqrt{3}} = \frac{1}{\sqrt{3}}$$

$$\frac{60-y}{50} = 1$$

60 - y = 50

y = 60 – 50 = 10

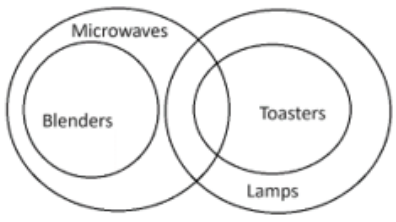
The height of the platform is 10 m.

Q.31 **Read the given statements and conclusions carefully. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. You have to decide which conclusion's logically follow/s from the given statements.**
Statements: **All blenders are microwaves. Some microwaves are toasters. All toasters are lamps.**
Conclusion I: **Some blenders are microwaves.**
Conclusion II **All toasters are blenders**

A. Only conclusion (II) is follow.
B. Both conclusions (I) and (II) are follow.
C. Neither conclusion (I) nor (II) is follow.
D. Only conclusion (I) is follow.

Answer: D

Sol: **Statements**: All blenders are microwaves. Some microwaves are toasters. All toasters are lamps.



Conclusion I: Some blenders are microwaves is definitely true because all the area of blenders also involves some area of microwaves.
Conclusion II: All toasters are blenders are possible but not definite because All toasters are not inside of blender
So,
Only conclusion I follow.

option d is correct.

Q.32 **The process of division of memory spaces is called_____**

A. Paging
B. Segmentation
C. Bifurcation

D. Dynamic Division

Answer: B

Sol: • Segmentation is the process of dividing the computer's main memory into different segments or sections based on the type of data or program stored.
• Each segment represents a logical unit, such as a function, array, or data block, rather than being of a fixed size like in paging.
• It helps the operating system manage memory efficiently by allocating variable-sized segments to processes as needed.
• Segmentation allows better logical organization and protection of memory, making it easier to handle large programs and multitasking.
Information Booster:
• Paging divides memory into fixed-size blocks called pages, while segmentation divides it based on logical divisions.
• Each process in segmentation has a segment table that stores base and limit addresses of segments.
• Segmentation supports modularity — programs can be written and compiled in separate modules.
• It also facilitates data sharing and protection between processes.
Additional Knowledge:
• In modern systems, segmentation and paging are often combined to improve both memory utilization and protection.
• Example: In Intel processors, segmented paging is used — logical addresses are first divided into segments and then paged into physical memory.
• Proper memory division enhances system performance, security, and multitasking efficiency.

Q.33 **An object is placed in front of a concave lens of focal length 15 cm and an image is formed at 7.5 cm. Then the magnification of the lens is:**

A. 0.50
B. 1.5
C. 0.75
D. 1.25

Answer: A

Sol: Given:

- Focal length of the concave lens, $f = -15\,\mathrm{cm}$(concave lens has a negative focal length)$v = -7.5cmv(\text{since the image formed by a concave lens is virtual, the image distance is negative})$
- Image distance,
- Object distance, u (we need to calculate this)

Step 1: Use the lens formula to find the object distance (u):

The lens formula is:

$$\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$$

Substitute the given values:

$$\frac{1}{-15} = \frac{1}{-7.5} - \frac{1}{u}$$

$$u = \frac{75}{-5} = -15\,\mathrm{cm}$$

Step 2: Use the magnification formula to find the magnification (m):

The magnification formula is:
$m = \frac{v}{u}$

Substitute the values of$\mathrm{v}$and$\mathrm{u}$:

$$m = \frac{-7.5}{-15} = 0.5$$

Thus the magnification of the concave lens is **0.5.**

Q.34 **Which of the following Strait separates Asia from the African continent?**

A. Berling Strait and Red Sea
B. Red Sea and Arabian Sea

C. Suez Canal Berling Strait
D. Suez Canal and Red Sea

Answer: D

Sol: The Suez Canal is an artificial waterway located in Egypt that connects the Mediterranean Sea to the Red Sea. It serves as a crucial international shipping route, allowing vessels to pass between Europe and Asia without having to circumnavigate the entire African continent. The Red Sea is the body of water that lies between Asia and Africa, and the Suez Canal provides a direct connection between the Red Sea and the Mediterranean Sea. Thus, option (d) is the correct answer.
 Berling Strait and Red Sea: The Berling Strait is not a well-known strait and does not separate Asia from the African continent. The Red Sea is a body of water located between Africa and Asia, but it is not connected to the Berling Strait. Therefore, option (a) is incorrect.
 Red Sea and Arabian Sea: The Red Sea is indeed a body of water that lies between Africa and Asia. However, the Arabian Sea is located to the southeast of the Arabian Peninsula, and it does not serve as a strait separating Asia from Africa. Option (b) is also incorrect.
 Suez Canal Berling Strait: As mentioned earlier, the Suez Canal is an artificial waterway in Egypt. However, the Berling Strait is not a known strait. Therefore, option (c) is incorrect.

Q.35 **Select the missing pair (fifth letter group : sixth letter group) that is related in the same way as the first letter group is related to the second letter group and the third letter group is related to the fourth letter group.**
DGH : AEG :: KLM : HJL :: ?

A. KMO : HKN
B. TUV : UWY
C. CFH : ZHG
D. NOP : MMM

Answer: A

Sol: **Given**: DGH : AEG :: KLM : HJL :: ?
Logic: 1st - 3, 2nd - 2, 3rd -1

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

DGH : AEG
D −3 → A
G −2 → E
H −1 → G
KLM : HJL
K −3 → H
L −2 → J
M −1 → L
Option A: KMO : HKN
K −3 → H
M −2 → K
O −1 → N
Pattern followed
Option B: TUV : UWY
T −3 → U (+1)
U −2 → W (+2)
V −1 → Y (+3)
Pattern **not** followed
Option C: CFH : ZHG
C −3 → Z
F −2 → H (+2)
H −1 → G
Pattern **not** followed
Option D: NOP : MMM
N −3 → M (−1)
O −2 → M (−2)
P −1 → M (−3)
Pattern **not** followed
Thus, correct option is (a).

Q.36 **According to Census 2011, which Indian State/UT has no Scheduled Tribe?**

A. Kerala
B. Goa
C. Puducherry
D. Chhattisgarh

Answer: C

Sol: The correct answer is (c) **Puducherry.**

• As per **Census 2011**, Puducherry is the only Union Territory in India with **no Scheduled Tribe (ST) population**.
• States and UTs like Delhi, Chandigarh, Haryana, and Punjab have negligible ST populations, but Puducherry officially records **none**.

Information Booster:

• India's total Scheduled Tribe population: **10.45 crore (8.6%)** of the total population (Census 2011).
• States with the highest ST population: **Madhya Pradesh**, **Maharashtra**, and **Odisha**.
• Constitutionally recognized under **Articles 342 and 366(25)**.
• ST list can be modified only by the **President of India** through an order.

Additional Knowledge:

• The term "Scheduled Tribes" was introduced in the **Government of India Act, 1935**.
• India currently has **over 700 recognized tribes**.
• Ministry of Tribal Affairs was formed in **1999** to address tribal development.
• Key schemes: **Vanbandhu Kalyan Yojana**, **Eklavya Model Residential Schools (EMRS)**.

Q.37 **What will be the median of all the prime numbers between 20 and 62?**

A. 38
B. 42
C. 41
D. 39

Answer: B

Sol: Given:
Prime numbers between 20 and 62:
23, 29, 31, 37, 41, 43, 47, 53, 59, 61

Formula Used:

Median =

If the number of elements is odd, Median = middle element.

If the number of elements is even, Median = average of the two middle elements.

Solution:

There are 10 prime numbers between 20 and 62.
Since the count is even, the median will be the average of the 5th and 6th elements.

The 5th and 6th elements are 41 and 43.

So,
Median = (41 + 43) / 2 = 84 / 2 = 42

The median is **42**.

Q.38 **Match list-I with list-II and choose the correct answer from the code given below -**
List-I Article
(A) Article 9
(B) Article 13
(C) Article 23
(D) Article 29
List-II Related to which Provision
(i) Prohibition in Human Trafficking and Forced Labour
(ii) Protection of minorities' interests

(iii) Single citizenship
(iv) Definition of Law
Code -

A. A-(iv), B-(iii), C-(ii), D-(i)
B. A-(i), B-(ii), C-(iii), D-(iv)
C. A-(iii), B-(iv), C-(i), D-(ii)
D. A-(ii), B-(iii), C-(iv), D-(i)

Answer: C

Sol: Article 9
No one who has willingly gained the citizenship of any foreign State shall be a citizen of India by virtue of article 5, or be presumed to be a citizen of India by virtue of article 6 or article 8.
Article 13
Any laws that were in effect on Indian soil prior to the start of this Constitution that are in conflict with the provisions of this Part shall be invalid to the extent of such conflict.
Article 23
Human trafficking, beggar work, and other similar forms of forced labour are illegal, and anyone found in violation of this rule faces legal sanctions.
Article 29
Protection of minorities' interests. - (1) Any group of citizens living on Indian territory or a portion thereof with a unique language, script, or culture has the right to preserve it.

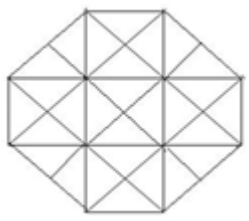
Q.39 **Given is a question followed by two arguments. Decide which of the arguments is/are strong with respect to the question.**
Question:
Should we avoid overuse of air conditioners?
Arguments:
I. Yes, it weakens the human system.
II. No, the comfort cannot be forsaken.

A. Only argument I is strong.
B. Both arguments I and II are strong.
C. Only argument II is strong.
D. Neither argument I nor II is strong.

Answer: A

Sol: **Question**:
Should we avoid overuse of air conditioners?
Arguments:
I. Yes, it weakens the human system. **(Strong)**
This talks about a harmful effect (on health). Logical, relevant, and directly supports avoiding overuse.
II. No, the comfort cannot be forsaken. **(Weak)**
This is more of an emotional/personal convenience argument, not logically strong enough compared to health concerns.
Comfort is desirable, but it does not outweigh a logical reason like health risks.
So, **Only argument I is strong.**
Thus, correct option is (a).

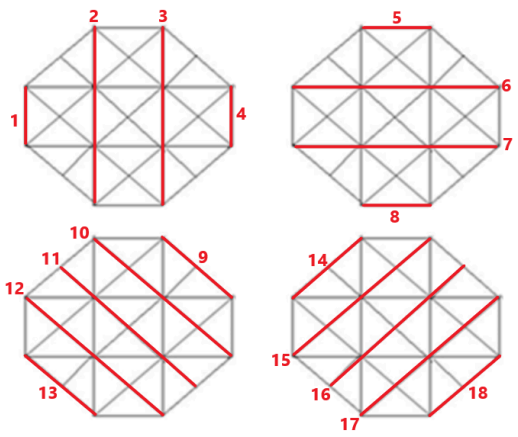
Q.40 **What is the minimum number of lines required to make the following figure?**



A. 18
B. 13
C. 20
D. 16

Answer: A

Sol: There are **18** lines required to make the following figure.



Thus, correct option is (a).

Q.41 **In October 2025, the Asian Development Bank (ADB) approved a USD 460 million results-based loan for which program to promote agricultural solarization and strengthen rural power infrastructure in India?**

A. Maharashtra Power Distribution Enhancement Program
B. Gujarat Solar Agri-Modernization Program
C. Rajasthan Rural Energy Access Project
D. Madhya Pradesh Renewable Grid Development Scheme

Answer: A

Sol: **The correct answer is (a) Maharashtra Power Distribution Enhancement Program**

Explanation:

• The **Asian Development Bank (ADB)** sanctioned a **USD 460 million loan** for the *Maharashtra Power Distribution Enhancement Program for Agricultural Solarization*.
• An additional **USD 40 million concessional loan** was provided from the **Clean Technology Fund (CTF)** administered by ADB.
• The project supports **solar-powered irrigation**, **grid modernization**, and **rural electrification** in Maharashtra, benefiting nearly **9 lakh farmers** by 2028.

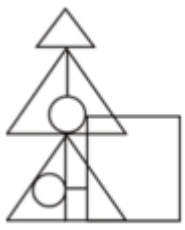
Information Booster:

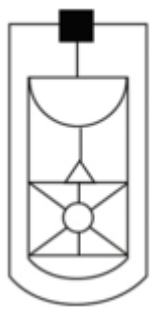
• **Total Loan:** USD 500 million (ADB + CTF)
• **Completion Target:** 2028
• **Emission Reduction:** Over 3 million tons annually
• **Focus:** Renewable energy integration and daytime solar power for irrigation
• **Main Beneficiaries:** 9 lakh agricultural consumers (farmers)

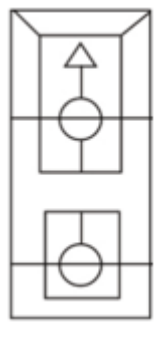
Additional Knowledge:

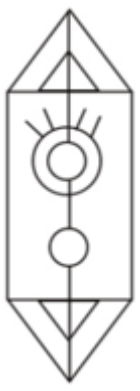
• **Program Components:**
– Upgrade 180 substations & install 4,500 transformers
– Develop ~4,200 circuit km of power lines
– Deploy 500 MWh Battery Energy Storage Systems (BESS)
• **Digitization:** Solar dashboards for 2,500 substations
• **Social Impact:** Training for 5,000 individuals (including 1,500 women)
• **Alignment:** With Maharashtra's *Power Sector Vision 2030*
• **ADB Details:**
– **President:** Masato Kanda (Japan)
– **HQ:** Manila, Philippines
– **Established:** 1966

Q.42 **Select the option in which the following figure is embedded. (Rotation is NOT allowed)**

A. 

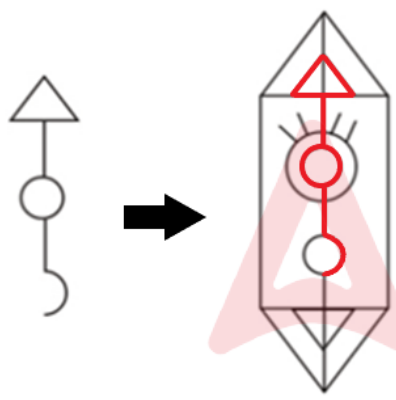
B. 

C. 

D. 

Answer: D

Sol: The correct embedded figure is shown below.



Thus, correct option is (d).

Q.43 **Match the port/ corridor with its strategic benefit to India.**

Column A (port/Corridor)	Column B (Strategic Benefit to India)
A. Chabahar Port	1. Links India with Europe via Middle East
B. IMEC	2. New age of transportation between the two countries India to Southeast Asia via Mizoram-Myanmar link
C. Sittwe Port	3. Access to Central Asia bypassing Pakistan

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

Answer: A

Sol: The correct answer is (a) **A-3, B-1, C-2.**

- **Chabahar Port (Iran)** provides India direct access to **Afghanistan and Central Asia**, bypassing Pakistan.
- **India–Middle East–Europe Corridor (IMEC)** strengthens trade connectivity from **India to Europe** through the Middle East.
- **Sittwe Port (Myanmar)** enhances connectivity to **Southeast Asia** via the **Kaladan Multi-Modal Transit Transport Project**.

Information Booster:

- Chabahar Port developed by **India Ports Global Limited (IPGL)**.
- IMEC announced at **G20 Summit 2023 in New Delhi**.
- Sittwe Port inaugurated in **May 2023** under India–Myanmar cooperation.
- These initiatives support **Act East** and **Neighbourhood First** policies.
- Aim: Reduce dependency on Chinese-controlled trade routes.

Additional Knowledge:

- Chabahar is India's counter to **China's Gwadar Port (CPEC)**.
- IMEC is part of the **India–U.S.–EU strategic initiative**.
- Sittwe Port is located in **Rakhine State, Myanmar**.
- Such projects promote **regional trade, logistics efficiency, and maritime security**.

Q.44 **Given are the scores of a batsman in the last 10 innings. Find the median score of the batsman in these innings.**
65, 180, 81, 6, 63, 27, 122, 8, 165, 50

A. 64.5
B. 64
C. 65
D. 63

Answer: B

Sol: **Given:**
Scores in 10 innings: 65, 180, 81, 6, 63, 27, 122, 8, 165, 50

Formula Used:
Median for even (n):

$\text{Median} = \frac{\left(\frac{n}{2}\right)^{\text{th}} + \left(\frac{n}{2}+1\right)^{\text{th}}}{2}$ after arranging data in ascending order.

Solution:
Arrange in ascending order: 6, 8, 27, 50, 63, 65, 81, 122, 165, 180.
Here n = 10. The 5th and 6th terms are (63) and (65).

$\text{Median} = \frac{63+65}{2} = \frac{128}{2} = 64$

Q.45 **In this question, a statement is given followed by two courses of action, numbered I and II. You must assume everything in the statement to be true, and on the basis of the information given in the statement, decide which of the given courses of action logically follow(s) for pursuing.**
Statement:
Reports indicate that fish populations in River Y have declined sharply due to excessive fishing and industrial pollution.
Courses of Action:
I. Fishing in River Y should be regulated for at least six months.
II. Industries should be ordered to treat waste before discharging into River Y.

A. Only II follows
B. Only I follows
C. Neither I nor II follows
D. Both I and II follow

Answer: D

Sol: **Statement**:
Reports indicate that fish populations in River Y have declined sharply due to excessive fishing and industrial pollution.
Courses of Action:
I. Fishing in River Y should be regulated for at least six months.
Addresses excessive fishing cause. **(Follows)**
II. Industries should be ordered to treat waste before discharging into River Y.
Addresses industrial pollution cause. **(Follows)**
So, **Both I and II follow**.

Thus, correct option is (d).

Q.46 **Criteria to be selected as Lab Assistant (as on 01-03-2024):**
Must have Diploma in Lab Technology with at least 60% marks.
Age must be 21 to 28 years.
Should have minimum 1 year practical lab experience.
Must be willing to work in night shifts.
Special Clause:
If the candidate has 70% in Diploma but only 6 months of experience, refer to Chief Lab Supervisor.
Case:
Irfan is 22 years old, has 72% in Lab Diploma, 6 months of experience, and agrees to night shifts.
Question: What should be done in Irfan's case?

A. Refer to Chief Lab Supervisor
B. Reject the candidate
C. Information insufficient
D. Select the candidate

Answer: A

Sol: **Given**:
Criteria to be selected as Lab Assistant (as on 01-03-2024):
Must have Diploma in Lab Technology with at least 60% marks.
Age must be 21 to 28 years.
Should have minimum 1 year practical lab experience.
Must be willing to work in night shifts.
Eligibility Criteria:
1. Diploma in Lab Technology with ≥ 60% marks
Irfan has 72% **(Eligible)**
2. Age 21–28 years
Irfan is 22 **(Eligible)**
3. Minimum 1 year practical lab experience
Irfan has 6 months only.
4. Must be willing to work night shifts
Irfan agrees **(Eligible)**
Special Clause:
If candidate has 70%+ in Diploma but only 6 months of experience, refer to Chief Lab Supervisor.
Irfan has 72% and 6 months experience → Clause applies
Options:
A. Refer to Chief Lab Supervisor → **Correct**, clause applies.
B. Reject the candidate → **Wrong**, clause prevents rejection.
C. Information insufficient → **Wrong**, info is complete.
D. Select the candidate → **Wrong**, he doesn't meet the 1-year experience condition.
So, **Refer to Chief Lab Supervisor.**
Thus, correct option is (a).

Q.47 **C invests Rs 9000 in a company for 2 years at compound interest (compounded annually) which gives him an interest of Rs 4395.60. What will be the annual rate of interest at which C invested his amount?**

A. 22 percent
B. 26 percent
C. 18 percent
D. 20 percent

Answer: A

Sol: **Given:**
Principal (P) = Rs 9000

Time (T) = 2 years

Compound Interest (CI) = Rs 4395.60

Compounded annually

Need to find: Annual Rate of Interest (R%)

Formula Used:

Amount = $P\left(1+\frac{R}{100}\right)^{T}$

CI = A - P

Solution:

Amount (A) = CI + P = 4395.60 + 9000 = 13395.60

Now,

13395.60 = $9000\left(1+\frac{R}{100}\right)^{2}$

$$\left(1+\frac{R}{100}\right)^{2}=\frac{13395.60}{9000}=\frac{14884}{10000}$$

$$1+\frac{R}{100}=\frac{122}{100}$$

$$\frac{R}{100}=\frac{122}{100}-1=\frac{22}{100}$$

R = 22% per annum

Q.48 **If '×' means '-', '+' means '/', '-' means '×', '/' means '+', then 15–2/900+90 × 100 is:**

A. 190
B. 180
C. 90
D. None of these

Answer: D

Sol: The correct answer is (d) None of these
Explanation: Given substitutions: '×' → '–', '÷' → '/', '–' → '×', '/' → '+'
Now, rewrite the expression: 15 – 2 / 900 + 90 × 100 = 15 × 2 + 900 / 90 – 100
Step-by-step: → 15 × 2 = 30 → 900 / 90 = 10 Now, 30 + 10 – 100 = 40 – 100 = –60

Q.49 **What type of dam is the Hemavathi Dam in Karnataka?**

A. Earthen dam only
B. Gravity dam with steel lining
C. Masonry dam with central spillway and earthen flanks
D. Concrete arch dam

Answer: C

Sol: The correct answer is option (c)
Explanation

The **Hemavathi Dam** is classified as a **masonry dam with a central spillway and earthen flanks**. This hybrid construction design utilizes strong masonry at the core section where the spillway is located, allowing controlled release of excess water during floods. The earthen flanks on either side provide structural support and flexibility at reduced construction cost and are ideal for spanning larger distances. This design combines the durability of masonry with the economy of earthen embankments, making it suitable for river valleys with moderate flow and wide basins like the Hemavati River.

Information Booster
· Type: **Masonry dam** (center) + **earthen flanks**
· **Spillway**: Central masonry structure for flood discharge

· Purpose: **Irrigation, drinking water, flood control**
· River: **Hemavati**, a Kaveri tributary
· Commissioned in: **1979**, in Hassan district

Additional Knowledge
(a) Earthen dam only Earthen dams are built entirely of compacted earth. While Hemavathi has earthen flanks, the central section is masonry, disqualifying it as an "earthen dam only."
(b) Gravity dam with steel lining Gravity dams resist the force of water by their weight and are usually constructed with concrete or masonry. Steel lining is typically used in pressure tunnels or pipelines, not a characteristic of Hemavathi Dam.
(c) Masonry dam with central spillway and earthen flanksCorrect answer. This is the actual construction type of the Hemavathi Dam. The design allows for robust water management and is ideal for large river basins.
(d) Concrete arch dam These are curved dams primarily used in narrow canyons. The Hemavathi site does not fit this geographic requirement, and no arch design is used in its structure.

Q.50 **A sound wave has a frequency of 500 Hz and a wavelength of 0.7 meters. What is the approximate speed of this sound wave?**

A. 350 m/s
B. 714 m/s
C. 0.0014 m/s
D. 500 m/s

Answer: A

Sol:

The correct answer is 350 m/s.
Explanation The relationship between wave speed {v}, frequency {f}, and wavelength {λ} is given by the equation: v=f×λ. Plugging in the given values: v=500Hz×0.7m=350m/s. This is a typical speed for sound in air.
Additional Information
· **{b}** This would be the result of dividing frequency by wavelength {500/0.7}, which is incorrect.
· **{c}** This would be the result of dividing wavelength by frequency {0.7/500}, which is also incorrect.

Q.51 **If the roots of the equation $2x^2$ - 3x + a = 0 are in the ratio 1 : 2, then find the value of a.**

A. –1
B. –2
C. 2
D. 1

Answer: D

Sol: **Given:**
Quadratic: $2x^2 - 3x + a = 0$

Roots are in the ratio 1 : 2.

Formula Used:

For $Ax^2 + Bx + C = 0$:
$\alpha + \beta = -\frac{B}{A}, \quad \alpha\beta = \frac{C}{A}$

Solution:

let roots be k and 2k

Here A = 2, B = -3, C = a

Sum of roots: $k + 2k = 3k = -\frac{B}{A} = -\frac{-3}{2} = \frac{3}{2}$
k= $\frac{1}{2}$

Product of roots: $k \times 2k = 2k^2 = 2\left(\frac{1}{2}\right)^2 = \frac{1}{2}$

But $\alpha\beta = \frac{C}{A} = \frac{a}{2}$

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

a = 1

Q.52 Which of the following numbers is divisible by 18?

A. 3672
B. 4894
C. 5438
D. 7428

Answer: A

Sol: **Given:**

We need to determine which of the given numbers is divisible by 18.

Concept Used:

A number is divisible by 18 if it is divisible by both 2 and 9.

Divisibility by 2: number ends in an even digit.

Divisibility by 9: sum of digits is divisible by 9.

Solution:

Option A: 3672

Ends in 2 → divisible by 2

Sum of digits = 3 + 6 + 7 + 2 = 18 → divisible by 9

Divisible by 2 and 9 → Divisible by 18

Option B: 4894

Ends in 4 → divisible by 2

Sum = 4 + 8 + 9 + 4 = 25 → not divisible by 9

Not divisible by 18

Option C: 5438

Ends in 8 → divisible by 2

Sum = 5 + 4 + 3 + 8 = 20 → not divisible by 9

Not divisible by 18

Option D: 7428

Ends in 8 → divisible by 2

Sum = 7 + 4 + 2 + 8 = 21 → not divisible by 9

Not divisible by 18

Thus, Option A – 3672 is correct.

Q.53 **Criteria to be selected a Field Officer (as on 01-01-2024):**
Graduate in Agriculture or Environmental Science with at least 65% marks.
Age between 23 and 35 years.
Must have a valid driving license.
Should have field experience of at least 2 years.
Special Clause:
If candidate has no driving license but more than 4 years of field experience, refer to Regional Head.
Case: Shalini is 29 years old, has 68% in Environmental Science, 5 year of filed work, but does not hold a driving license.
Question: What should be done is Shalini's case?

A. Reject the candidate
B. Refer to Regional Head
C. Call for interview
D. Select the candidate

Answer: B

Sol: **Given**:
Eligibility Criteria for Field Officer (as on 01-01-2024):
Graduate in Agriculture or Environmental Science with at least 65% marks
Shalini has Environmental Science, 68%.
Age between 23 and 35 years
Shalini is 29.
Must have a valid driving license
Shalini does not have a license.
Field experience of at least 2 years
Shalini has 5 years.
Special Clause:
If candidate has no driving license but more than 4 years of field experience, refer to Regional Head.
Shalini has no license but 5 years field experience (>4 years) → Clause applies
So, **Refer to Regional Head**, because fits the special clause.
Thus, correct option is (b).

Q.54 **The simplified value of $72 \div \left[\frac{12}{6} \times (3+9-(5+5-(2+5)))\right]$ is:**

A. 6
B. 4
C. 8
D. 3

Answer: B

Sol: **Given:**

$$72 \div \left[\frac{12}{6} \times (3+9-(5+5-(2+5)))\right]$$

Concept Used:

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

Solution:

$$72 \div [2 \times (3+9-(5+5-7))]$$

$=72 \div [2 \times (3 + 9 - (10 - 7))]$

$=72 \div [2 \times (3 + 9 - 3)]$

$=72 \div [2 \times 9]$

$=72 \div 18 = 4$

Q.55 **Which of the following is NOT a feature of the Indus Valley Civilization?**

A. It was known for its advanced urban planning.
B. It had a pictographic script.
C. It was primarily located in present-day Pakistan and India.
D. It was a nomadic civilization.

Answer: D

Sol: The answer is (d). The Indus Valley Civilization was not a nomadic civilization. It was an urban civilization, with well-planned cities and a complex social structure.
 It was known for its advanced urban planning. The cities were well-planned, with a grid pattern of streets and a complex drainage system.
 It had a pictographic script. The Indus script has not yet been deciphered, but it is thought to be a logosyllabic script.
 It was primarily located in present-day Pakistan and India. The Indus Valley Civilization was located in the Indus River valley, which is now part of Pakistan and northwest India.

Q.56 **After the 97th Constitutional Amendment, for how long can a state co-operative law that is inconsistent with the amendment remain in force?**

A. 1 year
B. 5 years
C. 6 months
D. 2 years

Answer: A

Sol: The correct answer is (A) 1 year
Explanation:

- After the **97th Constitutional Amendment** of 2011, any **state law** related to **cooperative societies** that is **inconsistent** with the amendment can remain in force for a **maximum of one year**.

- This one-year period was provided to allow states to amend or **repeal their existing laws** to comply with the new **constitutional provisions**.

- The **97th Amendment**, which came into effect in **2012**, aimed to promote the **autonomy** and **democratic functioning** of cooperative societies in India.

- The amendment brought cooperative societies under the **direct constitutional framework**, ensuring that cooperative societies across the country would be governed by similar rules to strengthen their role in the economy.

Information Booster:

- **97th Amendment**: Added **Part IXB** to the Indian Constitution, specifically governing **cooperative societies** and empowering **Parliament** to legislate in this area.

- **Promotion of Democratic Functioning**: The amendment aimed to ensure that cooperative societies functioned in a **democratic** and **transparent** manner, with a focus on **self-help** and **mutual aid**.

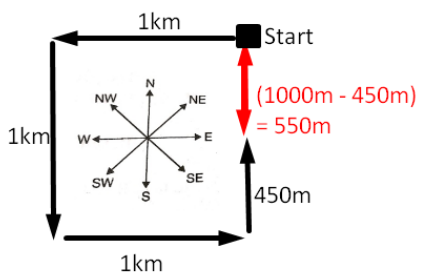
- **Autonomy**: The amendment also emphasized the **autonomy** of cooperative societies, making them less susceptible to interference from political entities.

Q.57 Nitara walks 1 km towards West and takes a left turn. After that moves 1 km and then turns left and walks 1 km again and turns left and after that walks 450 m. How far is Nitara from her starting point?

A. 500 m
B. 700 m
C. 550 m
D. 200 m

Answer: C

Sol: **Given:**
Nitara walks 1 km towards West and takes a left turn.
After that moves 1 km and then turns left and walks 1 km again and turns left and after that walks 450 m.
From the given information path diagram will be:



So, Nitara **550m** from her starting point.
Thus, the correct option is: (c)

Q.58 Choose the next word-pair in the series:
DW, GT, JQ, MN, PK, SH, ?

A. UE
B. UF
C. VF
D. VE

Answer: D

Sol: **Given:**
DW, GT, JQ, MN, PK, SH, ?
Logic: In each term, 1st letter is increased by 3 and 2nd letter is decreased by 3.

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

For D, G, J, M, P, S, ?
D + 3 =G, G + 3 = J, J + 3 = M, M + 3 = P, P + 3 = S, **S + 3 = V**
For W, T, Q, N, K, H, ?
W - 3 = T, T - 3 = Q, Q - 3 = N, N - 3 = K, K - 3 = H, **H - 3 = E**
So, VE is next term.
Thus, the correct answer is (d).

Q.59 The group of seven students took an exam. After the examination, another student joined the group. By including the marks of the new student, the average marks of the group increased to 2. How many more marks did this student get compared to the average marks of the initial seven students?

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

Answer: D

Sol: **Given:**
Initial group size =7.

After adding one more student, group size =8.

the average increases by 2 marks.

Solution:
Let old average =A. Then old total =7A.
New average =A + 2 with 8 students

new total = 8(A + 2) = 8A + 16.
But new total =7A + new score.
So 7A + new score = 8A + 16

new score = A + 16.
Hence, the new student's marks exceed the old average by 16 marks.

Q.60 **₹ 27,600 is distributed among Thomas, David and Vijay in such a manner that $\frac{1}{7}^{th}$ of the share of Thomas, $\frac{1}{3}^{th}$ of the share of David and $\frac{1}{2}$ of the share of Vijay are equal. Find the sum of the share of Thomas and Vijay.**

A. 18,720
B. 15,200
C. 16,700
D. 20,700

Answer: D

Sol: **Given:**
Total = ₹ 27,600

$\frac{1}{7}$ of Thomas's share = $\frac{1}{3}$ of David's share = $\frac{1}{2}$ of Vijay's share (all equal)

Solution:
If $\frac{1}{7}T = \frac{1}{3}D = \frac{1}{2}V = k$, then
T = 7k ; D = 3k; V = 2k and T + D + V = 12k = Total.

12k = 27,600

k = 2,300
T = 7k $= 7 \times 2{,}300 = 16{,}100$
V = $2k = 2 \times 2{,}300 = 4{,}600$
T + V = 16,100 + 4,600 = ₹20,700

Q.61 **Rohan's aunt's present age is six times Rohan's present age. After 10 years, the sum of their ages would be eleven times Rohan's present age. What is Rohan's and his aunt's present ages?**

A. 5 years and 30 years
B. 7 years and 42 years
C. 6 years and 36 years
D. 8 years and 48 years

Answer: A

Sol: **Given:**
Aunt's age = 6 × Rohan's age

After 10 years: (Rohan + 10) + (Aunt + 10) = 11 × Rohan's age

Solution:

Let R = Rohan's age now => Aunt = 6R

(R + 10) + (6R + 10) = 11R

7R + 20 = 11R

4R = 20

R = 5

Thus, Rohan: 5 years, Aunt: 6 × 5 = 30 years

Q.62 **A jacket is sold for ₹3,600 after two successive discounts on the marked price. The two discounts are in the ratio of 2 : 1, and their sum is 30%. What was the marked price of the jacket?**

A. ₹5,200
B. ₹5,400
C. ₹5,000
D. ₹4,800

Answer: C

Sol: **Given:**

Selling price of the jacket = ₹3,600

The two successive discounts are in the ratio of 2 : 1

The sum of the discounts is 30%

Formula Used:

Final Price = Marked Price × $\left(1 - \frac{\text{First Discount}}{100}\right) \times \left(1 - \frac{\text{Second Discount}}{100}\right)$

Solution:

The total discount is 30%, and the two discounts are in the ratio 2 : 1

Let the first discount be 2x and the second discount be x

Thus,

2x + x = 30

3x = 30

x = 10

Therefore, the first discount is 2x = 20% and the second discount is x = 10%

$$3600 = \text{Marked Price} \times (1 - 0.20) \times (1 - 0.10)$$

$$3600 = \text{Marked Price} \times 0.80 \times 0.90$$

$$3600 = \text{Marked Price} \times 0.72$$

Marked Price = $\frac{3600}{0.72}$ = 5000

Thus, the marked price of the jacket is ₹5,000.

Q.63 **Refer to the following number series and answer the question that follows (all numbers are single-digit numbers only and counting to be done from left to right only).**
(Left) 5 8 7 5 6 9 9 3 1 3 2 9 4 7 2 4 6 5 8 8 7 9 3 (Right)
How many such odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an even digit?

A. Two
B. Three
C. None
D. One

Answer: A

Sol: **Given**: (Left) 5 8 7 5 6 9 9 3 1 3 2 9 4 7 2 4 6 5 8 8 7 9 3 (Right)
Logic: Odd Digit | Odd Digit | Even Digit
(Left) 5 8 7 5 6 9 9 3 1 3 2 9 4 7 2 4 6 5 8 8 7 9 3 (Right)

Two odd digits are there, each of which is immediately preceded by an odd digit and also immediately followed by an even digit.
Thus, correct option is (a).

Q.64 **Perimeter of a rectangle is six times of its breadth. If breadth of the rectangle is 15 cm, then what is the area of this rectangle?**

A. 450 cm^2
B. 300 cm^2

C. 900 cm^2
D. 600 cm^2

Answer: A

Sol: **Given:**
Perimeter of the rectangle is six times its breadth.

Breadth of the rectangle = 15 cm.

Formula Used:

Perimeter of a rectangle = 2 × (Length + Breadth)

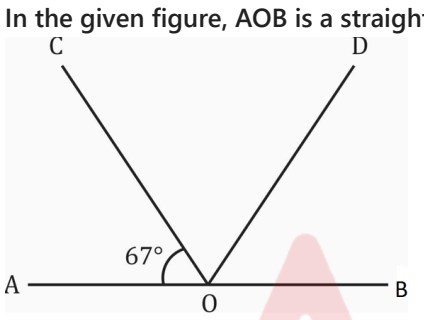
Area of a rectangle = Length × Breadth

Solution:
Let the length of the rectangle be L .
The perimeter is given as six times the breadth:
$2 \times (L + 15) = 6 \times 15$
$2 \times (L + 15) = 90$
$L + 15 = 45$
$L = 45 - 15 = 30$ cm

$$\text{Area} = L \times \text{Breadth} = 30 \times 15 = 450\text{cm}^2$$

The area of the rectangle is 450 cm^2.

Q.65 In the given figure, AOB is a straight line. ∠AOC = 67° and OD is the bisector of ∠BOC. What is the value of ∠BOD in degrees?



A. 56.5°
B. 55°
C. 55.5°
D. 56°

Answer: A

Sol: **Given:**
AOB is a straight line → ∠AOB = 180°
∠AOC = 67°
OD is the bisector of ∠BOC
Formula Used:
A linear pair of angles consists of two adjacent angles whose non-common sides form a straight line, meaning their sum is always 180 degrees.
Solution:
AOB is the straight line
=> ∠AOB = ∠AOC + ∠BOC = 180° (linear pair angles)
=> 180° = 67° + ∠BOC
=> ∠BOC = 113°
∵ OD is bisector of ∠BOC
∴ $\angle COD = \angle BOD = \frac{1}{2} \times \angle BOC = \frac{1}{2} \times 113° = 56.5°$

Q.66 **Arrange the following economic reforms in chronological order:**
i. LPG Reforms
ii. Nationalisation of Banks

iii. Introduction of GST

iv. Implementation of the Insolvency and Bankruptcy Code

A. (ii), (i), (iv), (iii)
B. (ii), (iv), (i), (iii)
C. (iv), (ii), (iii), (i)
D. (i), (ii), (iii), (iv)

Answer: A

Sol: The correct sequence of the events are:

1. Nationalisation of Banks (1969)

This was a major step taken by the Indian government under then-Prime Minister Indira Gandhi. On July 19, 1969, 14 large commercial banks were nationalized. The primary goal was to expand the reach of banking services, especially in rural areas, and to align the banking sector with the socio-economic priorities of the government, such as financial inclusion and poverty alleviation.

2. LPG Reforms (1991)

In 1991, India faced a severe balance of payments crisis. In response, the government, led by Prime Minister P.V. Narasimha Rao and Finance Minister Dr. Manmohan Singh, introduced the Liberalisation, Privatisation, and Globalisation (LPG) reforms. These reforms were aimed at opening up the Indian economy, promoting foreign investment, reducing government control in certain sectors, and allowing market forces to drive economic growth. It marked a shift from a planned economy to a market-driven one.

3. Implementation of the Insolvency and Bankruptcy Code (2016)

The Insolvency and Bankruptcy Code (IBC) was introduced in 2016 to streamline the insolvency and bankruptcy process for companies and individuals. Prior to this, India lacked an efficient legal framework for resolving insolvencies. The IBC provides a time-bound process for resolving insolvency, protecting creditors, and ensuring quicker recovery of dues.

4. Introduction of GST (2017)

The Goods and Services Tax (GST) was implemented in 2017, aimed at unifying India's complex indirect tax system into a single tax structure. It replaced various state and central taxes like VAT, excise duty, and service tax, and created a single national market by reducing tax barriers between states. GST is a major reform to streamline taxation, increase compliance, and boost the ease of doing business.

Q.67 **Janapada Geete, which includes the vachanas of Basavanna, is folk music from the Indian state of _____.**

A. Goa
B. Telangana
C. Karnataka
D. Kerala

Answer: C

Sol: **Correct Answer: (C) Karnataka**

Explanation:

• **Janapada Geete** translates to **"folk songs"** in Kannada and refers to the traditional **folk music of Karnataka**.
• These songs include themes of **rural life, love, devotion, and community wisdom**, and are sung in various local dialects.
• One significant feature of this tradition is the inclusion of **Vachanas** – **poetic expressions of devotion and philosophy** by **Basavanna**, a 12th-century social reformer and saint.

Information Booster:

• **Basavanna** was the founder of the **Lingayat movement** and composed vachanas to challenge casteism and promote **equality and devotion to Lord Shiva**.
• Janapada Geete is performed during **festivals, harvests, marriages**, and community gatherings across **rural Karnataka**.
• Instruments used: **Dollu**, **Tappu**, **Chende**, and **Nadaswaram**.

Additional Knowledge:

- **(A) Goa** – Known for **Mando** and **Dulpod** folk songs.
- **(B) Telangana** – Famous for **Oggu Katha** and **Lambadi songs**.
- **(D) Kerala** – Popular for **Sopana Sangeetham** and **Vadakkan Pattukal**.

Q.68 If the numerator of a fraction is increased by 25% and its denominator is decreased by 10%, the value of the fraction 15/16. What is the original fraction?

A. $\frac{43}{47}$
B. $\frac{27}{40}$
C. $\frac{11}{13}$
D. $\frac{3}{4}$

Answer: B

Sol: **Given:**

Increase in numerator = 25%

Decrease in denominator = 10%

New value = $\frac{15}{16}$

Concept Used:

x% increase = (100 + x)/100

x% decrease = (100 – x)/100

Solution:

Let the original fraction be $\frac{x}{y}$

Change in numerator = $\frac{100+25}{100} = \frac{5}{4}$

Change in denominator = $\frac{100-10}{100} = \frac{9}{10}$

$\frac{x \cdot \frac{5}{4}}{y \cdot \frac{9}{10}} = \frac{15}{16}$

$=> \frac{5x \cdot 10}{9y \cdot 4} = \frac{15}{16}$

$=> \frac{50x}{36y} = \frac{15}{16}$

$=> \frac{10x}{9y} = \frac{3}{4}$

$=> \frac{x}{y} = \frac{27}{40}$

∴ The original value of the fraction is $\frac{27}{40}$.

Q.69 Which of the following keyboard shortcuts is used to add a bookmark of the page currently opened in a Chrome browser?

A. Alt + B
B. Ctrl + M
C. Ctrl + B
D. Ctrl + D

Answer: D

Sol: **Correct Answer: (D) Ctrl + D**

Explanation:

• In **Google Chrome** (and most modern browsers), pressing **Ctrl + D** will **add a bookmark** for the page currently open.

• A dialog box will appear allowing the user to **name the bookmark** and choose a **folder** to save it in.

Information Booster:

• Bookmarks help users **quickly access** frequently visited websites.

• The bookmark feature is found under the **"Bookmarks" menu** or can be managed via **chrome://bookmarks**.

Additional Knowledge:

- **(A) Alt + B** – Not a default Chrome shortcut; may be used for custom or application-specific actions.
- **(B) Ctrl + M** – In MS Word, opens the **Indent dialog box**, not related to bookmarking.
- **(C) Ctrl + B** – Used to **bold** selected text in many applications (e.g., Word, Google Docs).
- **(D) Ctrl + D** – Used to **bookmark the current page** in Chrome and other browsers.

Q.70 **In the following question, select the odd letter/letters from the given alternatives.**

A. ORU
B. CFI
C. HKN
D. FJM

Answer: D

Sol: Except, FJM all other option follow +3, +3 pattern

Q.71 **In the following question, groups of letter groups are given. The letter groups in each set are related to the other letter groups in the same set by some logic/rule/relation. Select the set of letter groups from the given options that follows the same logic/rule/relation.**
(AT, BW, CZ)
(LX, MA, ND)

A. (AN, BQ, CU)
B. (CT, DV, EZ)
C. (RF, SH, TK)
D. (FB, GE, HH)

Answer: D

Sol: **First set:** (AT, BW, CZ)

A + 1 → B, B + 1 → C

For the second letters:

T + 3 → W, W + 3 → Z

Logic:

1st letters: +1, 2nd letters: +3

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

Now, let's analyze each option following this same rule:

Option A: (AN, BQ, CU)

A + 1 → B, B + 1 → C

For the second letters:

N + 3 → Q, Q + 3 → T ≠ U

This **does not** follow

Option B: (CT, DV, EZ)

C + 1 → D, D + 1 → E

For the second letters:

T + 2 → V, V + 4 → Z

This **does not** follow

Option C: (RF, SH, TK)

R + 1 → S, S + 1 → T

For the second letters:

F + 2 → H, H + 3 → K

This **does not** follow

Option D: (FB, GE, HH)

F + 1 → G, G + 1 → H

For the second letters:

B + 3 → E, E + 3 → H

This **follows** the same pattern:

Thus, correct option is (d).

Q.72 **If it is Friday on 4/8/2017, then what will be the day after 61 days?**

A. Tuesday
B. Wednesday
C. Thursday
D. Friday

Answer: B

Sol: **Given:**

Friday on 4/8/2017

Total no of odd days in 61 days

$\frac{61}{7}$ = 8 and Remainder = 5

Thus After 61 days Friday on 4/8/2017 will be - Fridya + 5 = **Wednesday**

Correct answer is (b) **Wednesday**

Q.73 **5 men and 2 boys can do in 30 days as much work as 7 men and 10 boys can do in 15 days. How many boys should join 40 men to do the same work in 4 days?**

A. 12
B. 16
C. 10
D. 15

Answer: C

Sol: **Given:**

5 men + 2 boys = 7 men + 10 boys in work output (30 days vs 15 days)

Formula Used:

Total Work = Efficiency × time

Solution:

As per the condition;

(5M + 2B) × 30 = (7M + 10B) × 15

150M + 60B = 105M + 150B

45M = 90B

1M = 2B

$$\frac{M}{B} = \frac{2}{1}$$

Total work = (5M + 2B) × 30 = (5(2) + 2(1)) × 30 = 360 unit

New team with 40 men and x boys:

Total work = (40(2) + x(1)) × 4 = 360

(80 + x) × 4 = 360

80 + x = 90

x = 10 boys

Q.74 **If in a certain language. EXECUTIVE is coded as TCIEUXVEE, then how is MAUSOLEUM coded in that language?**

A. LSEUOAUMM
B. AUUCOSLMM
C. AUEUOSKMM
D. SLUEOAUMM

Answer: A

Sol: Let us label the letters of the given word from 1 to 9. Then, the code contains the letters of the word in the order 6, 4, 7, 3, 5, 2, 8, 1, 9.
Thus, we, have:

M A U S O L E U M → L S E U O A U M M
1 2 3 4 5 6 7 8 9 6 4 7 3 5 2 8 1 9

Q.75 **The price of fuel decreases by 10%, 45% and 10% in three successive months, but increases by 65% in the fourth month. What is the percentage increase/decrease in the price of fuel in the fourth month as compared to its original price? (Round off the answer to two decimal places.)**

A. Increases by 25.16%
B. Decreases by 30.57%
C. Increases by 21.55%
D. Decreases by 26.49%

Answer: D

Sol: **Given:**

Successive changes in price:

1st month: –10%

2nd month: –45%

3rd month: –10%

4th month: +65%

Formula Used:

Final price % of original = $100 \times (1 + \frac{a_1}{100})(1 + \frac{a_2}{100})...(1 + \frac{a_n}{100})$

Solution:

Final price % of original = $100 \times (1 - \frac{10}{100})(1 - \frac{45}{100})(1 - \frac{10}{100})(1 + \frac{65}{100})$

Final Price % = $100 \times (0.9 \times 0.55 \times 0.9 \times 1.65)$

$\text{Final Price} = 73.51$

Net change = 73.51 - 100 = -26.49%

∴ The price decreased by 26.49% (approximately).

Q.76 **In a race of 800 m, Ram can beat Shyam by 50 m, and in a race of 600 m, Shyam can beat Ghanshyam by 40 m. By how many metres will Ram beat Ghanshyam in a race of 400m?**

A. 80 m
B. 50 m
C. 40 m
D. 100 m

Answer: B

Sol: **Given:**

In a race of 800 m, Ram can beat Shyam by 50 m, and in a race of 600 m, Shyam can beat Ghanshyam by 40 m.

Solution:

Ram runs 800 metres when Shyam runs 750 metres.

Shyam runs 600 metres when Ghanshyam runs 560 metres.

LCM of 750 and 600 = 3000 metres.

Ram runs 3200 metres when Shyam runs 3000 metres

Shyam Runs 3000 metres Ghanshyam runs 2800 metres.

Ram beats Ghanshyam by 400 metres in a 3200 metre race.

In 400 metre race = $\frac{400 \times 400}{3200}$ = 50 metres

∴ Ram beats Ghanshyam in 400 metre race by 50 metres.

Q.77 **An article is marked at Rs. 950. If it is sold at a discount of 20%, then the selling price becomes 2.5 times of its cost price. What is the cost price?**

A. Rs. 318
B. Rs. 304
C. Rs. 312
D. Rs. 299

Answer: B

Sol: **Given:**

Marked price of the article = Rs. 950

Discount = 20%

The selling price becomes 2.5 times the cost price.

Formula Used:

Selling price after discount = Marked Price × $\left(1 - \frac{\text{Discount}\%}{100}\right)$

Solution:

Selling Price = $950 \times \left(1 - \frac{20}{100}\right)$

= 950 × 0.8 = 760

Now,

760 = 2.5 × Cost Price

Cost Price = $950 \times \left(1 - \frac{20}{100}\right)$ = 304

Thus, The cost price of the article is Rs. 304

Q.78 **Consider the following statements regarding the geological evolution of the Peninsular Plateau:**
Statement 1: The fault valleys of the Narmada and Tapti rivers are a result of block faulting that occurred during the Carboniferous period.
Statement 2: The Deccan Trap was formed due to massive volcanic activity during the Quaternary period, leading to the deposition of thick lava sheets.
Which of the above statements is/are correct?

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

Answer: B

Sol: The correct answer is (b) Only 1

Explanation:

• Statement 1 is correct: The Narmada and Tapti valleys are rift valleys formed due to block faulting, which is believed to have occurred during the Carboniferous period.
• These valleys lie in zones of tectonic weakness and are geologically significant.
• Statement 2 is incorrect: The Deccan Trap was formed due to massive volcanic eruptions during the Cretaceous period (about 66 million years ago), not during the Quaternary period.
• The volcanic activity covered large parts of the western and central Indian Plateau with basaltic lava.
• These lava sheets formed layered structures known as traps.

Information Booster:

• The term "Trap" comes from the Swedish word "Trappa" meaning stairs, referring to the step-like landscape formed by lava layers.
• The Deccan Trap region includes parts of Maharashtra, Madhya Pradesh, and Gujarat.

Q.79 **Straight lines l and m are parallel to each other. Points A and B lie on the line l. points C and D lie on the line m. and E is a point that lies between the straight lines l and m. all in such a manner that ∠ EAB = 50° and ∠ ECD = 70°. Find the measure of AEC if points A and C lie on the same side of point E.**

A. 60°
B. 70°
C. 100°
D. 120°

Answer: D

Sol: **Given:**

Lines l and m are parallel.

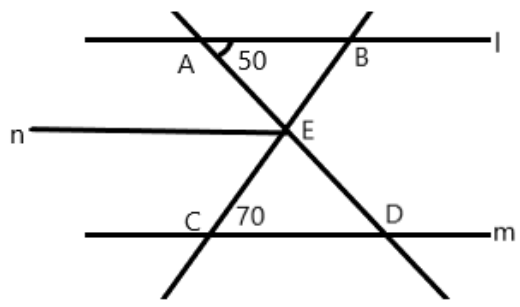
Points A and B lie on line l

Points C and D lie on line m

Point E lies between lines l and m

$\angle EAB = 50^\circ$ and $\angle ECD = 70^\circ$

Concept Used:



Alternate interior angles: Since lines l and m are parallel, angles involving transversal lines (such as ∠EAB and ∠ECD) will exhibit properties like alternate interior angles

n also parallel to l and m

Solution:

From alternate angle property;

$\angle BAE = \angle AEn$

and, $\angle ECD = \angle CEn$

So,

∠AEC = ∠EAB + ∠ECD

= 50 + 70

= 120°

Q.80 During emergency, the enforcement of Fundamental Rights can be suspended by—

A. Parliament
B. President
C. Supreme Court
D. Lok Sabha

Answer: B

Sol: **Correct Answer: (B) President**

Explanation:

→ During an emergency, the President of India can suspend the enforcement of Fundamental Rights under Article 359 of the Indian Constitution.

→ This power is exercised during a National Emergency, and the suspension applies to most of the Fundamental Rights, except Article 20 and Article 21.

→ The President can do this on the advice of the Council of Ministers.

Information Booster:

→ Article 359 allows the President to suspend the enforcement of fundamental rights during an emergency, but the right to protection from arrest and detention (under Articles 20 and 21) cannot be suspended.

→ A State Emergency (Article 356) does not lead to the suspension of Fundamental Rights, but it does affect the governance of states.

→ Parliament can pass laws related to emergency, but it is the President who suspends rights under emergency provisions.

Additional Information (Other Options):

Option (A) Parliament: Parliament makes laws but cannot suspend Fundamental Rights during an emergency.

Option (C) Supreme Court: The Supreme Court interprets laws and can review the suspension of rights, but it does not have the authority to suspend Fundamental Rights itself.

Option (D) Lok Sabha: Lok Sabha, the lower house of Parliament, does not have the power to suspend Fundamental Rights.

Q.81 Assertion–Reason Question

Assertion (A): Venus has the longest day in the solar system.

Reason (R): Venus rotates on its axis from east to west.

A. Both A and R are true and R is the correct explanation.
B. Both A and R are true but R is not the correct explanation.
C. A is true, R is false.
D. A is false, R is true.

Answer: B

Sol: The correct answer is: (b) Both A and R are true but R is not the correct explanation.

Explanation:

• **Assertion is true:** Venus has the **longest rotation period** among planets. One rotation (one Venus day) takes **243 Earth days**, which is longer than its year.

• **Reason is true:** Venus rotates **retrograde**, which means it spins **from east to west**, opposite to most planets.

• **But**, the direction of rotation **does not explain** why its day is so long. The length of its day is due to its **extremely slow rotation speed**, not the direction of rotation.

Information Booster (Exam Key Points):

• Venus is called **Earth's twin** due to similar size.
• Venus rotates **slowest** and **retrograde** (opposite to Earth).
• **Only Venus and Uranus** rotate in the **opposite direction** compared to most planets.

Q.82 **Which film won the award for Best Hindi Film at the 71st National Film Awards?**

A. Sam Bahadur
B. Kathal – A Jackfruit Mystery
C. Rocky Aur Rani Kii Prem Kahaani
D. 12th Fail

Answer: B

Sol: **The correct answer is (B) Kathal – A Jackfruit Mystery**

Explanation:

· The satirical comedy **Kathal – A Jackfruit Mystery** won **Best Hindi Film**.
· Starring **Sanya Malhotra**, it combines humour with a strong social message.

Information Booster:

· Best Popular Film: **Rocky Aur Rani Kii Prem Kahaani**.
· Best Film on National Values: **Sam Bahadur**.
· Kathal highlighted issues of **bureaucracy and social justice**.
· Directed by **Yashowardhan Mishra**.

Q.83 The value of $\frac{(p-q)^3+(q-r)^3+(r-p)^3}{(p^2-q^2)^3+(q^2-r^2)^3+(r^2-p^2)^3}$ is:

Where p ≠ q ≠ r

A. $\frac{1}{(p+q)(q+r)(r+p)}$
B. 1
C. $\frac{1}{p+q+r}$
D. 0

Answer: A

Sol: **Formula Used:**

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

Solution:

$(p-q)+(q-r)+(r-p)=0$

and $(p^2 - q^2) + (q^2 - r^2) + (r^2 - p^2) = 0$

$$\frac{(p-q)^3 + (q-r)^3 + (r-p)^3}{(p^2-q^2)^3 + (q^2-r^2)^3 + (r^2-p^2)^3}$$

$$= \frac{3(p-q)(q-r)(r-p)}{3(p^2-q^2)(q^2-r^2)(r^2-p^2)}$$

$$= \frac{3(p-q)(q-r)(r-p)}{3(p-q)(p+q)(q-r)(q+r)(r-p)(r+p)}$$

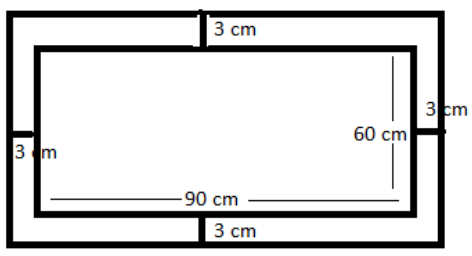
$$= \frac{1}{(p+q)(q+r)(r+p)}$$

Q.84 A field measures 90 m by 60 m. There is a concrete path 3 m wide all round its perimeter. Find the total area covered by the concrete path.

A. 963 m^2
B. 639 m^2
C. 936 m^2
D. 693 m^2

Answer: C

Sol: **Given:**
Field dimensions = 90 m × 60 m
Width of path around = 3 m
Formula Used:
Area of path = Area of outer rectangle – Area of inner rectangle
Solution:



Outer length = 90 + 2×3 = 96 m
Outer breadth = 60 + 2×3 = 66 m
Area of outer rectangle = 96 × 66 = 6336 m^2
Area of inner rectangle (field only) = 90 × 60 = 5400 m^2
Area of path = 6336 – 5400 = 936 m^2

Q.85 How many pairs of chromosomes are found in humans?

A. 14
B. 18
C. 23
D. 32

Answer: C

Sol: **Correct Answer:** (C) 23
Explanation:

- Humans have **46 chromosomes** in each body cell.
- These are arranged in **23 pairs** (22 pairs of **autosomes** and 1 pair of **sex chromosomes**).
- One chromosome in each pair comes from the **mother** and the other from the **father**.

Information Booster:

- Female sex chromosomes: **XX**

- Male sex chromosomes: **XY**
- Chromosomes carry **DNA** which contains **genes** that control inherited traits.

Q.86 **Which team appointed Axar Patel as their captain for the IPL 2025 season?**

A. Gujarat Titans
B. Delhi Capitals
C. Mumbai Indians
D. Chennai Super Kings

Answer: B

Sol: The correct answer is (b) Delhi Capitals
Delhi Capitals (DC), co-owned by **JSW-GMR**, officially appointed **Axar Patel** as their **captain for the 2025 IPL season**. The **31-year-old all-rounder** has been with the franchise **since 2019** and previously served as **vice-captain for two seasons**. Axar has been a key performer for DC, contributing with both **bat and ball**. His **leadership qualities** and **consistent performances** earned him the responsibility to lead DC in IPL 2025. The team aims for a successful season with **experienced players like KL Rahul, Faf du Plessis, and Mitchell Starc**.

Information Booster

- **Axar Patel's IPL Journey**: Played **150 matches**, scored **1,653 runs**, and picked up **123 wickets**.
- **Performance for Delhi Capitals**: Since joining in **2019**, played **82 matches**, scored **967 runs**, and took **62 wickets**.
- **Notable IPL Achievement**: Took a **hat-trick in IPL 2016** while playing for Punjab.
- **Coaching Staff for IPL 2025**:
  - **Head Coach**: Hemang Badani
  - **Mentor**: Kevin Pietersen
  - **Bowling Coach**: Munaf Patel
- **Delhi Capitals' First Match in IPL 2025**: Against **Lucknow Super Giants on March 24, 2025, in Visakhapatnam**.
- **Franchise Endorsement**: DC's **co-owner Parth Jindal** and **Chairman Kiran Kumar Grandhi** praised Axar's leadership.

Q.87 **In MS-Excel 2010, _____ operation is used on data tables for displaying only the rows that meet certain conditions and the other rows get hidden.**

A. Filter
B. Chart
C. Table
D. Sort

Answer: A

Sol: The correct answer is (a) Filter.
• The **Filter** operation in MS Excel 2010 is used to **display only specific data** that meets certain conditions while **hiding the rest** of the rows.
• It helps in analyzing large data sets quickly by focusing only on relevant information.
Information Booster:
• Shortcut Key: **Ctrl + Shift + L** activates or removes filters.
• Found under the **Data tab → Sort & Filter group**.
• Filters can be applied based on **text, numbers, or dates**.
• **Custom Filters** allow users to apply multiple conditions at once.
• Useful in financial reports, student records, and inventory analysis.
Additional Knowledge:
• **Sort** arranges data in ascending or descending order but does not hide rows.
• **Chart** is used for visual representation of data.
• **Table** organizes data into structured columns and rows but does not filter automatically.
• In **Excel 2021 and Excel 365**, **Advanced Filter** allows copying filtered data to another location for comparison or reporting.

Q.88 **Consider the following statements:**

1. **Lord Dalhousie introduced the Doctrine of Lapse and railways.**
2. **Lord Canning was the first Viceroy of India.**
3. **Lord Curzon passed the Vernacular Press Act and Ilbert Bill.**

Which of the following is true?

A. 1 and 2 only
B. 2 and 3 only
C. 1 and 3 only
D. All of the above

Answer: A

Sol: The correct answer is: (a) 1 and 2 only

Explanation:

• **Statement 1 is correct:** Lord Dalhousie introduced the **Doctrine of Lapse** policy and initiated **railways, telegraph, and postal reforms** in India.

• **Statement 2 is correct:** After the Revolt of 1857, the rule of the East India Company ended, and **Lord Canning became the first Viceroy of India in 1858**.

• **Statement 3 is incorrect:**

– **Vernacular Press Act (1878)** was passed by **Lord Lytton**, not Lord Curzon.

– **Ilbert Bill (1883)** was introduced during the time of **Lord Ripon**, not Lord Curzon.

Information Booster :

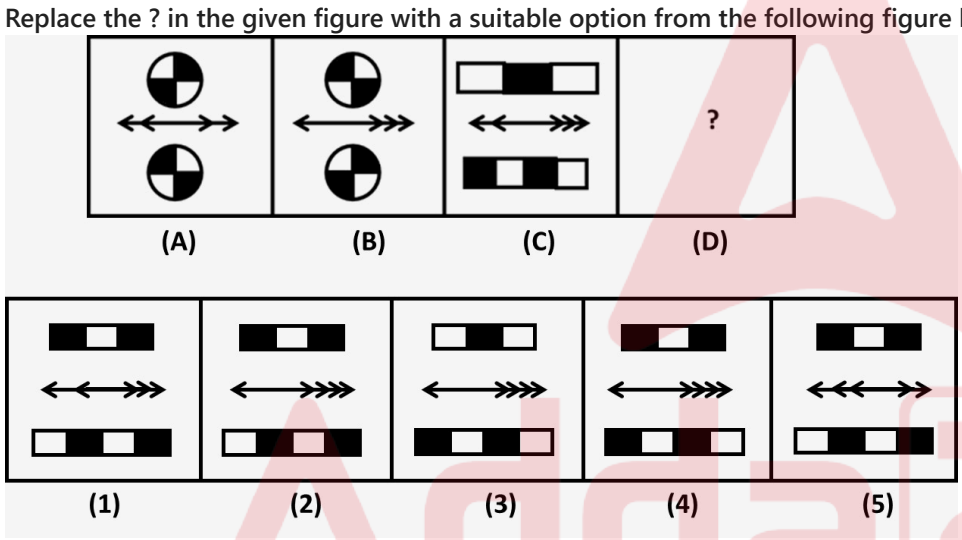
• **Lord Curzon** (1899–1905) is known for:

– **Partition of Bengal (1905)**

– Establishment of **Archaeological Survey of India (ASI)**

– **Indian Universities Act (1904)**

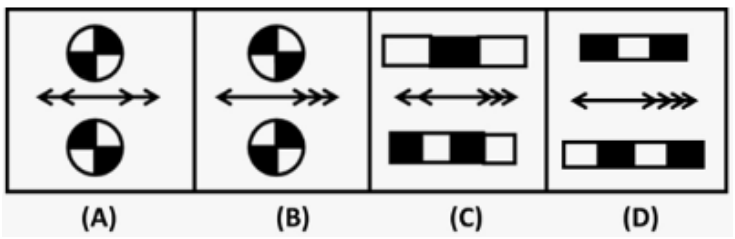
Q.89 Replace the ? in the given figure with a suitable option from the following figure by observing the relationship between figures (A) and (B).



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

Answer: B

Sol: **Logic:** Figure A to B unfilled place to filled and one arrow shift to the right side.



Thus, the correct option is (b).

Q.90 Choose the conclusion/conclusions that follow the given statements by selecting a right option.

Statements:

1. Some producers are writers.
2. All writers are singers.

Conclusions:

I. Some producers are singers.
II. No writer is producer.

A. Only II follows
B. Only I follows
C. None follows
D. Both I and II follows

Answer: B

Sol: **Statements**:
1. Some producers are writers.
2. All writers are singers.

From the given statement possible Venn diagram will be.

Conclusions:
I. Some producers are singers. (**True**, there is direct relation between producers and singers).
II. No writer is producer. (**False**, this contradicts statement 1, which clearly says: Some producers are writers).
Only I follows
Thus, correct option is (b).

Q.91 **Which organization provides the data for the Henley Passport Index?**

A. United Nations
B. International Air Transport Authority (IATA)
C. World Economic Forum (WEF)
D. International Monetary Fund (IMF)

Answer: B

Sol: Ans. (b)
Explanation
The Henley Passport Index derives its data from the International Air Transport Authority (IATA), which tracks visa policies worldwide. The index uses this data to rank countries based on the number of destinations their citizens can access without requiring a visa. IATA's comprehensive database ensures accuracy and reliability in determining global mobility trends.
Information Booster
· Henley Passport Index uses IATA data.
· IATA tracks global visa policies and agreements.
· The index reflects international passport mobility.
· Rankings are based on visa-free and visa-on-arrival access.
· IATA data ensures credibility and accuracy.

Q.92 **What is the official name of the Biodiversity Park inaugurated in Alwar?**

A. Eco Van
B. Namo Van
C. Vriksha Kendra
D. Paryavaran Vatika

Answer: B

Sol: **The correct answer is (b) Namo Van**
Explanation:
· The **Namo Biodiversity Park** is also officially called **Namo Van**.
· The name aligns with similar initiatives under the **"Namo" green branding** seen across India.
Information Booster:
· Other states have also launched **Namo Van-type biodiversity parks** to promote environmental awareness.

Q.93 **Elephantiasis is also known as lymphatic filariasis, it's caused by parasitic worms, and can spread from person to person through ____**

A. Protozoa

B. Virus
C. Reptiles
D. Mosquitoes

Answer: D

Sol: The correct answer is (d) Mosquitoes.

• **Lymphatic filariasis (Elephantiasis)** is caused by **filarial worms** such as *Wuchereria bancrofti*, which are transmitted to humans through the **bites of infected mosquitoes**, mainly **Culex** species.

Information Booster:

• The disease affects the **lymphatic system**, causing swelling, mostly in **legs, arms, and genital areas**.
• It is classified as a **Neglected Tropical Disease (NTD)** by WHO.
• **Mass Drug Administration (MDA)** programs are used in India for prevention.
• Main drugs used: **Diethylcarbamazine (DEC)** + **Albendazole**.

Additional Information:

• The disease is **not spread by direct person-to-person contact**; transmission occurs only through mosquito bites.
• India has one of the **largest elimination programs** for filariasis under the **National Vector Borne Disease Control Programme (NVBDCP)**.
• Long-term infection may cause **permanent disability**, so early detection and drug compliance are essential.

Q.94 The Planning Commission was the nodal body for central planning in India. Who served as the first Chairman of the Planning Commission?

A. Jawaharlal Nehru
B. BR Ambedkar
C. Sardar Vallabhbhai Patel
D. CD Deshmukh

Answer: A

Sol: The correct answer is (A) Jawaharlal Nehru
Explanation:

· **Jawaharlal Nehru**, India's **first Prime Minister**, served as the **first Chairman of the Planning Commission** of India.

· The Planning Commission was established in **March 1950** through an executive resolution of the Government of India, with the aim of promoting a **planned and balanced economic development**.

· As Chairman, Nehru played a leading role in formulating India's **Five-Year Plans**, beginning with the **First Five-Year Plan (1951–1956)**.

Information Booster:

· The Planning Commission was tasked with:

o Assessing and allocating resources

o Setting priorities for development

o Preparing Five-Year Plans

· It was not a constitutional or statutory body but functioned as an **advisory body** to the central government.

· The Commission was **dissolved in 2014** and replaced by the **NITI Aayog**, which focuses on a **bottom-up approach** to planning.

Additional Knowledge:

(B) B.R. Ambedkar:

- Known for his role in drafting the Indian Constitution and work on **social reforms**, not economic planning.

(C) Sardar Vallabhbhai Patel:

- Played a key role in **integrating princely states**, but was not involved in chairing the Planning Commission.

(D) C.D. Deshmukh:

- First Indian **Governor of the RBI** and later **Finance Minister**, but not the Chairman of the Planning Commission.

Q.95 **A shopkeeper buys a chair whose marked price is Rs 4800 at two successive discounts of 10 percent and 20 percent. If he sells the chair for Rs 3974.40, then what is the profit percentage?**

A. 20 percent
B. 8 percent
C. 15 percent
D. 12 percent

Answer: C

Sol: **Given:**

Marked Price (MP) = Rs. 4800

Successive discounts: 10% and 20%

Selling Price (SP) = Rs. 3974.40

Need to find Profit Percentage

Formula Used:

Successive Discount Formula:

Net Discount % = a + b - $\frac{ab}{100}$

Cost Price = $\text{MP} \times \left(1 - \frac{\text{Net Discount }\%}{100}\right)$

Profit % = $\frac{\text{SP} - \text{CP}}{\text{CP}} \times 100$

Solution:

net discount % = 10 + 20 - $\frac{10 \times 20}{100}$ = 30 - 2 = 28%

CP = $4800 \times \left(1 - \frac{28}{100}\right) = 4800 \times 0.72 = 3456$

Profit = 3974.40 - 3456 = 518.40

Profit % = $\frac{518.40}{3456} \times 100$ = 15%

Q.96 **Sattriya is the classical dance of which state?**

A. Assam
B. Manipur
C. Kerala
D. Karnataka

Answer: A

Sol: The correct answer is **(a) Assam**

Explanation:

• **Sattriya** is one of the **eight classical dance forms of India**, originating from **Assam**.

• It was introduced in the **15th century** by the Vaishnavite saint **Srimanta Sankardeva** as a medium to spread **Bhakti (devotion)** and teachings of **Lord Krishna**.

• The dance was traditionally performed in **Sattras (monastic institutions)** by male monks, but later included female performers as well.

Information Booster:

• Sattriya dance is closely linked to the **Neo-Vaishnavism movement** of Assam.

• It was officially recognized as a **classical dance form** by the **Sangeet Natak Akademi in 2000**.

• Musical instruments used include **Khol**, **Taal (cymbals)**, and **Flute**.

• Costumes are made of **Assamese silk (Muga and Pat silk)**.

• Themes of Sattriya performances are drawn from **Bhagavata Purana** and **Ramayana**.

Additional Knowledge:

• **Manipuri** – Classical dance of **Manipur**, based on *Raslila* themes of Krishna.

• **Kathakali** – Classical dance of **Kerala**, known for elaborate makeup and storytelling.

• **Yakshagana** – Traditional theatre dance form of **Karnataka** combining dance, music, and drama.

Q.97 **As of October 2025, the total deposits under the Pradhan Mantri Jan Dhan Yojana (PMJDY) have crossed which amount?**

A. ₹1.50 lakh crore
B. ₹2.00 lakh crore
C. ₹2.75 lakh crore
D. ₹3.25 lakh crore

Answer: C

Sol: The correct answer is (c) ₹2.75 lakh crore.

Explanation:

• As of **22 October 2025**, total balances under **PMJDY** crossed **₹2.75 lakh crore**, reflecting improved account usage due to reactivation drives and financial inclusion outreach.

Information Booster:

• Total Number of PMJDY Accounts: **56.85 crore** beneficiaries (2025).
• Contribution Breakdown: **Public Sector Banks** (~₹2.15 lakh crore), **RRBs** (~₹51,489 crore), **Private Banks** (~₹8,149 crore).
• **Financial Inclusion Saturation Programme (July–September 2025)** focused on **re-KYC and reactivating dormant accounts**.
• DBT (Direct Benefit Transfers) continues to be a major **driver of account balance growth**.

Additional Knowledge:

• PMJDY was launched on **28 August 2014** under the **Ministry of Finance**.
• Each account provides **Rupay Debit Card + Overdraft facility + Accidental Insurance**.
• Linked Schemes: **PMJJBY, PMSBY, Atal Pension Yojana**.
• Dormant account issue persists: **~13 crore inactive accounts** in August 2025, reduced gradually after reactivation campaigns.

Q.98 **What is the name of India's heaviest communication satellite launched by ISRO on November 2, 2025?**

A. CMS-01
B. GSAT-31
C. CMS-03
D. INSAT-4A

Answer: C

Sol: The correct answer is (c) CMS-03.

• On **2 November 2025**, the **Indian Space Research Organisation (ISRO)** launched **CMS-03**, the **heaviest communication satellite** ever launched from Indian soil.
• It was carried by the **LVM3-M5 rocket** (also called **GSLV-Mk3**) from the **Satish Dhawan Space Centre, Sriharikota**, marking the **fifth operational flight** of LVM3.
• The 4,410 kg satellite was placed successfully into a **Geo-synchronous Transfer Orbit (GTO)** to boost India's secure and high-capacity communications.

Information Booster:

• Launch Vehicle – LVM3-M5 (GSLV-Mk3)
• Satellite Weight – 4,410 kg

• Launch Date – 2 November 2025
• Launch Site – Second Launch Pad, SDSC Sriharikota
• Orbit – Geo-synchronous Transfer Orbit (~29,970 km apogee)

Additional Knowledge:

• The LVM3 rocket has also been used for **Chandrayaan-3** and **Gaganyaan** test missions.
• CMS-03 enhances **India's internet, broadcast, and secure communication** coverage across the nation.
• This mission reflects India's **self-reliance in launching heavy satellites**, which earlier required foreign launchers.
• ISRO plans to upgrade the vehicle with a **C32 cryogenic stage** and **semi-cryogenic engines** for future **human spaceflight missions**.

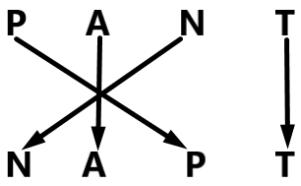
Q.99 **Select the option related to the third letter cluster in the same way as the second letter cluster is related to the first letter cluster**
PANT : NAPT :: MOVE :?

A. VVME
B. VOME
C. OOME
D. OVME

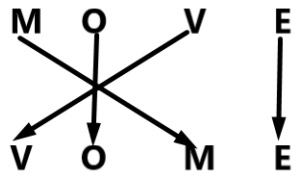
Answer: B

Sol: Given:
PANT : NAPT :: MOVE :?

In this question following pattern is followed -



Similarly,



Thus, the correct answer is (b).

Q.100 **Select the correct alternative to indicate the arrangement of the following words in a logical and meaningful order.**
1. Egg
2. Caterpillar
3. Chrysalis
4. Butterfly
5. Flight

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

Answer: A

Sol: **Correct Answer:** (a) 1, 2, 3, 4, 5

Explanation:
The life cycle of a butterfly follows a natural and logical biological sequence:

Egg (1) → laid on leaves.
Caterpillar (2) → the larva that hatches from the egg.
Chrysalis (3) → the stage where it forms a cocoon and undergoes metamorphosis.
Butterfly (4) → emerges as an adult.
Flight (5) → the butterfly begins to fly and live its adult life.
