Q.1 Who won the best actress award (critics) at the South Indian International Movie Awards (SIIMA) 2024?

A. Alia Bhatt
B. Shraddha Kapoor
C. Aishwarya Rai Bachhan
D. Deepika Padukone

Answer: C

Sol: **The correct answer is: (C) Aishwarya Rai Bachchan**
Explanation:

- **Aishwarya Rai Bachchan** won the **Best Actress (Critics)** award at the **South Indian International Movie Awards (SIIMA) 2024** for her portrayal of **Nandini** in the **Tamil film "Ponniyin Selvan: II"**.

- This award was conferred during the **SIIMA 2024** ceremony held in **Dubai**, where Aishwarya's performance in the **epic film** directed by **Mani Ratnam** received widespread recognition.

- The **SIIMA** award for **Best Actress (Critics)** is one of the prestigious categories presented annually to recognize outstanding performances in **South Indian cinema**.

About South Indian International Movie Awards (SIIMA):

- **SIIMA** is one of the most prominent and **prestigious award functions** in South India, established in **2012**. It recognizes **excellence in cinema** across the four South Indian film industries: **Tamil**, **Telugu**, **Malayalam**, and **Kannada**.

- The awards honor the **best performances** in various categories, including **Best Actor**, **Best Actress**, **Best Director**, **Best Film**, and **Critics' Awards**.

Q.2 Which city was awarded the title of Best Ganga Town at the Swachh Survekshan 2024-25 Awards Ceremony?

A. Varanasi
B. Prayagraj
C. Haridwar
D. Rishikesh

Answer: B

Sol: The correct answer is option (b) **Prayagraj**
Explanation

In the Swachh Survekshan 2024-25 Awards Ceremony, Prayagraj was awarded the title of Best Ganga Town.
· This recognition highlights Prayagraj's efforts in cleanliness and urban management along the Ganges River, including its commendable waste management initiatives during the Mahakumbh-2025 preparations.

Information Booster
· **Prayagraj** was awarded **Best Ganga Town** for its significant contribution to cleaning the Ganga River.
· The city has implemented various sanitation projects to improve waste management along the riverbanks.
· The **Swachh Survekshan** Awards recognize cities for their contributions to sanitation, waste management, and environmental sustainability.
· **Union Minister Shri Manohar Lal** presented the award to Prayagraj at the Swachh Survekshan ceremony.

Q.3 Hiromi Kawakami's speculative fiction novel, shortlisted for the 2025 International Booker Prize, is titled:

A. Under the Eye of the Big Bird
B. The Nakano Thrift Shop
C. Strange Weather in Tokyo
D. The Ten Loves of Nishino

Answer: A

Sol: The correct answer is (a) Under the Eye of the Big Bird.

- *Under the Eye of the Big Bird* is a **speculative fiction novel** by **Hiromi Kawakami**, translated into English by **Asa Yoneda**, and was **shortlisted for the 2025 International Booker Prize**.

- The novel imagines a **post-human future**, exploring evolution, extinction, and strange hybrid lifeforms with poetic and philosophical depth.

Information Booster:

- The novel was originally published in Japanese in **2016**, and the English translation was released in **January 2025**.

- Known for blending **literary fiction with speculative elements**, Kawakami uses imaginative settings to examine human emotion and identity.

- The 2025 International Booker Prize shortlist featured six titles, all from independent publishers.

- The prize judges praised Kawakami's work as "mind-expanding" for its fusion of science fiction with deeply human themes.

Additional Information (Why Other Options Are Incorrect):

- **(B) The Nakano Thrift Shop** – A slice-of-life novel by Kawakami, not speculative.

- **(C) Strange Weather in Tokyo** – A romantic literary novel by Kawakami.

- **(D) The Ten Loves of Nishino** – Another Kawakami novel, centered on relationships.

Booker Prize Facts:

- The **Booker Prize** was established in **1969** and is one of the most prestigious literary awards in the English-speaking world.

- The **International Booker Prize** was introduced in **2005**, restructured in **2016** to honor a **single book** translated into English, with both the **author and translator sharing the prize money**.

- The prize celebrates **literary excellence in global fiction** and has helped promote the works of international authors and translators to a wider audience.

- Past winners include **Han Kang**, **David Diop**, **Geetanjali Shree**, and **Jokha Alharthi**.

- The award highlights the growing importance of **translation in global literature**.

Q.4 In July 2025, PM Modi launched infrastructure projects worth ₹7,200 crore in which state, as part of the broader Viksit Bharat Mission?

A. Uttar Pradesh
B. Bihar
C. Madhya Pradesh
D. Odisha

Answer: B

Sol: The correct answer is (B) Bihar
Explanation:

- **Prime Minister Narendra Modi** launched **₹7,200 crore** worth of **infrastructure projects** in **Motihari, Bihar**.

- The initiative is a part of the **Viksit Bharat Mission**, which envisions **balanced regional development** and aims to integrate **Eastern India** into the national growth agenda.

- These projects are aimed at enhancing **urban infrastructure**, **housing development**, and **connectivity** in cities like **Motihari**, **Patna**, and **Gaya**.

Information Booster:

- **Viksit Bharat Mission**: This is India's vision for becoming a **developed nation by 2047**, marking the **100th year of India's independence**.

- **Regional Development**: PM Modi emphasized Bihar's potential for **equitable urban development**, drawing comparisons between **Patna and Pune**, and **Gaya and Gurugram**.

- The **₹7,200 crore** investment includes major improvements in **urban amenities** and **housing schemes**, with **three lakh pucca houses** delivered in **Motihari** alone.

- The initiative aims to provide a **boost to local employment**, **improve living standards**, and enhance **infrastructure resilience** in the region.

Q.5 What is the primary objective of the 'Sahkar' taxi service, launched by the Indian government in March 2025?

A. To establish a government-owned ride-hailing monopoly
B. To empower drivers through a cooperative, profit-sharing model
C. To provide free taxi services to senior citizens
D. To replace all existing private taxi services in India

Answer: B

Sol: The correct answer is (b) To empower drivers through a cooperative, profit-sharing model.
- The **'Sahkar' taxi service**, launched in **March 2025**, is a **cooperative-based ride-hailing initiative** by the Indian government.

- Its **main goal** is to **empower taxi drivers** by involving them directly in the **ownership and profit-sharing** process, reducing dependency on large private aggregators.

Information Booster:

- **Launched by:** Ministry of Cooperation and Ministry of Housing & Urban Affairs.

- **Model:** Cooperative ownership where drivers are members and stakeholders.

- **Revenue Sharing:** Profits are distributed among driver-members, ensuring fair income.

- **Target Cities:** Pilot launched in major cities like **Delhi, Mumbai, and Bengaluru**.

- **Digital Platform:** Includes a mobile app to compete with platforms like Ola and Uber.

Q.6 On which date did India launch the world's first Traditional Knowledge Digital Library (TKDL)?

A. July 10, 2025
B. July 11, 2025
C. July 12, 2025
D. July 14, 2025

Answer: C

Sol: The correct answer is (c) July 12, 2025.
- India officially launched the world's first Traditional Knowledge Digital Library (TKDL) on **July 12, 2025**.

- The launch aimed to preserve, protect, and promote India's traditional medicinal knowledge through advanced digital and AI-based tools.

- This initiative marks a significant step in integrating traditional medicine systems like Ayurveda, Unani, Siddha, Sowa Rigpa, and Homoeopathy with modern healthcare practices.

Information Booster:

- **Systems Included:** Ayurveda, Unani, Siddha, Sowa Rigpa, Homoeopathy.

- **Recognition:** Praised by the World Health Organization (WHO) in its report *Mapping the Application of Artificial Intelligence in Traditional Medicine* (2025).

- **AI Innovations:** Includes pulse reading, tongue analysis, Prakriti assessment, and Ayurgenomics (integrating Ayurveda with genomic science).

- **Government Initiative:** Supported by Prime Minister Narendra Modi's vision of "AI for all," as presented at the GPAI Summit in 2023.

- **Ministerial Endorsement:** Union Minister Prataprao Jadhav highlighted India's balanced approach to traditional and modern healthcare integration.

Q.7 Who among the following founded the Prarthana Samaj?

A. Swami Dayanand Savyaswati
B. Raja Ram Mohan Roy
C. Swami Vivekananda
D. Dr. Atmaram Pandurang

Answer: D

Sol: **Correct Answer:** D) Dr. Atmaram Pandurang

Explanation:

- **Dr. Atmaram Pandurang** founded the **Prarthana Samaj** in **1867** in Mumbai.
- The **Prarthana Samaj** was established as a reformist movement in response to the social and religious issues prevailing in India during that time.
- The aim was to promote social reforms, particularly focusing on the abolition of **sati**, the promotion of **women's rights**, and the **spread of education**.

Information Booster:

- The Prarthana Samaj is considered a **precursor to the social reform movements** in India and is often associated with the efforts to promote religious and social equality.
- The Prarthana Samaj sought to reform **Hinduism**, advocating for a return to the **ethical principles of the Vedas** while rejecting superstitions.
- The movement was influenced by the ideas of **Raja Ram Mohan Roy** and other reformers of the time.
- **Dr. Atmaram Pandurang** was instrumental in **spreading education** and advocating for **cultural reforms**.

Additional Knowledge:

- **A. Swami Dayanand Savyaswati** – Founded the **Arya Samaj** in 1875, not the Prarthana Samaj.
- **B. Raja Ram Mohan Roy** – Founded the **Brahmo Samaj** in 1828, focusing on religious reforms, but not the Prarthana Samaj.
- **C. Swami Vivekananda** – Was a prominent social reformer, but he was not the founder of the Prarthana Samaj. He is associated with the **Ramakrishna Mission**.

Q.8 The person who is also known as Deshbandhu, is _____.

A. Motilal Nehru
B. Rajendra Prasad
C. Rabindranath Tagore
D. Chittaranjan Das

Answer: D

Sol: (d) Chittaranjan Das
Sol.**Chittaranjan Das** was popularly known as **Deshbandhu**, meaning **"Friend of the Nation."** He was a prominent **freedom fighter, lawyer, and politician**, known for his **role in the Non-Cooperation Movement and as the founder of the Swaraj Party**.

Information Booster:

- **Founder of Swaraj Party (1923)**: Along with **Motilal Nehru**, he formed the Swaraj Party to contest elections and oppose British rule.
- **Advocate of Indian nationalism**: He defended **Aurobindo Ghosh** in the Alipore Bomb Case (1909).
- **Mayor of Calcutta**: Elected as the first Mayor of **Calcutta Municipal Corporation** in 1924.
- **Promoted Hindu-Muslim unity**: Advocated for communal harmony in India.

Additional Information:

- **(a) Motilal Nehru**: Father of **Jawaharlal Nehru**, co-founder of the Swaraj Party.
- **(b) Rajendra Prasad**: First **President of Independent India**.
- **(c) Rabindranath Tagore**: First **Indian Nobel Laureate (Literature, 1913)** and author of **Jana Gana Mana**.

Q.9 Who founded Naujawan Bharat Sabha?

A. Bhagat Singh
B. Hardayal Singh
C. Sachin Sanyal
D. Subhash Chandra Bose

Answer: A

Sol: The correct answer is (a) **Bhagat Singh**
Explanation:
• The **Naujawan Bharat Sabha** (Young India Association) was founded by **Bhagat Singh** in 1926.
• It was an organization created with the aim of promoting youth participation in the struggle for India's independence and fostering revolutionary ideas.
• The Naujawan Bharat Sabha played an important role in the youth-driven revolutionary movement during the Indian freedom struggle.

Information Booster:
• Bhagat Singh, one of India's most celebrated freedom fighters, used this organization to engage with young people and inspire them to join the fight against British colonial rule.
• The Sabha was involved in revolutionary activities, and Bhagat Singh aimed to create awareness among the youth about the need for radical action to achieve independence.

Additional Knowledge:
(b) **Hardayal Singh**
• Hardayal Singh was a prominent freedom fighter but did not found Naujawan Bharat Sabha.

(c) **Sachin Sanyal**
• Sachin Sanyal was an important revolutionary and a member of the Hindustan Socialist Republican Association (HSRA), but he did not found Naujawan Bharat Sabha.

(d) **Subhash Chandra Bose**
• Subhash Chandra Bose was a key leader in the Indian independence movement, but he was not the founder of Naujawan Bharat Sabha.

Q.10 The registered office of the Sangeet Natak Akademi is at:

A. Kolkata
B. New Delhi
C. Chennai
D. Mumbai

Answer: B

Sol: **Correct Answer: B. New Delhi**
Explanation:
The **Sangeet Natak Akademi**, India's **national academy for music, dance, and drama**, has its **registered office in New Delhi**. It was established in **1953** by the **Government of India** to promote and preserve Indian performing arts. The Akademi organizes festivals, supports artists, and presents the **Sangeet Natak Akademi Awards** to recognize excellence in the field.

Information Booster:
- Founded in **1953** as India's **first national arts academy**.
- Functions under the **Ministry of Culture, Government of India**.
- Recognizes and awards artists in **music, dance, theatre, and folk arts**.
- Maintains archives, research programs, and organizes cultural events.
- **Ratan Thiyam, Dr. Sonal Mansingh, and Pt. Birju Maharaj** are past awardees.

Q.11 Nehru Institute of Mountaineering is located at _____.

A. Leh
B. Jammu and Kashmir
C. Himachal Pradesh
D. Uttarakhand

Answer: D

Sol: The correct answer is (d) Uttarakhand.

The **Nehru Institute of Mountaineering (NIM)** is located in **Uttarkashi, Uttarakhand, India**. Established in **1965**, it is one of the premier mountaineering institutes in India, named after **Jawaharlal Nehru**, India's first Prime Minister, who was an ardent supporter of adventure sports. The institute provides training in **mountaineering, rock climbing, skiing, and high-altitude survival techniques**.

Information Booster:

- **NIM offers various training programs** such as Basic, Advanced, Search & Rescue, and Skiing courses.
- **Tenzing Norgay and Edmund Hillary** were among the early mountaineers who inspired the institute's curriculum.
- **It is one of the four premier mountaineering institutes in India**, along with **HMI (Darjeeling), JIM & WS (Pahalgam), and ABVIMAS (Manali).**
- **The Indian Armed Forces frequently collaborate with NIM** for training purposes.
- **The institute has trained many Everest climbers and Indian defense personnel.**

Analysis of Other Options:

- **(A) Leh** – Leh is home to the **Jawahar Institute of Mountaineering and Winter Sports (JIM & WS)**, not NIM.
- **(C) Himachal Pradesh** – The **Atal Bihari Vajpayee Institute of Mountaineering and Allied Sports (ABVIMAS)** is located in **Manali, Himachal Pradesh**, but not NIM

Famous organizations and their headquarters in India:

Organization	Headquarters (HQ)	Field
Reserve Bank of India (RBI)	Mumbai, Maharashtra	Banking & Finance
Securities and Exchange Board of India (SEBI)	Mumbai, Maharashtra	Stock Market Regulation
Insurance Regulatory and Development Authority of India (IRDAI)	Hyderabad, Telangana	Insurance Regulation
Indian Space Research Organisation (ISRO)	Bengaluru, Karnataka	Space Research
Defence Research and Development Organisation (DRDO)	New Delhi	Defense Research
Council of Scientific and Industrial Research (CSIR)	New Delhi	Scientific Research
National Aeronautics Laboratory (NAL)	Bengaluru, Karnataka	Aeronautical Research
Indian Council of Agricultural Research (ICAR)	New Delhi	Agriculture Research
National Bank for Agriculture and Rural Development (NABARD)	Mumbai, Maharashtra	Rural Development
Small Industries Development Bank of India (SIDBI)	Lucknow, Uttar Pradesh	MSME Financing
Oil and Natural Gas Corporation (ONGC)	New Delhi	Oil & Gas
Bharat Heavy Electricals Limited (BHEL)	New Delhi	Engineering & Energy
Steel Authority of India Limited (SAIL)	New Delhi	Steel Manufacturing

Organization	Headquarters (HQ)	Field
Indian Railways	New Delhi	Rail Transport
Telecom Regulatory Authority of India (TRAI)	New Delhi	Telecom Regulation
Press Trust of India (PTI)	New Delhi	News & Media
National Thermal Power Corporation (NTPC)	New Delhi	Power Generation
Indian Oil Corporation (IOC)	New Delhi	Oil & Gas
Food Corporation of India (FCI)	New Delhi	Food & Agriculture
Federation of Indian Chambers of Commerce and Industry (FICCI)	New Delhi	Trade & Commerce
Confederation of Indian Industry (CII)	New Delhi	Industrial Development
National Highways Authority of India (NHAI)	New Delhi	Road Transport

Q.12 Which of the following countries is not a member of SAARC?

A. Afghanistan
B. Maldives
C. Mauritius
D. Sri Lanka

Answer: C

Sol: The correct answer is (C) Mauritius

Explanation:

- **SAARC** (South Asian Association for Regional Cooperation) is a regional intergovernmental organization and geopolitical union in South Asia. It includes **8** member countries:

    1. Afghanistan

    2. Bangladesh

    3. Bhutan

    4. India

    5. Maldives

    6. Nepal

    7. Pakistan

    8. Sri Lanka

- **Mauritius** is not a member of SAARC. While it is an important country in the Indian Ocean region, it is not included in the SAARC grouping.

Information Booster:

- **SAARC** was established in 1985 to promote regional cooperation and development among its member states in South Asia.

- The organization focuses on economic, social, cultural, and regional integration to improve the quality of life for people in the region.

Additional Information:

- **Mauritius**, while not a member of SAARC, is a member of other international organizations such as the **Commonwealth of Nations** and the **African, Caribbean, and Pacific Group of States (ACP)**.

ChatGP

Q.13 What is the name of the 12-day cybersecurity exercise launched by the Indian Defence Cyber Agency in June 2025?

A. Cyber Shakti
B. Cyber Suraksha
C. Cyber Shield
D. Cyber Warrior

Answer: B

Sol: The correct answer is (b) Cyber Suraksha

- **Cyber Suraksha** is a **12-day cybersecurity exercise** launched by the **Defence Cyber Agency** under the **Integrated Defence Staff Headquarters**, starting from **June 16, 2025**.

- The exercise aims to simulate **real-world cyber threats** and enhance India's **cyber defence** capabilities by training over **100 participants** from various **national defence and security agencies**.

- The **exercise** will focus on **cyber resilience**, **decision-making** in cyber warfare, and **leadership training**, with a special emphasis on **CISOs** (Chief Information Security Officers).

Information Booster:
• The **Cyber Suraksha exercise** is a multi-phase program designed to simulate **cyberattack scenarios** and train personnel in **cyber defence** and **leadership**.
• It runs from **June 16 to June 27, 2025**, involving **over 100 personnel** from various defence and national security agencies.
• The exercise will feature a **CISOs Conclave**, which includes talks by cyber experts and **table-top exercises** for **decision-making** during cyber crises.
• The exercise is part of India's broader effort to enhance its **national cybersecurity posture**, especially within the **defence sector**.
• Future plans include conducting similar exercises regularly to maintain a **state of cyber readiness** across all levels of defence.

Q.14 Which city is home to Google's first Safety Engineering Centre (GSEC) in the Asia-Pacific region?

A. Bangalore
B. Hyderabad
C. Chennai
D. Pune

Answer: B

Sol: The correct answer is (b) Hyderabad.
- **Google's first Safety Engineering Centre (GSEC)** in the **Asia-Pacific region** was launched in **Hyderabad**, marking it as the **1st GSEC in Asia** and the **4th globally**. The centre will focus on **cybersecurity**, **AI safety**, and **fraud prevention** to improve **digital defense** and build **responsible AI systems**.

Information Booster:

- The **GSEC** in Hyderabad is a key milestone in Google's ongoing commitment to **cybersecurity** and **user safety** across India and the Asia-Pacific region.

- The centre will utilize technologies such as **AI**, **Large Language Models (LLMs)**, **Gemini Nano**, and **SynthID** to tackle real-time cyber threats and ensure the responsible use of AI.

- **Telangana CM A Revanth Reddy** and **IT Minister D Sridhar Babu** were present at the inauguration of the centre on **June 18, 2025**.

Q.15 What is the newly approved HIV prevention shot by the US FDA, which requires just two injections per year?

A. Truvada
B. Descovy
C. Lenacapavir (Yeztugo)
D. Cabotegravir

Answer: C

Sol: The correct answer is (c) Lenacapavir (Yeztugo)
- The **US FDA** has approved **Lenacapavir**, a long-acting injectable HIV prevention drug developed by **Gilead Sciences**.

- Branded as **Yeztugo**, this drug is administered just **twice a year**, offering a **99.9% effectiveness rate** in preventing HIV according to **Phase 3 clinical trials**.

- This breakthrough treatment is a significant advancement over daily pills or current injectable methods, addressing barriers such as **pill fatigue**, **stigma**, and **access challenges**.

- **Lenacapavir** is marketed for **pre-exposure prophylaxis (PrEP)**, a method used to prevent HIV infection before potential exposure.

Information Booster:
• **Lenacapavir** works by **binding to the HIV capsid**, blocking key replication steps of the virus.
• It was previously approved as **Sunlenca** for treating multi-drug resistant HIV in patients.
• The **global approval** of **Lenacapavir** could open doors for **faster regulatory approvals** and a **global rollout** of the drug.
• The drug is expected to significantly improve **compliance** and reduce **stigma** associated with HIV prevention.
• **PrEP** is effective in reducing HIV risk by **99%** through sexual contact and **74%** through injection drug use.

Additional Information:
• **(a)Truvada** and **(b)Descovy** are oral PrEP medications, which require daily use, unlike **Lenacapavir**, which requires **just two shots a year**.
• **(d)Cabotegravir** is another injectable option, but it requires **bimonthly** injections, making **Lenacapavir** a more convenient alternative.

Q.16 Anandkumar Velkumar created history in 2025 by winning gold in the 42 km marathon at the World Speed Skating Championships held in _____.

A. Japan
B. China
C. Italy
D. South Korea

Answer: B

Sol:

The correct answer is (B) China
Explanation:
· The **2025 World Speed Skating Championships** were hosted in **China**.
· Anandkumar Velkumar won **gold in the 42 km marathon**, becoming **India's first world champion** in speed skating.
Information Booster:
· He also won **gold in the 1000m event** and **bronze in the 500m sprint** at the same championships.

Q.17 The first World Figure Skating Championships in 1896 had how many competitors?

A. 2
B. 4
C. 6
D. 8

Answer: B

Sol:

The correct answer is (B) 4
Explanation:
· The **1896 Saint Petersburg championship** saw only **four competitors**.
· It was a modest beginning but laid the foundation for **modern figure skating competitions**.
Information Booster:
· Over time, the event expanded and became open to **women (1906)** and **pairs (1908)**.

Q.18 Which number will replace the question mark (?) in the following series?
3, 2, 3, 8, 6, 24, 18, 48, ?, 48

A. 72
B. 52
C. 68
D. 92

Answer: A

Sol: **Given**: 3, 2, 3, 8, 6, 24, 18, 48, ?, 48
Logic: Odd term is multiplies by 1, 2, 3, 4 and Even term is multiplied by 4, 3, 2, 1
For, Odd term:
3 × 1 = **3**, 3 × 2 = **6**, 6 × 3 = **18**, 18 × 4 = **72**
For, Even term:
2 × 4 = **8**, 8 × 3 = **24**, 24 × 2 = **48**, 48 × 1 = **48**
The missing term is **72**.
Thus, correct option is (a).

Q.19 What should come in place of the question mark (?) in the given series based on the English alphabetical order?
OWEM, XFNV, GOWE, PXFN, ?

A. YOGO
B. YGWO
C. YGOW
D. WOGY
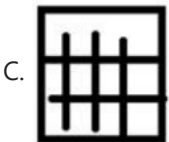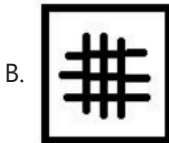
Answer: C

Sol: **Given**: OWEM, XFNV, GOWE, PXFN, ?

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

Logic: Letters are increasing + 9 place.
O + 9 = X, X + 9 = G, G + 9 = P, P + 9 = **Y**

W + 9 = F, F + 9 = O, O + 9 = X, X + 9 =**G**
E + 9 = N, N + 9 = W, W + 9 = F, F + 9 = **O**
M + 9 = V, V + 9 = E, E + 9 = N, N + 9 = **W**
So, the missing term is **YGOW**.
Thus, correct option is (c).

Q.20 Select the figure that will come next in the following figure series.

A.

B.

C.

D.

Answer: D

Sol: Given:

Logic: The given lines in figure is increasing + 1 vertically and horizontally pattern but not touch the outline.
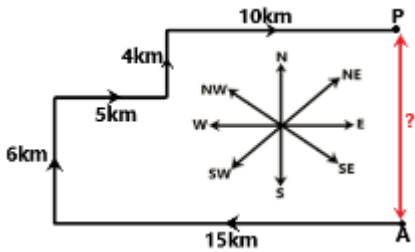
Thus, correct option is (d).

Q.21 Raj starts from Point A and drives 15 km towards the west. He then takes a right turn, drives 6 km, turns right and drives 5 km. He then takes a left turn and drives 4 km. He takes a final right turn, drives 10 km and stops at Point P. How far (shortest distance) and towards which direction should he drive in order to reach Point A again? (All turns are 90 degrees turns only unless specified.)

A. 12 km towards the north
B. 15 km towards the west
C. 10 km towards the south
D. 15 km towards the east

Answer: C

Sol: Given:
Raj starts from Point A and drives 15 km towards the west.
He then takes a right turn, drives 6 km, turns right and drives 5 km.
He then takes a left turn and drives 4 km.
He takes a final right turn, drives 10 km and stops at Point P.
From the given information path diagram will be.

6 + 4 = 10km

He far **10km** and towards **South** direction should he drive in order to reach Point A again.

Thus, correct option is (c).

Q.22 Select the number-pair in which the two numbers are related in the same way as are the two numbers of the following number-pair.

4:28

A. 9:153
B. 3:48
C. 2:4
D. 6:136

Answer: A

Sol: Given: 4 : 28

Logic: Square of 1st number, multiplied the number one less than itself and sum them together to get 2nd number.

4^2 = 16, 4 × 3 = 12

16 + 12 = **28**

Similarly,

9 : 153

9^2 = 81, 9 × 8 = 72

81 + 72 = **153**

Thus, correct option is (a).

Q.23 Which two signs should be interchanged in the following equation to make it correct?

3 - 6 × 18 + 4 ÷ 2 = 2

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

Answer: B

Sol: Given: 3 - 6 × 18 + 4 ÷ 2 = 2

Given equation is solve by **BODMAS** rule.

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

Now, we check each options.

Option (a): - and ÷ **(Not Follow)**

New equation: 3 ÷ 6 × 18 + 4 - 2 = 2

1.5 × 18 + 4 - 2 = 2

27 + 4 - 2 = 2

29 ≠ 2

Option (b): × and - **(Follow)**

New equation: 3 × 6 - 18 + 4 ÷ 2 = 2

3 × 6 - 18 + 2 = 2

18 - 18 + 2 = 2

20 - 18 = 2

2 = 2

Option (c): × and ÷ **(Not Follow)**

New equation: 3 - 6 ÷ 18 + 4 × 2 = 2

Option (d): × and + **(Not Follow)**

New equation: 3 - 6 + 18 × 4 ÷ 2 = 2

3 - 6 + 18 × 2 = 2

3 - 6 + 36 = 2

33 ≠ 2

Thus, correct option is (b).

Q.24 Out of the following four words, three have a certain kind of similarity and one is odd. Choose the odd one out.

A. Herd
B. hut
C. house
D. Igloo

Answer: A

Sol: Now, we check each options.
Option (a): Herd – A group of animals.
Option (b): Hut – A type of shelter or house.
Option (c): House – A type of house.
Option (d): Igloo – A type of house made of ice.
Hut, House and **Igloo** are all types of shelters or house.
Herd refers to a group of animals, which is unrelated to shelters.
Thus, correct option is (a).

Q.25 Based on the English alphabetical order, three of the following four letter-cluster pairs are alike in a certain way and thus form a group. Which pair DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster pair.)

A. DK-LU
B. JQ-RA
C. QX-YH
D. MR-CJ

Answer: D

Sol:

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

Logic: 1st letter + 8 = 3rd letter and 2nd letter + 10 = 4th letter
Now, we check each options.
Option (a): DK-LU **(Follow)**
D + 8 = L, K + 10 = U
Option (b): JQ-RA **(Follow)**
J + 8 = R, Q + 10 = A
Option (c): QX-YH **(Follow)**
Q + 8 = Y, X + 10 = H
Option (d): MR-CJ **(Not Follow)**
M + 8 $\neq$ C, R + 10 $\neq$ J
Thus, correct option is (d).

Q.26 Based on the English alphabetical order, three of the following four letter-clusters are alike in a certain way and thus form a group. Which letter-cluster DOES NOT belong to that group?
(Note: The odd one out is not based on the number of consonants/vowels or their position in the letter-cluster.)
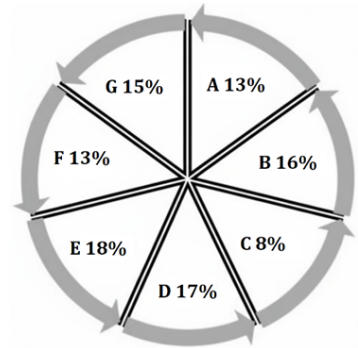
A. NVD
B. MVC
C. OWE
D. KSA

Answer: B

Sol:

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

Logic: 1st letter + 8 = 2nd letter and 2nd letter + 8 = 3rd letter
Now, we check each options.
Option (a): NVD (Follow)
N + 8 = V, V + 8 = D
Option (b): MVC (Not Follow)
M + 8 ≠ V, V + 8 ≠ C
Option (c): OWE (Follow)
O + 8 = W, W + 8 = E
Option (d): KSA (Follow)
K + 8 = S, S + 8 = A
Thus, correct option is (b).

Q.27 The population of 7 villages is shown in the following pie chart.

If the total population of all the villages is 60000, what is the population of village G?

A. 9000
B. 8000
C. 11000
D. 10000

Answer: A

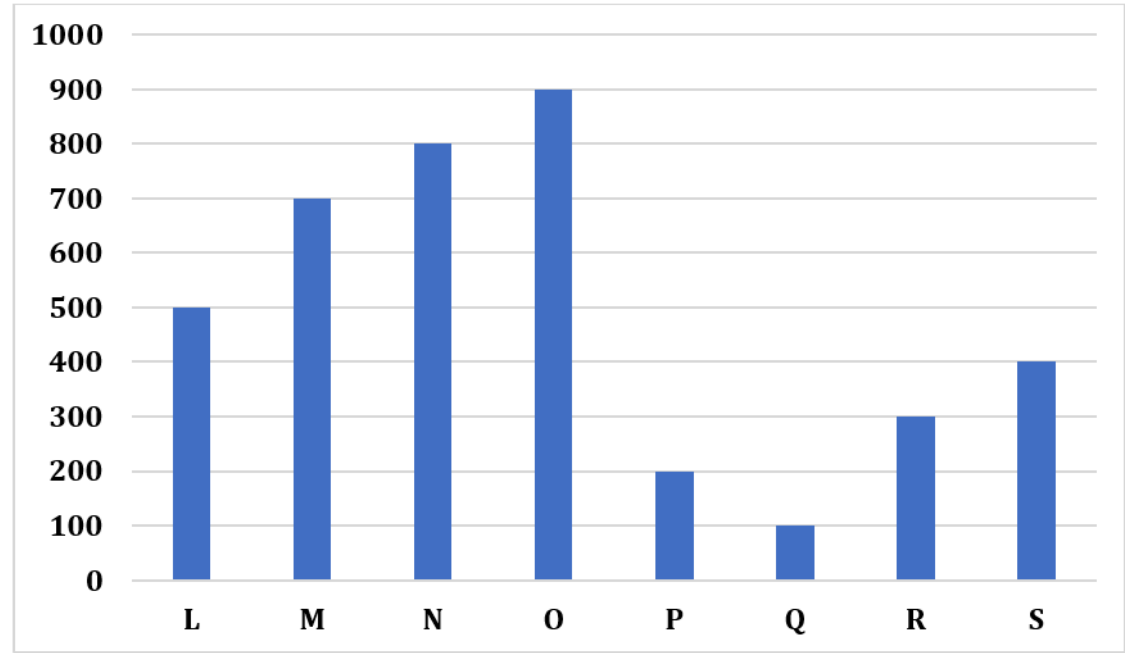**Sol: Given:**
Total population = 60000
Village G = 15%
Formula Used:

$$\text{Population of G} = \text{Total Population} \times \left(\frac{\text{Percentage}}{100} \right)$$

Solution:
Population of G = $60000 \times (\frac{15}{100})$
= 60000 × 0.15
= 9000

Q.28 The bar graph given below shows the number of calculators sold by 8 different shops.

What is the ratio of number of total calculators sold by M and N to the number of total calculators sold by P and Q?

A. 6:1
B. 4:1
C. 3:1
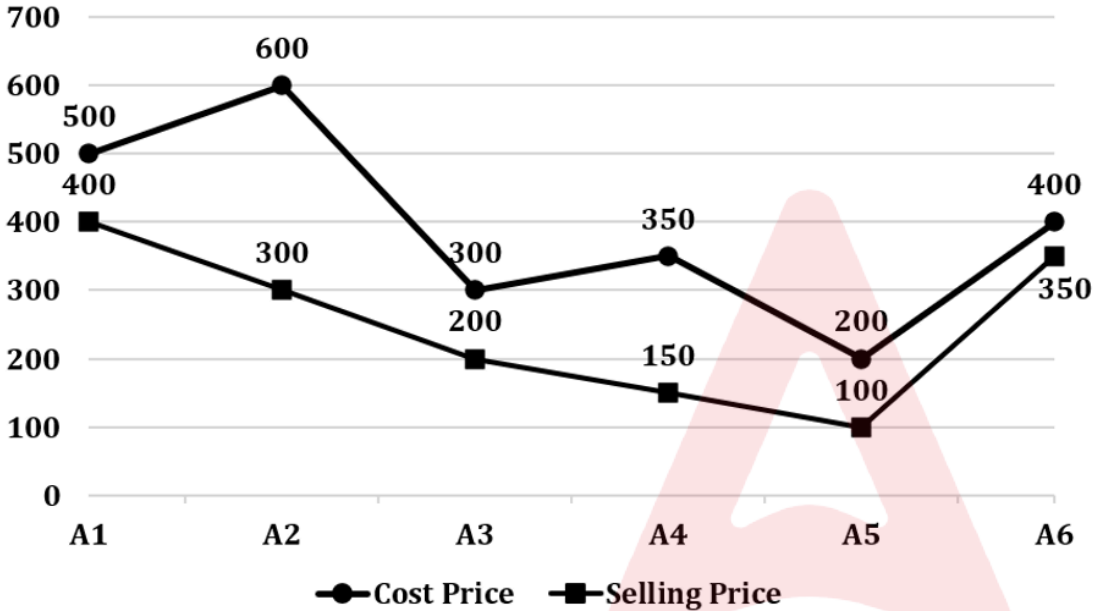D. 5:1

Answer: D

Sol: Solution:

Number of total calculators sold by M and N = 700 +800 =1500

Number of total calculators sold by P and Q = 200 +100 =300

Ratio of number of total calculators sold by M and N to the number of total calculators sold by P and Q

= 1500 : 300 = 5 : 1

Q.29 The line chart given below shows the cost price and selling price of 6 articles.

Loss = Cost Price - Selling price
Which of the following statement is correct?
I = The average value of loss on articles A1 and A2 is 300.
II = The difference between the value of loss on articles A5 and A6 is 50.
III = The difference between cost price and selling price of all articles is 750.

A. I and II
B. Only I
C. II and III
D. Only II

Answer: D

Sol: Given:

From the chart (Cost Price, Selling Price):

A1: (500, 400)

A2: (600, 300)

A3: (300, 200)

A4: (350, 150)

A5: (200, 100)

A6: (400, 350)
Loss = Cost Price - Selling Price.

Formula Used:

$$\text{Average} = \frac{\text{sum}}{\text{count}}$$

Solution:
Losses:
A1 = 500 - 400 = 100
A2 = 600 - 300 = 300
A3 = 300 - 200 = 100
A4 = 350 - 150 = 200
A5 = 200 - 100 = 100
A6 = 400 - 350 = 50

I) Average loss on A1 & A2 = $\dfrac{100 + 300}{2} = 200 \neq 300$ → False.

II) Difference between losses on A5 & A6 =|100 - 50|= 50 → True.

III) $\sum CP = 2350, \sum SP = 1500$

total difference = 2350 – 1500 = $850 \neq 750$ → False.

Hence, only statement II is correct.

Q.30 After 59 litres of petrol was poured into an empty storage tank, it was still 1% empty. How much more petrol must be poured (in litres, rounded off to one decimal place) into the storage tank in order to fill it?

A. 59.6
B. 58.6
C. 60
D. 0.6

Answer: D

Sol: Given:
Petrol poured = 59 L

Tank is still 1% empty

Need: Petrol required to completely fill the tank (to 1 decimal place)

Solution:

If 59 L = 99% of capacity:

Total Capacity = $\dfrac{59}{0.99} = 59.5959 \approx 59.6$ L

Remaining petrol = 59.6 - 59 = 0.6 L

Q.31 A number is increased by 30% and then decreased by 30%. Find the net change (in per cent) in the number.

A. 10% increase
B. 10% decrease
C. 9% increase
D. 9% decrease

Answer: D

Sol: Given:
A number is increased by 30%.

Then the new number is decreased by 30%.

Need: Net percentage change

Formula Used:

Net change = a + b + $\dfrac{ab}{100}$

Solution:

Here, a = +30% and b = -30%

Net change = 30 - 30 + $\dfrac{30 \times (-30)}{100}$

= 0 - 9 = -9%

= 9% decrease

Q.32 The monthly incomes of two friends Kiran and Mahesh, are in the ratio 5 : 7 respectively and each of them saves ₹78000 every month. If the ratio of their monthly expenditure is 1 : 3, find the monthly income of Kiran(in ₹).

A. 98500
B. 97500
C. 96500
D. 136500

Answer: B

Sol: Given:

The monthly incomes of Kiran and Mahesh are in the ratio 5 : 7.

Both Kiran and Mahesh save ₹78,000 every month.

The ratio of their monthly expenditures is 1 : 3.

Formula Used:

Income = Expenditure + Savings

Solution:

Let Kiran's monthly income be 5x and Mahesh's monthly income be 7x, where x is the common multiplier.

Let Kiran's monthly expenditure be E_k and Mahesh's monthly expenditure be E_m.

Kiran's income = 5x

Kiran's savings = ₹78,000

Kiran's expenditure = E_k

So, Kiran's income = Kiran's expenditure + Kiran's savings:

5x = E_k + 78,000

Therefore:

$E_k = 5x - 78,000$

Mahesh's income = 7x

Mahesh's savings = ₹78,000

Mahesh's expenditure = E_m

So, Mahesh's income = Mahesh's expenditure + Mahesh's savings:

7x = E_m + 78,000

Therefore:

$$E_m = 7x - 78{,}000$$

Using the ratio of their expenditures:
The ratio of their expenditures is given as 1 : 3. Therefore:

$$\frac{E_k}{E_m} = \frac{1}{3}$$

$$\frac{5x - 78{,}000}{7x - 78{,}000} = \frac{1}{3}$$

3(5x - 78,000) = 1(7x - 78,000)

15x - 234,000 = 7x - 78,000

15x - 7x = 234,000 - 78,000

8x = 156,000

$$x = \frac{156{,}000}{8} = 19{,}500$$

Kiran's income = 5x = 5 × 19,500 = ₹97,500
The monthly income of Kiran is ₹97,500.

Q.33 The sum of five numbers is 655. The average of the first two numbers is 78 and the third number is 119. Find the average of the remaining two numbers?

A. 197
B. 198
C. 191
D. 190

Answer: D

Sol: Given:
The sum of five numbers is 655.
The average of the first two numbers is 78.
The third number is 119.
Formula Used:
Sum of two numbers = Average × Number of terms
Average of remaining two numbers = (Total sum - Sum of first two numbers - Third number) / Number of terms
Solution:
Sum of first two numbers = 78 × 2 = 156
Sum of remaining two numbers = 655 - 156 - 119
=> Sum of remaining two numbers = 380
=> Average of remaining two numbers = $\frac{380}{2}$ = 190

Q.34 A sum of Rs.18,000 is lent at a compound interest of 18% compounded half-yearly. If the loan is repaid after 18 months and rounded to the nearest ten rupees, the interest paid is equal to _____.

A. Rs.5,120
B. Rs.5,230

C. Rs.5,310
D. Rs.5,050

Answer: C

Sol: Given:

Principal (P) = 18,000
Rate = 18% per annum (compounded half-yearly)
Time = 18 months = 1.5 years = 3 half-years
Rate per half-year = 18/2 = 9%

Formula Used:
A = P(1 + r/100)^n
Interest = A - P

Solution:

$$\text{C.I.} = P\left(1 + \frac{r}{100}\right)^3 - P$$

$$= 18000\left[\left(1 + \frac{9}{100}\right)^3 - 1\right]$$

$$= 18000\left[\left(\frac{109}{100}\right)^3 - 1\right]$$

$$= 18000 \times \frac{295029}{1000000}$$

$$= 18 \times \frac{295029}{1000}$$

$$= 5310.522$$

Alternate Solution:

Calculation of successive percentage for 9%, 9%, and 9%:
Net % increase = (1 + 0.09) × (1 + 0.09) × (1 + 0.09) - 1
= 1.09 × 1.09 × 1.09 - 1
= 1.295029 - 1
= 0.295029 = 29.5029%
C.I = 18000 × 29.5029%
C.I = 5310.52

Q.35 An amount of ₹50,000 is invested at an annual interest rate of 4%, compounded half yearly. What will be the total amount after 2 years (round up to two decimal places)?

A. ₹52,121.61
B. ₹55,000
C. ₹54,121.61
D. ₹53,120

Answer: C

Sol: Given:

Principal , P = ₹50,000

Annual interest rate (R = 4%)

Compounded half-yearly

Time = 2 years

Need: Total amount to 2 decimal places

Formula Used:

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

Solution:

Half-yearly rate = $\frac{4}{2}$ = 2%

Number of compounding periods = 2 × 2 = 4

$$A = 50000\left(1 + \frac{2}{100}\right)^{4}$$

$$= 50000(1.02)^{4}$$

= 50000 × 1.08243216 = ₹54,121.61(approx)

Q.36 A retailer buys an electronic item for ₹175. His overhead expenses are ₹25. He sells the electronic item for ₹400 and makes x%' profit. The value of x is:

A. 100
B. 120
C. 90
D. 80

Answer: A

Sol: Given:

Cost price of item = ₹175

Overhead expenses = ₹25

Selling price = ₹400

Profit % = x%

Formula Used:

$$\text{Profit\%} = \frac{SP - CP}{CP} \times 10$$

Solution:

Total CP = 175 + 25 = 200

Profit = 400 - 200 = 200

x = $\frac{200}{200} \times 100$ = 100

Q.37 A sum of ₹23,808 is divided between A, B, C and D such that the ratio of the shares of A and B is 8 : 9, that of B and C is 3 : 5, and that of C and D is 1 : 2. What is the share of B?

A. ₹3,456
B. ₹3,264
C. ₹3,072
D. ₹3,546

Answer: A

Sol: **Given:**
A:B = 8:9, B:C = 3:5, C:D = 1:2
Total amount = ₹23,808

Solution:

Equalize ratios

From (A : B = 8 : 9), let
A=8k, B=9k

From (B:C=3:5), write
B = 3m, C = 5m

Equate B:
9k = 3m

m = 3k

Thus,
C = 5m = 5(3k) =15k

From C : D = 1 : 2 , write
C = 1n,D = 2n

Equate C:
1n = 15k

n = 15k

Thus,
D = 2n = 30k
Sum all shares

$$A = 8k, B = 9k, C = 15k, D = 30k$$

Total:
8k + 9k + 15k + 30k = 62k

Given:
62k = 23808
$$k = \frac{23808}{62} = 384$$
B's share

B = 9k = $9 \times 384 = 3456$

Q.38 A bike goes 89 meters in a second. Find its speed in km/hr.

A. 320.4
B. 327.6
C. 329.6
D. 315.9

Answer: A

Sol: **Given:**
Speed of bike = 89 meters/second

Convert this speed into km/hr

Formula Used:

$$1 \text{ m/s} = \frac{18}{5} \text{ km/hr}$$

Solution:

$$89 \times \frac{18}{5} = 89 \times 3.6 = 320.4 \text{ km/hr}$$

Q.39 Choose the options that are similar to the address format.
I. 98, Maple Avenue, New York, NY 10001
II. Maple Avenue, New York, NY 10001, 98
III. 89, New York, NY 10001, Maple Avenue
IV. New York, YN 10001, Maple Avenue, 98

A. Only I and II
B. Only II and III
C. Only I and IV
D. Only III and IV

Answer: A

Sol: Given:
I. 98, Maple Avenue, New York, NY 10001
II. Maple Avenue, New York, NY 10001, 98
III. 89, New York, NY 10001, Maple Avenue
IV. New York, NY 10001, Maple Avenue, 98
Logic:
The correct address format typically follows: house number → street name → city → state → postal code.
In options I and II, the house number, street name, city, state, and postal code are in the correct order or easily recognizable despite minor rearrangement.
Facts & Explanation (Operation-wise):
I. "98, Maple Avenue, New York, NY 10001" - Correct format: house number → street → city → state → postal code.
II. "Maple Avenue, New York, NY 10001, 98" - While the house number is placed last, the address components are in a recognizable sequence.
Final Answer: (A) Only I and II
Final Correct Option: (A)

Q.40 Choose the options that are similar to the address format.
I. 225, Rose Street, Los Angeles, CA 90001
II. Rose Street, Loss Angeles, CA 90001, 225
III. Los Angale, CA 90001, Rose Street, 225
IV. 225, Loss Angeles, CA 90001, Rose Street

A. Only I and II
B. Only II and III
C. Only I and IV
D. Only II and IV

Answer: D

Sol: Given:
I. 225, Rose Street, Los Angeles, CA 90001
II. Rose Street, Loss Angeles, CA 90001, 225
III. Los Angale, CA 90001, Rose Street, 225
IV. 225, Loss Angeles, CA 90001, Rose Street

Logic:
The correct address format follows: house number → street name → city → state → postal code.
I has the correct format but contains the correct spelling of "Los Angeles."
II and IV are similar because although the city is misspelled as "Loss Angeles," they both maintain the correct address structure (even with the swap of house number and street name).
III has an incorrect sequence, so it's not considered a match.

Facts & Explanation:
II. "Rose Street, Loss Angeles, CA 90001, 225" - The address is in a valid format, despite the misspelling of the city, as it follows the sequence: street → city → state → postal code → house number.

IV. "225, Loss Angeles, CA 90001, Rose Street" - This follows the sequence correctly as well: house number → city → state → postal code → street name (with a misspelling of "Los Angeles").
Final Answer: (D) Only II and IV
Final Correct Option: (D)

Q.41   The devices that work with computer systems as soon as they are connected are described as:

A. Hot Swapping
B. Bay Swap
C. Plug-N-Play
D. USB Swapping

Answer: C

Sol: **Plug N Play** refers to **hardware devices** that are recognized by the **operating system** immediately upon **connection**, without requiring **manual configuration** or additional **driver installation**. This allows the device to start working **instantly** after being plugged in.
Important Key Points:
1. **Plug N Play** devices need **no manual setup**.
2. The **operating system** detects and configures the device **automatically**.
3. Common examples include **USB keyboards**, **mice**, and **storage devices**.
4. It improves **ease of use** and **system compatibility**.
Knowledge Booster:
· **Option a** is incorrect because **Hot Swapping** refers to removing or inserting devices **without shutting down** the system.
· **Option b** is incorrect because **Bay Swap** is not a standard term used in hardware connectivity.
· **Option d** is incorrect because **USB Swapping** is not a recognized feature or term related to automatic device configuration.

Q.42   Which of the following is the time taken by the CPU to access a location in memory?

A. Instruction cycle
B. Memory formatting time
C. Memory access time
D. CPU frequency

Answer: C

Sol: The correct answer is: **C) Memory access time**
Explanation:
- **Memory access time** refers to the time taken by the **CPU** to access a specific location in memory and retrieve or store data. It includes both the **time to address the memory** and the **time to retrieve the data**.

- It is a critical performance factor in computing, as faster memory access time leads to **improved system performance**.

Information Booster:
- **Instruction cycle** refers to the time taken by the CPU to fetch, decode, and execute an instruction.

- **Memory formatting time** is not a standard term related to memory access in CPUs.

- **CPU frequency** refers to the speed at which the CPU operates, measured in **hertz (Hz)**, and is different from the time taken to access memory.

Additional Knowledge:
- **Memory access time** can be affected by factors such as **cache memory**, **RAM type**, and the **architecture of the system**.

- In systems with **cache memory**, the CPU often accesses data from the **cache** first, significantly reducing the **memory access time** compared to accessing data directly from main memory.

Q.43   Which of the following is not a web mail provider?

A. Gmail
B. Outlook
C. Baidu

D. Yahoo

Answer: C

Sol: The correct answer is (c) Baidu.
• **Baidu** is a **Chinese search engine**, not a webmail service.
Information Booster:
• Gmail → Provided by **Google** (launched 2004).
• Outlook → Provided by **Microsoft**.
• Yahoo Mail → Provided by **Yahoo** (launched 1997).
Additional Knowledge:
• Baidu is often called the **"Google of China."**
• Popular webmail protocols: **POP3, IMAP, SMTP**.
• Email stands for **Electronic Mail**.

Q.44 Which of the following keyboard shortcuts is used to move through each of the open tabs going to the right in Chrome browser?

A. Alt + Tab
B. Ctrl + Tab
C. Ctrl + N
D. Alt + N

Answer: B

Sol: The correct answer is (b) Ctrl + Tab
• **Ctrl + Tab** allows switching to the next tab (right side) in the browser.
• Useful for navigating multiple open tabs quickly.
Information Booster:
• Move to previous tab: **Ctrl + Shift + Tab**
• Open a new tab: **Ctrl + T**
• Close current tab: **Ctrl + W**
Additional Knowledge:
• Reopen last closed tab: **Ctrl + Shift + T**
• Switch to specific tab: **Ctrl + 1 to Ctrl + 8**

Q.45 Which of the following is a feature of a Dot Matrix Printer?

A. Coloured Printing
B. High-Resolution Printing
C. Prints Multiple Copies using Carbon Paper
D. Quiet Printing

Answer: C

Sol: A key feature of **Dot Matrix Printers** is their ability to **print multiple copies using carbon paper**. This is because dot matrix printers use an impact mechanism, where the print head strikes an ink ribbon to form characters on the paper, allowing them to produce multiple copies simultaneously if carbon paper is placed between the sheets.
Important Key Points:
1. **Dot Matrix Printers** are impact printers, making them suitable for tasks that require printing multiple copies using carbon paper, such as receipts and invoices.
2. Although outdated compared to modern printers, dot matrix printers are still used in specific applications where such functionality is needed.
Knowledge Booster:
· **Coloured Printing** is not a feature of dot matrix printers, as they are typically limited to monochrome.
· **High-Resolution Printing** is not characteristic of dot matrix printers; they offer lower resolution compared to modern printers like inkjet or laser.
· **Quiet Printing** is not a feature of dot matrix printers; they tend to be noisier than modern non-impact printers.

Q.46 Hyperlinks can be created between a Word document and _____.

A. another word document
B. a webpage on the www
C. a webpage on a company Internet
D. all of these

Answer: D

Sol:

Hyperlinks can be created between a Word document and:
1. **Another Word document**
2. **A webpage on the World Wide Web (WWW)**
3. **A webpage on a company's internal network (Intranet)**

Important Key Points:
1. **Link to another Word document**: You can create a hyperlink in a Word document that links to another Word document, making it easy to navigate between related files.
2. **Link to a webpage on the WWW**: You can link to external webpages on the internet by creating a hyperlink to a URL.
3. **Link to a webpage on a company's intranet**: You can create a hyperlink to an internal webpage on your company's network (intranet), allowing easy access to resources available within the organization.

Knowledge Booster:
· **Hyperlinks** are an essential part of Word documents, allowing you to connect various resources, whether they are local files, external websites, or internal company resources.
· Hyperlinks improve document interactivity and usability by providing quick access to related content.

Q.47 **Which of the following statement is true with respect to the Random-Access Memory?**

A. Used specially for the booting process
B. Stores data in Gigabytes
C. Non-volatile memory
D. Writing data to the memory is faster

Answer: D

Sol: The correct answer is (d) Writing data to the memory is faster

Explanation:
• **Random-Access Memory (RAM)** is a type of computer memory that can be read from and written to. It is the primary working memory of a computer system.
• One of its key characteristics is that it allows **fast and direct access** to any memory address, regardless of its physical location.
• Compared to other types of storage like Hard Disk Drives (HDDs) or Solid State Drives (SSDs), RAM has significantly **faster read and write speeds**.
• This high speed is essential for the CPU to quickly access data and instructions for currently running programs and processes, which is why it is used as the computer's main memory.

Information Booster:
• The term "random access" means that the time it takes to access any piece of data is the same, no matter where it is located.
• RAM is a **volatile memory**, meaning it requires continuous power to retain the stored information. The data is lost as soon as the power is turned off.
• RAM is divided into two main types: **Static RAM (SRAM)**, which is faster and more expensive, and **Dynamic RAM (DRAM)**, which is slower, less expensive, and commonly used for a computer's main memory.
• The amount of RAM (e.g., 8 GB, 16 GB) is a critical factor for the performance of a computer, especially when running multiple applications or resource-intensive software.

Additional Knowledge:
(a) Used specially for the booting process (Option a)
• The **booting process** primarily uses instructions stored in **Read-Only Memory (ROM)** or Flash Memory, which contains the BIOS (Basic Input/Output System) or UEFI (Unified Extensible Firmware Interface).
• RAM is only used during the boot process after the initial instructions from ROM are executed, to load the operating system.

(b) Stores data in Gigabytes (Option b)
• While modern RAM modules do store data in **Gigabytes (GB)** (e.g., 8 GB, 16 GB, 32 GB), this is not a unique or defining characteristic.
• Many other storage devices, such as hard drives and SSDs, also store data in Gigabytes or even Terabytes (TB), making this a general feature of storage rather than a specific truth about RAM.

(c) Non-volatile memory (Option c)
• This statement is **false**. RAM is a **volatile memory**.
• This means that the data stored in RAM is temporary and is completely erased when the power is turned off.
• A **non-volatile memory** retains its data even without power, examples of which include ROM, hard disk drives, SSDs, and USB flash drives.

Q.48 **Except which of the following functions, a formula with a logical function shows the words "TRUE" or "FALSE" as a result?**

A. NOT
B. OR

C. IF

D. AND

Answer: C

Sol:

The **IF** function in Excel is unique because it can return different results based on a condition, rather than just "TRUE" or "FALSE." While logical functions like **NOT**, **OR**, and **AND** return **TRUE** or **FALSE** based on the evaluation of conditions, the **IF** function allows you to specify custom outcomes if a condition is met (TRUE) or not met (FALSE).

Important Key Points:

1. **NOT**, **OR**, and **AND** are all logical functions that evaluate conditions and return either **TRUE** or **FALSE**.

2. The **IF** function allows you to return specific values or text (such as "Yes", "No", or a numerical result) depending on whether a condition is TRUE or FALSE.

3. The **IF** function syntax is: =IF(logical_test, value_if_true, value_if_false), where you can specify values for both true and false outcomes.

4. Logical functions are primarily used to test conditions and decisions, while **IF** provides more flexibility by allowing custom results.

Knowledge Booster:

· **(a) NOT**: The **NOT** function inverts a logical value, turning **TRUE** to **FALSE** and vice versa.

· **(b) OR**: The **OR** function returns **TRUE** if at least one of the conditions is true; otherwise, it returns **FALSE**.

· **(d) AND**: The **AND** function returns **TRUE** only if all conditions are true; otherwise, it returns **FALSE**.

Q.49 Unauthorized access to a bank account for carrying online transactions is an example of:

A. Phishing

B. Intellectual property theft

C. Virus attack

D. Hacking

Answer: D

Sol: Hacking refers to gaining unauthorized access to data in a system. In this case, accessing someone's bank account without permission to carry out online transactions is classified as hacking.

Important Key Points:

1. **Hacking** - Involves unauthorized access to computer systems or accounts for malicious purposes.

2. **Phishing** - A form of social engineering used to trick users into providing sensitive information, usually through fake emails or websites.

Knowledge Booster:

· **Intellectual Property Theft**: Involves stealing or using someone else's intellectual work without permission, which is unrelated to unauthorized bank transactions.

· **Virus Attack**: Refers to malicious software that infects a computer system but does not directly involve unauthorized bank account access.

Q.50 Which one of the following software applications would be the most appropriate for performing numerical and statistical calculations?

A. Database

B. Spreadsheet

C. Graphics package

D. Document processor

Answer: B

Sol: A **Spreadsheet** is designed to handle **numerical data**, apply **formulas**, and perform **statistical calculations** efficiently. It allows users to organize data in **rows and columns**, use **built in functions**, and generate **charts** for analysis. Therefore, it is the most suitable tool for **numerical and statistical tasks**.

Important Key Points:

1. **Spreadsheet** applications support **mathematical and statistical functions**.

2. They organize data in a **tabular form** for easy manipulation.

3. They can generate **graphs and charts** to visualize data patterns.

4. Examples include **Microsoft Excel**, **Google Sheets**, and **LibreOffice Calc**.

Knowledge Booster:

· **Option a** is incorrect because a **Database** is mainly used for **storing and managing data**, not direct calculation.

· **Option c** is incorrect because a **Graphics package** focuses on **image creation and editing**.

· **Option d** is incorrect because a **Document processor** is used for **text creation and formatting**, not numeric analysis.