

## Bihar Jeevika (Common Subjects) MBT Based on 4th December 1st shift

**Q.1** Oscar for Best Picture at the 96th Academy Awards in 2024 was awarded to which film?

- A. Barbie
- B. Killers of the Flower Moon
- C. Oppenheimer
- D. The Holdovers

**Answer:** C

**Sol:** The correct answer is (c) Oppenheimer

### Explanation:

- Oppenheimer won the Oscar for Best Picture at the 96th Academy Awards in 2024.
- The film also secured six additional awards, highlighting its excellence in multiple categories.
- Christopher Nolan won Best Director for the same film.
- Cillian Murphy received Best Actor, and Robert Downey Jr. won Best Supporting Actor for their performances.
- The movie became one of the most awarded films of the year, recognized globally.

### Information Booster:

- The 96th Academy Awards ceremony was held in 2024, honoring the best films of 2023.
- Oppenheimer is a biographical film about J. Robert Oppenheimer and the development of the atomic bomb during WWII.

### Additional Knowledge:

(a) Barbie (Option a)

- Although a major box-office success, Barbie did not win Best Picture.
- It received nominations in various categories, including Best Supporting Actor and Best Original Song.

(b) Killers of the Flower Moon (Option b)

- Directed by Martin Scorsese, it received multiple nominations but did not win Best Picture.
- Lily Gladstone was a major contender for Best Actress.

(d) The Holdovers (Option d)

- The film received critical acclaim and won awards in acting categories, but not Best Picture.

**Q.2** At the 71st National Film Awards, the Best Actor award was shared between Shah Rukh Khan and \_\_\_\_.

- A. Rajkummar Rao
- B. Pankaj Tripathi

- C. Vikrant Massey
- D. Vicky Kaushal

Answer: C

Sol: The correct answer is (C) Vikrant Massey

Explanation:

- **Best Actor award (tie):**
- **Shah Rukh Khan** for *Jawan*.
- **Vikrant Massey** for *12th Fail*.
- This was a rare tie, celebrating two powerful performances.

Information Booster:

- *Jawan* (2023) was directed by **Atlee** and became one of SRK’s biggest blockbusters.
- *12th Fail* (2023) is based on the struggles of UPSC aspirants.
- Past Best Actor (2022): **Allu Arjun (Pushpa: The Rise)**.
- Vikrant Massey has steadily grown as one of India’s **most acclaimed new-generation actors**.

Q.3 Shekhar Kapur received the Padma Bhushan in 2025 for his work in which field?

- A. Science
- B. Medicine
- C. Literature
- D. Art

Answer: D

Sol: The correct answer is: (D) Art

Explanation:

- **Shekhar Kapur**, the renowned Indian **film director, actor, and producer**, was awarded the **Padma Bhushan** in **2025** in the field of **Art**.
- He is internationally recognized for directing critically acclaimed films such as **“Bandit Queen”, “Elizabeth”, and “Elizabeth: The Golden Age”**.
- The award acknowledged his **outstanding contributions to cinema**, both in India and globally.

Information Booster:

- The **Padma Bhushan** is India’s **third-highest civilian award**, presented for **distinguished service of a high order** in various fields.
- Shekhar Kapur has received multiple international accolades, including **BAFTA** and **Golden Globe nominations**.
- In 2020, he was appointed **President of the Film and Television Institute of India (FTII)**.
- He has also served on juries for prestigious festivals like **Cannes and Venice Film Festival**.
- His work is known for its **blend of artistic storytelling and historical depth**.

Additional Knowledge:

- The **2025 Padma Awards** recognized several contributors in diverse fields, including **science, public affairs, literature, and art**.
- Other prominent recipients in the **Art category** included musicians, dancers, and filmmakers.
- Shekhar Kapur’s international success has helped place **Indian cinema on the global map**.
- His upcoming works continue to bridge **Hollywood and Indian cinematic narratives**, influencing a new generation of filmmakers.

Q.4 What is the amount of cash incentive provided to pregnant women and lactating mothers under the Pradhan Mantri Matru Vandana Yojana – PMMVY?

- A. ₹5,000
- B. ₹2,000
- C. ₹3,000
- D. ₹7,000

Answer: A

Sol: Correct Answer: A — ₹5,000

Explanation

- Under the **Pradhan Mantri Matru Vandana Yojana (PMMVY)**, eligible **pregnant women and lactating mothers** receive a **cash incentive of ₹5,000** for the first live birth.
- The incentive is provided in **3 installments**, linked to early registration, antenatal check-ups, and child birth registration.
- The scheme aims to ensure **better nutrition, reduce maternal mortality**, and encourage **safe delivery practices**.

Information Booster

- PMMVY is implemented by the **Ministry of Women and Child Development**.
- It supplements the **Janani Suraksha Yojana (JSY)** benefits provided under the National Health Mission.

Additional Knowledge (Exam-Focused)

- PMMVY was launched in **2017**, replacing the **Indira Gandhi Matritva Sahyog Yojana (IGMSY)**.
- The scheme supports the **first pregnancy** to break the cycle of maternal undernutrition.

Q.5 In which year did the Government of India launch the Antyodaya Anna Yojana?

- A. 1995
- B. 2000
- C. 2005
- D. 1998

Answer: B

Sol: Correct Answer: (B) 2000

Explanation:

- **Antyodaya Anna Yojana (AAY)** was launched **on 25th December 2000** by the Government of India.
- The scheme aims to provide **highly subsidized food grains** to the **poorest of the poor** households.

Information Booster:

- Under AAY, eligible families receive:
  - **35 kg of food grains per month**
  - **Rice at ₹3/kg**
  - **Wheat at ₹2/kg**
- The scheme was launched under the **Ministry of Consumer Affairs, Food and Public Distribution**.
- It initially targeted **1 crore families**, later expanded based on poverty levels.

Q.6 Which organization is the implementing agency for the Satat Jeevikoparjan Yojana (SJY) in Bihar?

- A. Bihar State Industrial Development Corporation (BSIDC)
- B. Bihar Rural Livelihoods Promotion Society (JEEViKA)
- C. Bihar State Milk Co-operative Federation Ltd. (COMFED)
- D. Bihar Urban Infrastructure Development Corporation (BUIDCO)

Answer: B

Sol: The correct answer is (b) Bihar Rural Livelihoods Promotion Society (JEEViKA)

Explanation:

- The Bihar Rural Livelihoods Promotion Society (BRLPS), popularly known as JEEViKA, is the implementing agency for SJY.
- JEEViKA is an autonomous body under the Department of Rural Development, Government of Bihar.
- It works for the socio-economic empowerment of rural poor women through self-help groups (SHGs).
- Under SJY, JEEViKA helps ultra-poor households with asset transfers, capacity building, and livelihood support.

- It ensures long-term sustainable income sources for the excluded families.

Information Booster:

- JEEViKA was initially supported by the World Bank and later expanded across Bihar to address rural poverty.
- Apart from SJY, JEEViKA implements National Rural Livelihood Mission (NRLM) in Bihar.

**Q.7** Who among the following was a revolutionary from West Bengal who was only 18, when he was hanged at the Muzaffarpur Jail by the British?

- A. Sukhdev Thapar
- B. Jogesh Chandra Chatterjee
- C. Prafulla Chaki
- D. Khudiram Bose

**Answer:** D

**Sol: Correct Answer:** D

Explanation:

- **Khudiram Bose** was a young revolutionary from **West Bengal**, hanged by the British at **Muzaffarpur Jail** in **1908** when he was just **18 years old**.
- He participated in the Muzaffarpur bomb attack targeting British officials and became one of India’s **youngest martyrs**.

Information Booster:

- Khudiram Bose was associated with the **Anushilan Samiti**, a prominent revolutionary organisation in Bengal.
- His bravery, even during his trial and execution, inspired countless young freedom fighters.

Additional Knowledge :

- **A. Sukhdev Thapar:**
  - Revolutionary from **Punjab**.
  - Member of **Hindustan Socialist Republican Association (HSRA)**.
  - Executed on **23 March 1931** along with **Bhagat Singh and Rajguru** (Shaheed Diwas).
- **B. Jogesh Chandra Chatterjee:**
  - Bengali revolutionary; founding member of **Hindustan Republican Association (HRA)**.
  - Later joined the **Congress Socialist Party (CSP)**.
- **C. Prafulla Chaki:**
  - Partner of Khudiram Bose in the **Muzaffarpur bombing mission(1908)**.
  - To avoid arrest, he **shot himself** at Samastipur railway station.
  - Also a member of the **Anushilan Samiti**, known for his commitment to revolutionary nationalism.

**Q.8** Who established the Gadar party in 1913 and made efforts for armed revolution in India?

- A. Lala Hardayal
- B. Chandrashekhar Azad
- C. Lala Lajpat Roy
- D. Subhash Chandra Bose

**Answer:** A

**Sol:** The correct answer is **(a) Lala Hardayal**.

- Lala Hardayal founded the **Ghadar Party in 1913** in San Francisco with the aim of armed revolt against British rule.
- The party mobilized Indian immigrants, especially Punjabi Sikhs, for revolutionary activities.
- It published the **Ghadar newspaper**, spreading nationalist ideas among overseas Indians.

Information Booster:

- The Ghadar Party was initially called the **Pacific Coast Hindustan Association**.
- Key leaders included **Sohan Singh Bhakna, Kartar Singh Sarabha**, and **Rashbehari Bose** in India.
- The headquarters was known as the **Yugantar Ashram** in San Francisco.
- The party played a key role during **World War I** in planning uprisings in India.

Additional Knowledge:

- Option (b) Chandrashekhar Azad belonged to the **Hindustan Socialist Republican Association (HSRA)**, not the Ghadar Party.
- Option (c) Lala Lajpat Roy was linked to the **Lal-Bal-Pal** trio, not Ghadar activities.
- Option (d) Subhash Chandra Bose led the **INA (Azad Hind Fauj)** decades later.
- The Ghadar Movement influenced revolutionary nationalism, inspiring later groups like HSRA.

**Q.9** The first session of the Indian National Congress was held at \_\_\_\_\_ in 1885.

- A. Bombay (Now Mumbai)
- B. Allahabad (Now Prayagraj)
- C. Calcutta (Now Kolkata)
- D. Madras (Now Chennai)

**Answer:** A

**Sol: Correct Answer: (A) Bombay (Now Mumbai)**  
**Explanation:**

The **first session of the Indian National Congress (INC)** was held in **Bombay (now Mumbai)** from **28–31 December 1885**.

- It was presided over by **W.C. Bonnerjee**, the first President of INC.
- The session was initially planned in Pune but shifted to Bombay due to a plague outbreak.

**Information Booster:**

- Founded in **1885** by **Allan Octavian Hume** along with Dadabhai Naoroji and Dinshaw Wacha.
- Attended by **72 delegates**.
- The INC became the principal platform for India’s freedom movement.

**Q.10** Where is the headquarters of the Sports Authority of India (SAI)?

- A. New Delhi
- B. Mumbai
- C. Tamil Nadu
- D. Bengaluru

**Answer:** A

**Sol: The correct answer is (a) New Delhi**

**Explanation:**

- The **Sports Authority of India (SAI)** is headquartered in **New Delhi**.
- Established in **1984**, SAI is the apex national organization for **promoting sports and developing athletes** in India.
- It oversees **sports training centers, coaching programs, and infrastructure development** across the country.

**Information Booster:**

- SAI operates **Regional and Centre of Excellence (CoE) training facilities** nationwide.
- It implements **schemes like National Sports Talent Contest and National Sports Development Fund**.
- SAI works under the **Ministry of Youth Affairs and Sports**.
- It supports athletes for **national and international competitions**, including the Olympics.
- SAI also collaborates with **state governments, sports federations, and private academies** to develop talent.

**Q.11** In which country the headquarters of International Rice Research Institute (IRRI) is located?

- A. Japan
- B. China
- C. Malaysia
- D. Philippines

**Answer:** D

**Sol:** The correct answer is: **D. Philippines**

**Explanation:**

- The **International Rice Research Institute (IRRI)** headquarters is located at **Los Baños, Laguna, Philippines**.
- Established in **1960**, IRRI is dedicated to reducing poverty and hunger through rice science.
- It plays a key role in developing high-yielding and climate-resilient rice varieties.

Information Booster:

- IRRI was founded by the **Ford Foundation and Rockefeller Foundation**.
- Works under the umbrella of the **CGIAR (Consultative Group on International Agricultural Research)**.
- Contributed to the **Green Revolution** with varieties like IR8 (called “miracle rice”).
- India hosts a regional centre of IRRI in **Varanasi, Uttar Pradesh**.
- Focus areas: food security, sustainable farming, and farmer livelihood improvement.

Q.12 What is the motto of the United Nations Organisation (UNO)?

- A. Peace for All
- B. It’s Your World
- C. One World, One Future
- D. Unity for Humanity

Answer: B

Sol: The correct answer is (b) It’s Your World

Explanation:

- The official motto/slogan of the United Nations is “It’s Your World.”
- It highlights the UN’s vision of collective responsibility and global cooperation.
- The motto reflects the idea that the UN belongs to all nations and people and works for peace, security, and development.
- It is used in official UN communication to promote inclusiveness and global participation.

Information Booster:

- UNO was founded on 24 October 1945 after World War II.
- Headquarters: New York City, USA.

Additional Knowledge:

Option (a): Peace for All

- Not an official UN motto, though peace is its core objective.

Option (c): One World, One Future

- Popular phrase but not adopted officially by the UN.

Option (d): Unity for Humanity

- Not associated with UNO’s official branding or documents.

Q.13 Where did DRDO conduct the flight test of the Stratospheric Airship Platform (SAP)?

- A. Pokhran, Rajasthan

- B. Sheopur, Madhya Pradesh
- C. Balasore, Odisha
- D. Sriharikota, Andhra Pradesh

Answer: B

Sol: The correct answer is (b) Sheopur, Madhya Pradesh.

- DRDO successfully conducted the **maiden flight trial** of the **Stratospheric Airship Platform (SAP)** at **Sheopur, Madhya Pradesh** on **3 May 2025**.
- The airship reached an altitude of around **17 km** during the 62-minute flight test.

Information Booster:

- Developed by DRDO’s **Aerial Delivery Research and Development Establishment (ADRDE), Agra**.
- Systems tested included **envelope pressure control** and **emergency deflation**.
- Data collected will help in creating **simulation models** for future missions.

Additional Knowledge:

- SAP is a **lighter-than-air high-altitude platform** with prolonged endurance.
- It is designed for **Intelligence, Surveillance & Reconnaissance (ISR), earth observation**, and communication support.
- India has now joined a **select group of nations** with indigenous stratospheric airship technology.

Q.14 Chandrayaan-5 is a collaborative space mission between ISRO and which country's space agency?

- A. NASA (USA)
- B. Roscosmos (Russia)
- C. JAXA (Japan)
- D. ESA (Europe)

Answer: C

Sol: Ans. (c)

Chandrayaan-5 is a joint lunar mission between the Indian Space Research Organisation (ISRO) and the Japan Aerospace Exploration Agency (JAXA).

- The mission is part of India and Japan's deepening space cooperation and is expected to feature a **250 kg rover** for advanced lunar exploration.
- JAXA's role in the mission includes providing a lunar lander, while ISRO will contribute to the rover and scientific instruments.
- This collaboration aims to explore the Moon's south pole, study lunar geology, and enhance India's expertise in planetary exploration.

Information Booster

- ISRO and JAXA have signed agreements for joint space missions, including Chandrayaan-5.
- The mission will focus on studying lunar minerals and water ice deposits in permanently shadowed regions.
- JAXA will provide a lander, while ISRO will develop the rover for exploration.
- Chandrayaan-5 follows Chandrayaan-4, which is expected to collect and return lunar samples to Earth.
- India and Japan are also collaborating on future space missions, including planetary exploration projects.

Additional Knowledge

- NASA (USA) – While NASA has worked with ISRO on past missions like NISAR (Earth observation satellite), it is not a partner in Chandrayaan-5.
- Roscosmos (Russia) – Russia has collaborated with India on human spaceflight programs (Gaganyaan) but is not involved in this lunar mission.
- ESA (European Space Agency) – ESA provides ground station support for ISRO missions but is not a direct collaborator on Chandrayaan-5.
- JAXA (Japan) – Japan has partnered with India on multiple space projects, making Chandrayaan-5 an important step in bilateral space cooperation.

Q.15 Which type of engine is the Indian Space Research Organisation working on for its future launch vehicles in 2025?

- A. Hydrogen-Peroxide Engine
- B. Hybrid-Solid Engine
- C. Semicryogenic Engine
- D. Electric Propulsion Engine

Answer: C



**Sol:** The correct answer is (c) Semicryogenic Engine

**Explanation:**

- In 2025, the Indian Space Research Organisation (ISRO) is actively developing a Semicryogenic Engine known as SE2000.
- This engine will replace the liquid core stage of the LVM3 and power the booster stages of the Next Generation Launch Vehicle (NGLV).
- The engine uses Liquid Oxygen (LOX) and Refined Kerosene (RP-1) as propellants, offering improved density impulse and cost-effectiveness.
- ISRO conducted multiple Power Head Test Article (PHTA) hot tests to validate ignition and performance in early 2025.
- The engine is expected to increase LVM3’s payload capacity from 4 tonnes to 5 tonnes, enhancing India’s space lift capability.

**Information Booster:**

- Semicryogenic engines combine the advantages of cryogenic and liquid engines.
- They are a key technology for heavy-lift and reusable launch systems, central to ISRO’s future missions.

**Additional Knowledge:**

Hydrogen-Peroxide Engine (Option a)

- Not currently in ISRO’s mainstream development focus.
- Used more in small or experimental propulsion systems, not heavy launch vehicles.

Hybrid-Solid Engine (Option b)

- Combines solid fuel and liquid oxidizer, used for small rockets or test platforms.
- Not being pursued for ISRO’s primary launch vehicles.

Electric Propulsion Engine (Option d)

- Primarily used for spacecraft (satellites), not launch vehicles.
- ISRO is developing it for satellite station-keeping, not liftoff propulsion.

**Q.16** What record rating did Abhishek Sharma achieve in the ICC T20I batting rankings during the Asia Cup 2025?

- A. 900
- B. 931
- C. 915
- D. 920

**Answer:** B

**Sol:**

Correct Answer: (b) 931

**Explanation:**

- During the Asia Cup 2025, Abhishek Sharma achieved a historic 931 rating points in the ICC Men’s T20I Batting Rankings.
- This rating is the **highest ever** recorded in the format at the conclusion of the **Super Fours** stage.
- His consistent and explosive performance with the bat earned him both **fan and expert panel votes**, leading to his **Player of the Month** award for



October 2025.

Information Booster:

- Abhishek scored **314 runs in 7 matches** with a **strike rate of 200**, showing his ability to dominate world-class bowling attacks.
- His performance helped India secure crucial wins in the **Asia Cup T20I** and highlighted his growing stature in international cricket.

**Q.17** Carlos Alcaraz defeated defending champion Jannik Sinner in the final of which Grand Slam in 2025?

- A. Australian Open
- B. French Open
- C. Wimbledon
- D. US Open, French Open

**Answer:** D

**Sol:** The correct answer is (d) US Open, French Open

Explanation:

- In **2025**, **Carlos Alcaraz** won the **Men’s Singles title** at the **US Open**, defeating the **defending champion Jannik Sinner** in the final.
- This victory marked a major achievement in Alcaraz’s career and further solidified his status as a **rising star in world tennis**.
- The **US Open** is held annually in **New York City**, and is one of the four prestigious **Grand Slam** tournaments.

Information Booster:

- **Carlos Alcaraz** is from **Spain** and is known for his **aggressive baseline play** and **athleticism**.
- He previously won the **2022 US Open** and became the **youngest world number 1** in ATP rankings.
- The **US Open** is the **final Grand Slam** of the tennis calendar year.

Additional Knowledge:

- **(a) Australian Open** – Held in January in Melbourne, Australia.
- **(b) French Open** – Played on clay courts in Paris.
- **(c) Wimbledon** – Played on grass courts in London.

**Q.18** Select the set in which the numbers are related in the same way as are the numbers of the following sets.

(NOTE: Operations should be performed on the whole numbers, without breaking down the numbers into their constituent digits. E.g. 13 – Operations on 13 such as adding/subtracting/multiplying to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed.)

9 - 8 - 72

12 - 5 - 60

- A. 15 - 5 - 75
- B. 18 - 2 - 38
- C. 9 - 20 - 160
- D. 4 - 13 - 56

**Answer:** A

**Sol:** Given:

9 - 8 - 72

12 - 5 - 60

**Logic:** 1st number  $\times$  2nd number = 3rd number

**For,** 9 - 8 - 72

**$9 \times 8 = 72$**

**For,** 12 - 5 - 60

**$12 \times 5 = 60$**

Now, we check each options.

**Option (a):** 15 - 5 - 75 **(Follow)**

**$15 \times 5 = 75$**

**Option (b):** 18 - 2 - 38 **(Not Follow)**

$18 \times 2 \neq 38$

**Option (c):** 9 - 20 - 160 **(Not Follow)**

$9 \times 20 \neq 160$

**Option (d):** 4 - 13 - 56 **(Not Follow)**

$4 \times 13 \neq 56$

Thus, correct option is (a).

**Q.19** Find the next number in the following series?

10, 30, 29, 49, ?

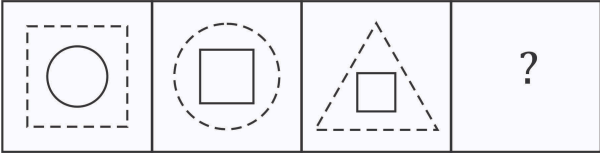
- A. 36

- B. 48
- C. 37
- D. 35

Answer: B

**Sol: Given:** 10, 30, 29, 49, ?  
**Logic:** Numbers are increasing + 20 and decreasing - 1 place alternately.  
 $10 + 20 = 30$   
 $30 - 1 = 29$   
 $29 + 20 = 49$   
 $49 - 1 = \mathbf{48}$   
So, the missing term is **48**.  
Thus, correct option is (b).

Q.20 Which answer figure will come next in the given problem figure series?

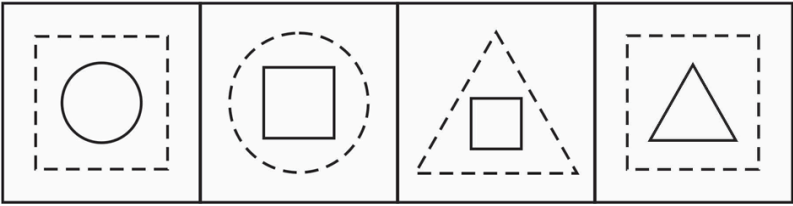


- A.
- B.
- C.

D.

Answer: B

**Sol: Logic:** Outer dotted linear shape goes in side and inner linear shape come outside.



Thus, correct option is (b).

**Q.21** If '+' means ' $\div$ ', '-' means ' $\times$ ', ' $\div$ ' means '+' and ' $\times$ ' means '-' then  
 $36 \times 12 + 4 \div 6 + 2 - 3 = ?$   
A. 1  
B. 39  
C. 40  
D. 42

Answer: D

**Sol: Given:**  $36 \times 12 + 4 \div 6 + 2 - 3 = ?$

Given Sign + - ÷ ×

New Sign ÷ × + -

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

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

**New equation:**  $36 - 12 \div 4 + 6 \div 2 \times 3 = ?$

$36 - 3 + 3 \times 3 = ?$

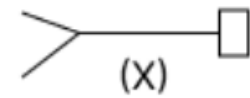
$36 - 3 + 9 = ?$

$45 - 3 = ?$

$? = \mathbf{42}$

Thus, correct option is (d).

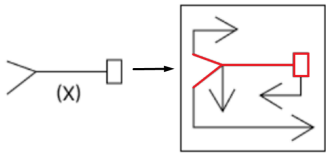
**Q.22** Select the option in which the given figure (X) is embedded (rotation is NOT allowed).



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

**Answer:** C

**Sol:** The correct embedded figure is shown below:



Thus, the correct option is **(c)**.

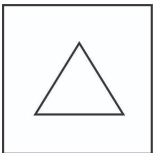
**Q.23** Which of the answer figures will come next in following problem figure series?

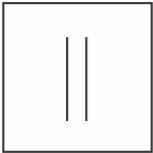
Problem figure:




- A.

- B.


- C.


- D.



Answer: B

Sol: Given -

N	Π	4	?
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All the elements have minimum three straight lines so in the next figure also be three lines

3 lines is given only in option B.

Q.24 Which of the following does not belong to this group?

- A. Milk
- B. Can
- C. Oil
- D. Petrol

Answer: B

Sol: **Milk, Oil** and **Petrol** are liquids.  
A **can** is a container, not a liquid.  
So, **Can** does not belong the group.  
Thus, correct option is (b).

Q.25 Which of the following does not belong to the group.

- A. Oregano
- B. Cauliflower
- C. Salad
- D. Meat

Answer: D

Sol: **Oregano, Cauliflower** and **Salad** are plant-based.  
**Meat** is an animal product.  
So, **Meat** doesn't belong the group.  
Thus, correct option is (d).

Q.26 Find the odd one out.

A	B	C	D
1520	1212	172	132
AET	AUB	AGB	ACB

- A. A
- B. C

- C. D
- D. B

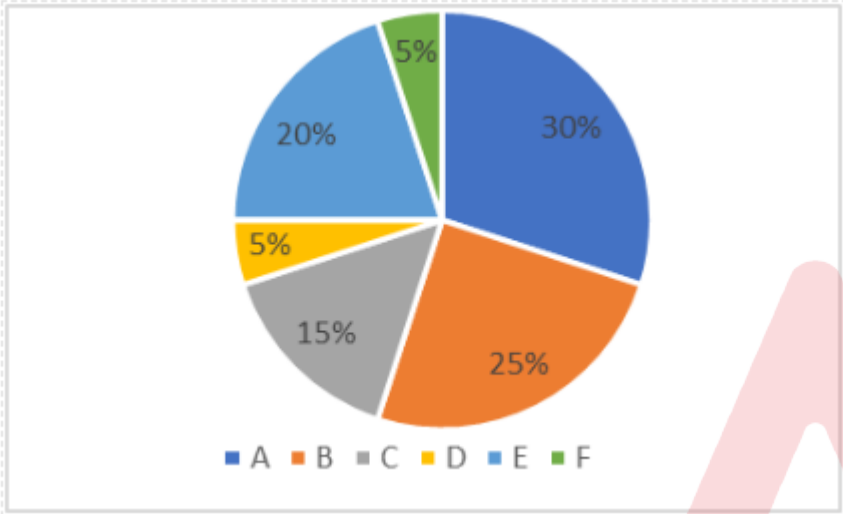
Answer: A

Sol: Given:

A	B	C	D
1520	1212	172	132
AET	AUB	AGB	ACB

- A) AET → A, E, T → 1, 5, **20 ≠ 2**  
B) AUB → A, U, B →1, 21, 2  
C) AGB → A, G, B → 1, 7, 2  
D) ACB → A, C, B → 1, 3, 2  
The last letter is not B in AET so it is odd one of the given sets.  
Thus, correct option is (a).

**Q.27** The following pie diagram shows the information about Non Performing Assets (NPA) processed by the various banks 6 of India until December 2017. If the total NPA under all the banks is 300 lakh crores, which bank contains more NPA compared to the other banks?



- A. F
- B. B
- C. A
- D. E

Answer: C

Sol: Given:

- Bank A = 30%  
Bank B = 25%  
Bank C = 15%  
Bank D = 5%  
Bank E = 20%  
Bank F = 5%  
Total NPA = 300 lakh crores

Formula Used:

$$\text{NPA of a Bank} = (\text{Percentage share} / 100) \times \text{Total NPA}$$

Solution:

- Bank A =  $(30/100) \times 300 = 90$  lakh crores  
Bank B =  $(25/100) \times 300 = 75$  lakh crores  
Bank C =  $(15/100) \times 300 = 45$  lakh crores  
Bank D =  $(5/100) \times 300 = 15$  lakh crores  
Bank E =  $(20/100) \times 300 = 60$  lakh crores  
Bank F =  $(5/100) \times 300 = 15$  lakh crores  
Bank A contains the highest NPA = 90 lakh crores.

Short Trick:

- Look at the highest percentage in the pie chart = 30% (Bank A).  
Highest NPA = 30% of 300 = 90 lakh crores.

**Q.28** If the same percentage increase in the sales of Type I vehicles in 2004 over 2003 is expected in 2005, approximately how many Type I vehicles will be sold in 2005?

Study the following table carefully and answer the question given below.

Year	Type I	Type II	Type III	Type IV	Type V
2000	26	64	232	153	340
2001	45	60	242	172	336
2002	72	79	248	210	404
2003	81	93	280	241	411
2004	107	112	266	235	442
Total	331	408	1268	1011	1933

- A. 141
- B. 139
- C. 144
- D. 131

Answer: A

Sol: Given:

Type I vehicles in 2003 = 81

Type I vehicles in 2004 = 107

Solution:

Increase = 107 - 81 = 26

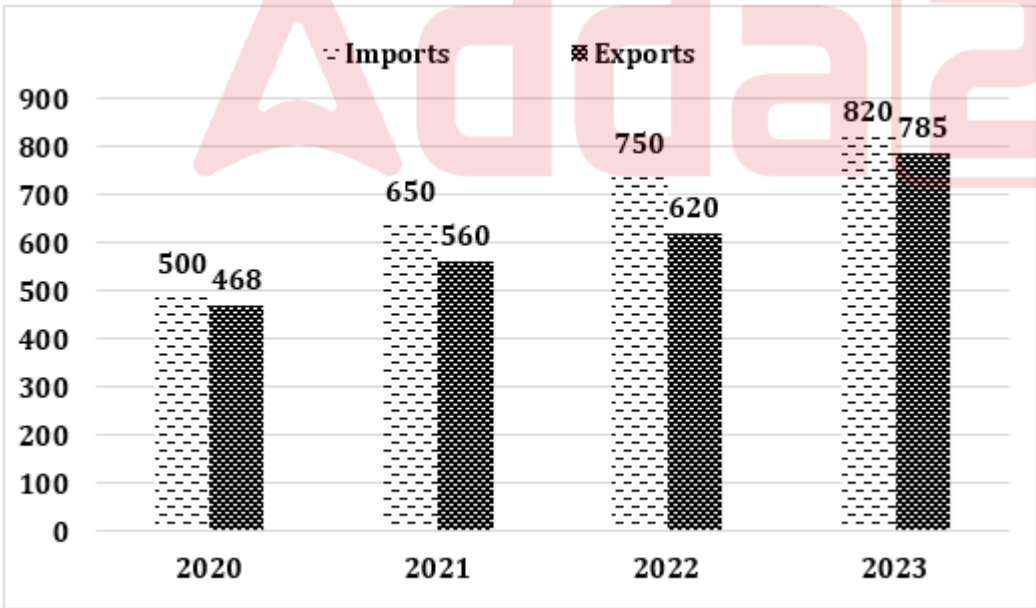
Percentage Increase =  $\frac{26}{81} \times 100 \approx 32.1\%$

Expected sales in 2005:

=  $107 \times \left(1 + \frac{32.1}{100}\right) = 107 \times 1.321 \approx 141.35$

Approximately 141 Type I vehicles will be sold in 2005.

Q.29 The given bar graph shows the imports and exports (in Rs crores) of coal by the USA from 2020 to 2023.



What is the ratio of the Total imports in 4 years and the total exports in the last three years?

- A. 544 : 811
- B. 2720 : 2433
- C. 544 : 393
- D. 1088 : 811

Answer: C

Sol: Solution:

Total imports (4 years):

= 500 + 650 + 750 + 820 = 2720

Total exports (last 3 years):

= 560 + 620 + 785 = 1965

Ratio of import to export;

= 2720 : 1965

= 544 : 393

- Q.30** A batsman scored 150 runs in a one-day cricket match. He hit 20 fours and 5 sixes. Calculate the percentage of runs he scored by running between the wickets.
- A. 25%
  - B. 73.38%
  - C. 25.5%
  - D. 26.67%

**Answer:** D

**Sol: Given:**

Total runs = 150

No. of fours = 20

No. of sixes = 5

**Solution:**

Run scored by fours =  $20 \times 4 = 80$

Run scored by sixes =  $5 \times 6 = 30$

Remaining run =  $150 - (80 + 30) = 40$

=  $\frac{40}{150} \times 100$

=  $\frac{400}{15}$

= 26.67%

- Q.31** In a bag the ratio of red balls to green balls is 15 : 26. If 12 more green balls are added to the bag the ratio of red balls to green balls will become 1 : 2. How many red balls are there in the bag?
- A. 30
  - B. 45
  - C. 15
  - D. 60

**Answer:** B

**Sol: Given:**

Ratio (Red : Green) initially = 15 : 26

After adding 12 green balls, ratio becomes 1 : 2



Solution:

Let R=15k, G = 26k for some k.

New ratio condition:  $\frac{R}{G + 12} = \frac{1}{2}$

$$2R = G + 12$$

$$30k = 26k + 12$$

$$4k = 12$$

$$k = 3$$

$$R = 15k = 15 \times 3 = 45$$

**Q.32** Find the fourth proportional to 2,4 and 8.

- A. 15
- B. 14
- C. 16
- D. 17

**Answer:** C

**Sol: Given:**

2, 4, and 8.

**Formula Used:**

$$\frac{a}{b} = \frac{c}{d}$$

$$\frac{2}{4} = \frac{8}{x}$$

$$\frac{1}{2} = \frac{8}{x}$$

$$x = 16$$

**Q.33** When a sum is invested for 5 years, the amount will be Rs. 3,640. If the rate of simple interest is increased by 2% per annum from earlier then this amount will be Rs. 3,920 turns out to be. What is the principal amount invested?

- A. Rs. 2,560
- B. Rs. 2,690
- C. Rs. 2,750
- D. Rs. 2,800

**Answer:** D

**Sol: Given:**

Time = 5 years

Amount<sub>1</sub> = Rs. 3640

Amount<sub>2</sub> = Rs. 3920

**Formula Used:**

$$SI = \frac{P \times R \times T}{100}$$

Amount = P + CI

**Solution:**

Let the sum of money be Rs. P

Let the rate of interest be r%

$$\text{Amount}_1 = P + \frac{P \times r \times 5}{100} = 3640$$

=>  $100P + 5Pr = 3640 \times 100$   
=>  $5Pr = (3640 \times 100) - 100P \dots(1)$   
Again,  
$$\text{Amount}_2 = P + \frac{P \times (r + 2) \times 5}{100} = 3920$$
  
=>  $100P + 5Pr + 10P = 3920 \times 100$   
=>  $5Pr = (3920 \times 100) - 110P \dots(2)$   
From equation (1) and (2) we get,  
=>  $(3640 \times 100) - 100P = (3920 \times 100) - 110P$   
=>  $(110P - 100P) = (3920 \times 100) - (3640 \times 100)$   
=>  $10P = 100 \times (3920 - 3640)$   
=>  $10P = 100 \times 280$   
=>  $10P = 28000$   
=>  $P = (28000/10)$   
=>  $P = \text{Rs. } 2800$

- Q.34** Priya invested a certain amount of money and got back an amount of Rs. 8800 after 3 years. If the rate simple interest is 40%, what is the principal amount invested by Priya?
- A. Rs. 7333
  - B. Rs. 4333
  - C. Rs. 4000
  - D. Rs. 7000

**Answer:** C

**Sol: Given:**  
Amount after 3 years = Rs. 8800  
  
Rate of simple interest = 40% per annum  
  
Time = 3 years

**Formula Used:**

$A = P + SI$   
$$SI = \frac{P \times R \times T}{100}$$

**Solution:**

From the formula;

$$8800 = P + \frac{P \times 40 \times 3}{100}$$
$$8800 = P + \frac{P \times 2 \times 3}{5}$$
$$8800 = \frac{5P + 6P}{5}$$
$$8800 = \frac{11P}{5}$$
$$800 = \frac{P}{5}$$
$$P = 800 \times 5$$

$P = ₹4000$

- Q.35** A shopkeeper marked the price of a table as ₹1,400 and offered two successive discounts, one of which is 12%. If a customer pays ₹1,133.44 for the table, then what was the second discount percentage offered?

- A. 10%
- B. 8%
- C. 15%
- D. 5%

Answer: B

Sol: Given:

Marked Price (MP) = ₹1400

First Discount = 12%

Final Price Paid = ₹1133.44

Formula Used:

Price after First Discount = MP × (1 - First Discount%)

Final Price = Price after First Discount × (1 - Second Discount%)

Solution:

Price after First Discount =  $1400 \times \left(1 - \frac{12}{100}\right) = 1232$

Let the second discount be x%.

Then,  $1232 \times \left(1 - \frac{x}{100}\right) = 1133.44$

$\Rightarrow \left(1 - \frac{x}{100}\right) = \frac{1133.44}{1232} \approx 0.92$

$\Rightarrow \frac{x}{100} = 1 - 0.92 = 0.08$

$\Rightarrow x = 0.08 \times 100 = 8\%$

Second discount percentage = 8%

**Q.36** Tarun and Tapan started a partnership with investments of Rs. 13,000 and Rs. 19,500 respectively, however due to a financial emergency Tapan had to withdraw his investment after 8 months. In what ratio should the profit of the first 12 months be shared among the duo?

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

Answer: B

Sol: Given:

Tarun's investment = ₹13,000 for 12 months

Tapan's investment = ₹19,500 for 8 months (withdrawn after 8 months)

Profit to be shared for the first 12 months

Formula Used:

Profit sharing ratio = (Capital × Time) ratio

Ratio =  $(C_1 \times T_1) : (C_2 \times T_2)$

Solution:

Tarun's capital-months =  $13,000 \times 12 = 156,000$

Tapan's capital-months =  $19,500 \times 8 = 156,000$

Hence, Tarun : Tapan =  $156,000 : 156,000 = 1 : 1$

**Q.37** If Anita walks a certain distance at 13 km/hr. instead of 10 km/hr., she would walk 30 km more. The actual distance travelled by her is:

- A. 100 km

- B. 50 km
- C. 60 km
- D. 25 km

Answer: A

Sol: Given:

Speed 1 = 10 km/h

Speed 2 = 13 km/h

Extra distance covered at higher speed = 30 km

Solution:

Let the actual distance be x km (at 10 km/h)

then distance at 13 km/h = x + 30 km

$$\frac{x}{10} = \frac{x + 30}{13}$$

$$13x = 10(x + 30)$$

$$13x = 10x + 300$$

$$3x = 300$$

$$x = 100$$

Q.38 Address 1: Mrs. Priya Desai, 503/3, Orchid Boulevard, Hyderabad - 500090  
Address 2: Mrs. Priya Desai, 503/3, Orchid Boulevard, Hyderabad - 500091

Are these likely to be the same?

- A. No, city codes do not match
- B. Yes, all major details match
- C. No, the flat numbers are different
- D. No, the postal codes are different

Answer: D

Sol: The house number, road name, and city name are the same, with only the postal code differing slightly ("500090" vs "500091").

Conclusion: The addresses are very similar and likely the same with a minor postal code difference.

Correct Answer:

D) No, the postal codes are different

Q.39 Address 1: Mr. Amit Sharma, 78/4, Maple Heights, Bangalore - 560078  
Address 2: Mr. Amit Sharma, 78/4, Maple Heights Apartment, Bangalore - 560078  
Are these likely to be the same?

- A. No, city codes do not match
- B. Yes, all major details match
- C. No, the flat numbers are different
- D. No, the building names are different

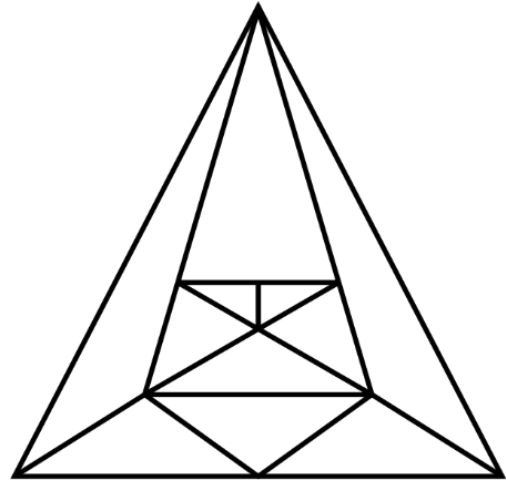
Answer: D

Sol: The house number, road name, and postal code match exactly. The only difference is the building name (Heights vs Apartment), which is a minor variation.

Conclusion: The addresses are likely the same with a minor difference in building names.

**Correct Answer:**  
D) No, the building names are different

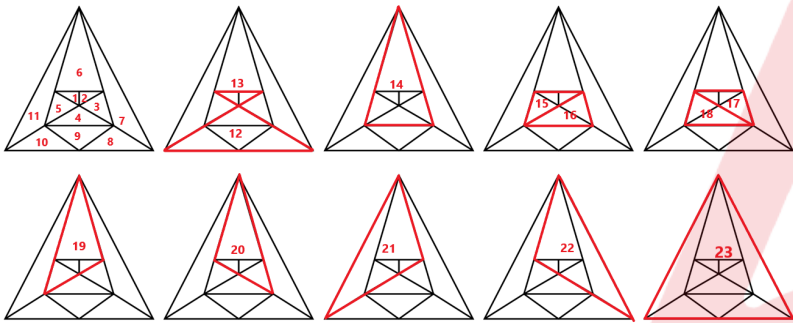
**Q.40** How many triangles are there in this figure?



- A. 17
- B. 23
- C. 18
- D. 19

**Answer:** B

**Sol:** There are **23** triangles given below.



Thus, correct option is (b).

**Q.41** What is a IP Address?

- A. It is the Internet Protocol
- B. It is an internet posting address used to authenticate the networks
- C. It is the unique number given to each device on the network
- D. It is same as the URL

**Answer:** C

**Sol:** An **IP Address (Internet Protocol Address)** is a **unique numerical identifier** assigned to each device connected to a network. It allows devices to **communicate with each other** over the Internet or local networks by identifying the source and destination of data packets.

- **Example of an IP Address:**
  - IPv4: 192.168.1.1
  - IPv6: 2001:0db8:85a3:0000:0000:8a2e:0370:7334

**Important Key Points:**

- 1. Purpose of an IP Address:**
  - Identifies devices on a network.
  - Facilitates communication between devices by specifying their location on the network.
- 2. Types of IP Addresses:**
  - **IPv4 (Internet Protocol version 4):** Uses a 32-bit address format (e.g., 192.168.0.1).
  - **IPv6 (Internet Protocol version 6):** Uses a 128-bit address format to accommodate more devices.
- 3. Dynamic vs. Static IP:**
  - **Dynamic IP:** Assigned temporarily by a DHCP server.
  - **Static IP:** A permanent IP address manually assigned to a device.

**Knowledge Booster:**

- 1. Option A: It is the Internet Protocol**

- **Incorrect:** The Internet Protocol is a set of rules for communication, whereas an **IP address** is the identifier for devices.
- 2. **Option B: It is an internet posting address used to authenticate the networks**
  - **Incorrect:** IP addresses are not "posting addresses"; they locate devices, not authenticate them.
- 3. **Option D: It is the same as the URL**
  - **Incorrect:**
    - A **URL** (Uniform Resource Locator) is a web address (e.g., www.google.com) used to access resources.
    - An **IP address** is the numeric address behind a URL.

**Q.42** Which of the following is used by the browser to connect to the location of the Internet resources?

- A. URL
- B. Cable
- C. Protocol
- D. Linker

**Answer:** A

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

**Explanation:**

- A **URL (Uniform Resource Locator)** is used by a browser to locate and access resources on the Internet. It provides the address of a resource (like a website) so the browser can connect to and retrieve it. The URL specifies the protocol (like HTTP or HTTPS), the domain name, and the path to the resource.

**Additional Knowledge:**

- **Cable:** A cable is a physical medium used to transmit data (like Ethernet or fiber optic cables). While cables enable the actual connection to the internet, they are not used by the browser to locate resources.
- **Protocol:** A protocol is a set of rules that define how data is transmitted over the network. HTTP (HyperText Transfer Protocol) or HTTPS (HTTP Secure) are common protocols used for web browsing, but protocols alone are not used to specify the exact location of the resource; the protocol is part of the URL.
- **Linker:** A linker is a tool used in computer programming to combine different pieces of code into a single executable file. It's not involved in locating internet resources.

**Q.43** What do you mean by Output in computer terminology?

- A. What the user gives to the processor
- B. What the processor takes from the user
- C. What the processor gets from the user
- D. What the processor gives to the user

**Answer:** D

**Sol:** The correct answer is **(d) What the processor gives to the user**

**Explanation:**

- In computer terminology, **output** refers to the information or data that the computer **delivers to the user** after processing input. It's the result of the computer's operations that can be displayed or communicated to the user through various devices such as screens, printers, speakers, etc.

For example:

- **Output devices:** Monitors, printers, speakers, etc.
- **Example:** When you open a website, the text and images that appear on your screen are the **output** produced by the processor.

**Information Booster:**

**Input vs. Output:**

- **Input:** Data or commands that are **fed into the system** by the user (e.g., typing on a keyboard, clicking a mouse).
- **Output:** The result of processing that the **system delivers back to the user** (e.g., displayed text on the screen, sound through speakers).

Additional Knowledge:

- **What the user gives to the processor:** This refers to **input**. Input is the data or commands that the user provides to the computer, usually through devices like a keyboard, mouse, or microphone.
- **What the processor takes from the user:** This is also **input**. The processor receives instructions or data from the user for processing.
- **What the processor gets from the user:** This, again, refers to **input**. It's the data the processor receives from the user, which is then processed.

**Q.44** Which of the following is not a Modifier Key?

- A. Ctrl
- B. Shift
- C. Insert
- D. Alt

**Answer:** C

**Sol:** The Correct Answer is **(c) Insert**

**Explanation:**

**Modifier keys** are keys that, when pressed in combination with other keys, modify their behavior. They don't usually perform actions on their own but alter the function of another key or key combination. The common modifier keys are:

- **Ctrl (Control):** Used in combination with other keys to perform various shortcuts ( Ctrl + C to copy, Ctrl + V to paste).
- **Shift:** Used to type uppercase letters and access secondary symbols on keys ( Shift + 2 gives you @, Shift + letter gives uppercase).
- **Alt (Alternate):** Used to access alternate commands or shortcuts, particularly in menus (Alt + Tab switches between open applications, Alt + F4 closes a window).
- **Insert**, however, is **not** a modifier key. It is a **toggle key**, meaning it changes the typing behavior of the keyboard. Pressing Insert switches between two modes:
- **Insert Mode:** Text you type is inserted at the cursor position without overwriting existing text.
- **Overwrite Mode:** Text you type will replace (overwrite) existing text at the cursor position.

**Additional Knowledge:**

**Modifier vs Toggle Keys:**

- **Modifier keys:** These keys do not work independently. They require being pressed with another key to modify its behavior. Common modifier keys include Ctrl, Shift, and Alt.
- **Toggle keys:** These keys work by changing the mode when pressed and can be turned on or off. Insert, Caps Lock, and Num Lock are examples of toggle keys.

**Additional Knowledge:**

- **Ctrl:** This is a **modifier key**. It modifies the function of other keys when pressed together (e.g., Ctrl + C to copy, Ctrl + S to save). It's one of the most commonly used modifier keys in modern computing.
- **Shift:** This is a **modifier key** as well. It changes the behavior of other keys, such as typing uppercase letters and accessing special characters ( Shift + 1 produces "!").
- **Alt:** The **Alt (Alternate)** key is also a **modifier key**. It modifies the function of other keys, primarily used in combination with other keys for shortcuts (Alt + Tab to switch windows or Alt + F4 to close a window).

**Q.45** If you magnify a you can see its individual pixels.

- A. DXF
- B. bitmap
- C. EMF
- D. vector graphic

**Answer:** B

**Sol:** The correct answer is **(b) bitmap**

**Explanation:**

- **Bitmap (or raster image)** refers to images that are made up of individual pixels. When you magnify a bitmap, you can clearly see the individual pixels because it's composed of a grid of color values for each pixel. Common examples of bitmap formats include JPEG, PNG, GIF, and BMP.



Information Booster:

Bitmap vs. Vector:

- **Bitmap images** are resolution-dependent, meaning that their quality deteriorates when resized or magnified.
- **Vector images**, on the other hand, are resolution-independent. They can be resized infinitely without losing quality because they use mathematical equations to define shapes.

Additional Knowledge:

- **DXF (Drawing Exchange Format):**This is a vector-based file format developed by Autodesk for enabling data interoperability between AutoCAD and other software. It's used for 2D and 3D drawings, and magnifying it would not show pixels but rather smooth lines and shapes because it stores data as vectors.
- **EMF (Enhanced Metafile):**This is a vector-based image format used by Windows for graphics and images. Like DXF, EMF uses vectors to represent images, so magnification would not show pixels.
- **Vector graphic:**A vector graphic is made up of paths, points, lines, and curves, not pixels. Because of this, vector images are scalable to any size without loss of quality. Magnifying a vector image will not show individual pixels, as it's not pixel-based.

Q.46 What is the alternative term for a programmable chip?

- A. PROM
- B. ROM
- C. Microcontroller
- D. RAM

Answer: C

Sol: The correct answer is **(c) microcontroller**

Explanation:

- programmable chip is alternatively called a **microcontroller**, an integrated circuit with a CPU, memory, and programmable input/output peripherals.

Information Booster:

- Combines CPU, memory, and peripherals on a single chip.
- Commonly used in embedded systems.
- Can be programmed for specific applications.
- Examples include Arduino and PIC controllers.
- Often used in automation, robotics, and IoT.
- Includes EEPROM or Flash memory for storing program code.

Additional Knowledge :

- **PROM:** Programmable Read-Only Memory, can be programmed once.
- **ROM:** Read-Only Memory, non-programmable by end-users.
- **RAM:** Random Access Memory, volatile, temporary storage.

Q.47 is measured in Mega Byte?

- A. Population density
- B. Memory capacity of the computer
- C. Intensity of the earthquake
- D. Ability to expend energy

Answer: B

Sol: The correct answer is **(b) Memory capacity of the computer**

Explanation:

**Mega Byte (MB)** is a unit used to measure **memory capacity** in computers. It is commonly used to describe the size of files, the capacity of **RAM** (Random Access Memory), or the size of **storage devices** like hard drives or SSDs. One **Mega Byte** is equivalent to **1,024 Kilobytes** or **1 million bytes**.

Information Booster:

- **Memory capacity** in computers is often measured in **bytes**, with units such as **Kilobytes (KB)**, **MegaBytes (MB)**, **Gigabytes (GB)**, and **Terabytes (TB)** being used for larger data sizes.
- For example, when you buy a computer, the **RAM** and **storage capacity (500 GB hard drive)** are typically expressed in terms of **Gigabytes** or **Terabytes**.
- **MegaByte (MB)** is often used for smaller files, such as documents, images, and software programs.

**Additional Information:**

- **Population density** : **Population density** is measured in people per square kilometer or square mile.
- **Intensity of the earthquake** : The **intensity of an earthquake** is usually measured on scales like the **Richter Scale** or **Moment Magnitude Scale**.
- **Ability to expend energy** : The **ability to expend energy** is measured in **Joules** or **Calories**.

**Q.48** Which key is used to capture the entire screen of the computer?

- A. Shift + Ctrl
- B. Ctrl + V
- C. Shift + Ctrl + W
- D. PrintScreen

**Answer:** D

**Sol:** The **PrintScreen** key is used to capture the entire screen of the computer. Pressing this key copies the current screen image to the clipboard, which can then be pasted into applications like MS Paint or Word for further use.

**Important Key Points:**

1. **PrintScreen Key:** Captures the entire screen and stores it temporarily in the clipboard.
2. To save or edit the screenshot, paste it into an application like Paint using **Ctrl + V**.
3. For capturing only the active window, use **Alt + PrintScreen**.

**Knowledge Booster:**

- **Ctrl + V:** Used to paste copied content from the clipboard, not for capturing screens.
- **Shift + Ctrl** and **Shift + Ctrl + W:** Not related to screen capturing.
- Tools like **Snipping Tool** and **Snip & Sketch** provide additional options for capturing specific screen areas.

**Q.49** In Google Chrome, what is the shortcut key combination to close the current active tab?

- A. Alt + Shift + Tab
- B. Ctrl + Shift + Tab
- C. Ctrl + W
- D. Ctrl +Tab

**Answer:** C

**Sol:** The shortcut **Ctrl + W** in Google Chrome is used to close the current active tab. It is a quick way to exit a tab without using the mouse.

**Important Key Points:**

1. **Ctrl + T:** Opens a new tab in the browser.
2. **Ctrl + Shift + T:** Reopens the most recently closed tab.
3. Browser shortcuts are consistent across most modern browsers like Chrome, Edge, and Firefox, making them user-friendly for multitasking.

**Knowledge Booster:**

- **Alt + Shift + Tab:** Switches to the previous open window in reverse order but does not close any tabs.
- **Ctrl + Shift + Tab:** Switches to the previous tab in the browser.
- **Ctrl + Tab:** Switches to the next tab in the browser.

**Q.50** Which of the following input devices is commonly used in computer games?

- A. Light pen
- B. Joystick
- C. Keyboard
- D. Touch screen

**Answer:** B

**Sol:** A **joystick** is a commonly used input device in computer games, especially for tasks involving movement or direction control. It allows the player to interact with game environments by tilting the stick in various directions, offering more precise control than keyboards in many cases.

**Important Key Points:**

- 1. Joysticks are ideal for flight simulators, racing games, and arcade-style gaming.
- 2. They can detect movement in multiple directions and often include buttons for actions.
- 3. They connect via USB or Bluetooth and may come with vibration feedback for enhanced gameplay.

**Knowledge Booster:**

- **Light pens** are used for screen drawing and are outdated in modern systems.
- **Keyboards** are used in gaming but are general-purpose and not specifically designed for directional or analog control.
- **Touch screens** are mostly used in smartphones and tablets, but not typically for PC-based gaming where joystick control is preferred.

