

1. Answer: (a) 1 and 2 only

**Explanation:**

Financial statements are based on recorded facts and are prepared periodically (usually annually or quarterly). They do not always show the true financial position, since values are based on historical cost and estimates.

2. Answer: (c) ₹4000

**Explanation:**

Let Cost = 100, Gross Profit = 25% on cost → Selling Price = 125

So,

COGS(cost of goods sold) = Sales × (100 / 125) = 1,20,000 × (100 / 125) = ₹96,000

Now,

COGS = Opening Stock + Purchases - Closing Stock

⇒ 96,000 = 20,000 + 80,000 - Closing Stock

⇒ Closing Stock = ₹4,000

3. Answer: (b) Profit & Loss A/c (Debit)

**Explanation:**

Interest on capital is an **expense for the business**, hence debited to **P&L Account**.

It is also **added to capital** in the Balance Sheet as it's income for the proprietor.

4. Answer: (d) ₹95,000

**Explanation:**

Closing Capital = Opening Capital + Net Profit + Capital Introduced - Drawings

= 50,000 + 40,000 + 5,000 - 10,000 = ₹95,000

5. Answer: (c) Both (a) and (b)

**Explanation:**

Outstanding expenses are **added to related expense** in P&L (Debit) and shown as a **liability** in the **Balance Sheet**.

6. Answer: (c) Both 1 and 2 correct

**Explanation:**

Overheads are **distributed among cost centers** based on an **equitable and rational basis** such as floor area, machine hours, or number of employees.

7. Answer: (b) ₹90,000

**Explanation:**

Works Cost = Prime Cost + Factory Overheads + Opening WIP - Closing WIP

= 80,000 + 20,000 + 5,000 - 35,000 = ₹90,000

8. Answer: (b) Net Profit understated

**Explanation:**

If closing stock is omitted, **COGS increases**, which reduces **Gross Profit** → **Net Profit is understated**.

9. Answer: (b) Prudence

**Explanation:**

**Prudence (Conservatism)** concept says **expected losses** should be recorded, but **expected gains** should not. Hence, provision for doubtful debts follows this principle.

10. Answer: (a) 1, 2 and 3 only

**Explanation:**

Accounting **ignores price level changes**, records **only monetary items**, and is **influenced by conventions**. It does **not ensure absolute accuracy** due to estimates and judgments.

11. Answer: (b) Matching Concept

**Explanation:**

The **Matching Concept** states that **expenses should be recognized in the same period** as the revenues they help to generate — ensuring correct profit calculation.

12. Answer: (b) 21,000

**Explanation:**

- Write off ₹10,000 → Debtors:  $1,50,000 - 10,000 = 1,40,000$
- New provision @10% = ₹14,000; old = ₹8,000 → increase ₹6,000 (P&L)
- Bad debts to P&L = existing ₹5,000 + new ₹10,000 = ₹15,000
- Total P&L debit =  $15,000 + 6,000 = ₹21,000$

13. Answer: (a) 12,500

**Explanation:**

- Short sales =  $2,00,000 - 1,50,000 = ₹50,000$
- Loss of profit =  $GP\% \times \text{short sales} = 25\% \times 50,000 = ₹12,500$

14. Answer: (d) All of the above

**Explanation:**

Insurable stock includes raw materials, WIP, finished goods

15. Answer: (b) Decided mutually by partners

**Explanation:**

Profit-sharing ratio is set by **agreement** and decided mutually by partners (not always equal, nor fixed by the Act).

16. Answer: (d) Neither 1 nor 2

**Explanation:**

- The Special Officer for Linguistic Minorities is provided under Article 350B, not Article 348.

- The officer is appointed by the President of India, but his function is limited only to linguistic minorities, not religious minorities.
- Hence, both statements are incorrect.

**17. Answer: (a) Only one**

**Explanation:**

- The 44th Amendment Act (1978) added Article 38(2), which directs the State to minimise inequalities in income, status, facilities, and opportunities.
- The other two directives — (i) to secure opportunities for healthy development of children and (ii) to protect and improve the environment — were added by the 42nd Amendment Act (1976).
- Hence, only one directive mentioned in the question was added by the 44th Amendment.

**18. Answer: (b) Indian Councils Act of 1861**

**Explanation:**

The portfolio system was introduced by Lord Canning in 1859 and was given formal recognition by the Indian Councils Act of 1861. Under this system, each member of the Viceroy's Council was made responsible for a specific department — the first step toward the cabinet form of government in India.

**19. Answer: (c) All three**

**Explanation:**

Under Article 360 of the Constitution, during a Financial Emergency:

1. The Centre acquires control over state finances, as the President can direct the States on how to manage their financial affairs.
2. The President may require all Money Bills or other financial Bills passed by a State Legislature to be reserved for his consideration.
3. The President may issue directions for the reduction of salaries and allowances of all persons serving in connection with the affairs of the Union or States, including judges of the Supreme Court and High Courts.

Therefore, all three statements are correct

**20. Answer: (c) Mandamus**

**Explanation:**

The writ of Mandamus (“we command”) is issued by a court to direct any public authority to perform a duty required by law. It can be issued to administrative, legislative, quasi-judicial, or judicial authorities that fail to act as per their legal obligations.

**21. Answer: (a) Both statements are correct and Statement II explains Statement I**

**Explanation:**

Under Article 75(3), the Council of Ministers is collectively responsible to the Lok Sabha. Therefore, if a vote of no-confidence is passed even against a single minister, it implies loss of confidence in the entire Council, resulting in its resignation. Statement II explains Statement I.

**22. Answer: (b) II only**

**Explanation:**

Under Article 143, only the President of India (not the Prime Minister) can refer a matter of public importance or constitutional interpretation to the Supreme Court for its advisory opinion. The Supreme Court, however, is not bound to give its advice. Hence, only Statement II is correct.

23. **Answer: (b) By a resolution in the Council of States supported by not less than two-thirds of the members present and voting**

**Explanation:**

According to Article 312, Parliament can create new All-India Services (like IAS, IPS) if the Rajya Sabha passes a resolution supported by at least two-thirds of the members present and voting. Parliament then makes a law to regulate such services

24. **Answer: (d) Statement I is incorrect but Statement II is correct**

**Explanation:**

The Preamble was part of the original Constitution adopted on 26 November 1949, not added after its enactment. However, it was drafted after the rest of the Constitution to ensure that it conformed to and reflected the spirit of its provisions. Hence, Statement I is incorrect but Statement II is correct.

25. **Answer: (a) Promotion of Indian handicrafts for export**

**Explanation:**

British economic policy was **exploitative** and aimed at turning India into a **supplier of raw materials** and **consumer of British manufactured goods**. Indian handicrafts were deliberately discouraged through high tariffs and machine-made imports. Development of railways, plantations, and zamindari system were all designed to facilitate colonial control.

26. **Answer: (a) Dadabhai Naoroji**

**Explanation:**

Dadabhai Naoroji in his book "*Poverty and Un-British Rule in India*" (1901) introduced the **Drain of Wealth Theory**, stating that India's wealth was being drained to Britain without adequate returns. He cited examples like home charges, pensions, and profits remitted by British officials. R.C. Dutt later elaborated this idea in his writings

27. **Answer: (b) Spiritual uplift and social service**

**Explanation:**

Swami Vivekananda, inspired by his guru Ramakrishna Paramhansa, founded the Mission to combine **Vedantic spirituality with social service** — focusing on education, health, and humanitarian aid. It was **not political**, but aimed at **national regeneration through spiritual awakening**

28. **Answer: (a) Brahma Samaj**

**Explanation:**

Founded by **Atmaram Pandurang** in 1867 and supported by **M.G. Ranade**, the Prarthana Samaj promoted **monotheism, women's uplift**, and **abolition of caste discrimination**. It drew direct inspiration from **Raja Ram Mohan Roy's Brahma Samaj** of Bengal, sharing similar liberal and reformist ideals.

**29. Answer: (c) Chauri Chaura incident**

**Explanation:**

After the **Chauri Chaura incident** (1922), where protesters killed 22 policemen, Gandhi believed the movement had deviated from non-violence. He immediately suspended it to preserve **moral discipline** and **Ahimsa** as the guiding principles of national struggle.

**30. Answer: (c) Kathakali — Andhra Pradesh**

**Explanation:**

- **Kathakali** originated in **Kerala**, not Andhra Pradesh.
- **Bharatanatyam** – Tamil Nadu
- **Odissi** – Odisha
- **Manipuri** – Manipur

Kathakali combines **dance, drama, and music** and is known for elaborate costumes and expressive gestures.

**31. Answer: (a) Chandelas**

**Explanation:**

The **Chandela dynasty** (9th–11th century CE) built the **Khajuraho Group of Temples** in Madhya Pradesh, famous for their **Nagara style architecture** and exquisite **sculptural art**. These temples reflect a blend of spirituality and sensuality, symbolizing the holistic view of life in Indian philosophy

**32. Answer: (b) Panchala**

**Explanation:**

**Panchala** was one of the **sixteen Mahajanapadas**, located in modern western Uttar Pradesh. It consisted of two divisions — *Uttara Panchala* (capital: Ahichhatra) and *Dakshina Panchala* (capital: Kampilya). It was culturally advanced and mentioned prominently in both **Rigveda** and **Mahabharata**.

**33. Answer: (b) Grant of revenue assignments to military officers**

**Explanation:**

Under the **Iqta system**, land revenue was assigned to nobles and military officers (*muqtis*) in lieu of salary. They collected taxes from peasants and maintained soldiers for the Sultan. It was first institutionalized under **Iltutmish**, later reformed by **Alauddin Khilji** to curb corruption and centralize control.

**34. \***

**35. Answer: (d) All of the above**

**Explanation**

- Industrialisation involves adoption of machinery and technology → more capital-intensive → capital-labour ratio increases.
- As workers use better tools, output per worker (labour productivity) increases.
- Efficiency in combining all inputs improves due to technological progress and economies of scale → total factor productivity (TFP) rises.

**36. Answer: (d) All of the above**

**Explanation**

- Statement 1: The National Statistical Office (NSO) under the Ministry of Statistics & Programme Implementation (MoSPI) compiles and releases the CPI (Rural, Urban, Combined) every month.

- Statement 2: The base year for the current CPI series is 2012 = 100 (technically 2011–12).
- Statement 3: CPI data is released monthly, both at all-India level and State/UT level, separately for rural, urban and combined sectors.

**37. Answer: (d) All of the above**

**Explanation**

- WPI (Wholesale Price Index): Measures price changes at the wholesale level — only goods, not services.
- CPI (Consumer Price Index): Includes both goods and services purchased by consumers.
- Imported goods affect both CPI and WPI because imported goods are part of domestic consumption and wholesale trade baskets.
- CPI excludes capital goods and intermediate goods, as it focuses only on consumer goods/services used by households.

**38. Answer: (c) 1 & 3 only**

**Explanation**

**Concept:**

When rupee depreciates → ₹ weakens against \$ → exports become cheaper for foreigners and imports become costlier for Indians.

**Effects:**

1. Exports more competitive (foreigners can buy more for same \$).
2. Exporters earn more rupees for same dollar value (not more dollars — careful wording).  
But since the statement says “exporters will fetch more dollars for the same amount of goods exported” — this is incorrect, they fetch the same dollars, just more rupees.
3. Demand for domestic goods/services rises (import substitution effect — as imports become expensive).

**39. Answer: © Central Government**

**Explanation**

Under Section 25, RBI Act 1934:

- “The design, form and material of bank notes shall be approved by the Central Government after considering the recommendations of the RBI Central Board.”

**40. Answer: (b) Equilibrium price of the industry**

**Explanation**

- In perfect competition, price is determined by industry equilibrium (intersection of industry demand and supply).
- Each firm is a price taker — it accepts this industry-determined price.

**41. Answer: (a) Elastic**

**Explanation**

Given:

Price ↑ 22% → Demand ↓ 25%

Elasticity = % change in quantity / % change in price = 25 / 22 ≈ 1.13 (>1)

When elasticity  $> 1 \rightarrow$  demand is elastic.

**42. Answer: (a) Combinations of two commodities which give the Consumer same satisfaction**

**Explanation**

An indifference curve shows different combinations of two goods that give the consumer the same level of satisfaction (utility).

Along the curve, total satisfaction remains constant.

**43. Answer: (b) When there are two or more alternative courses of action**

**Explanation**

Opportunity cost means the value of the next best alternative forgone when a choice is made.

It arises only when there are two or more alternatives to choose from.

**44. Answer: (C) `\begin{document}`**

**Explanation:**

A LaTeX document always starts with the declaration of document type using `\documentclass{}` (for example, `\documentclass{article}`) and then begins the actual content area using:

```
\begin{document}
```

```
...content...
```

```
\end{document}
```

`\begin{document}` starts the main body,

`\end{document}` closes it.

The other options are invalid LaTeX syntax.

**45. Answer: (B) Session Layer**

**Explanation:**

TLS (Transport Layer Security) and SSL (Secure Socket Layer) are protocols responsible for **managing sessions securely**, ensuring encryption and authentication between two communicating systems.

- They sit **between the Transport and Application layers**.
- Therefore, they are conceptually mapped to the **Session Layer** of the OSI model.

**46. Answer: (B) Half Duplex**

**Explanation:**

In **half-duplex mode**, communication occurs **in both directions**, but **not at the same time**.

- Example: Walkie-talkies — one person talks while the other listens, then they switch.
- **Simplex:** one-way only (e.g., monitor).
- **Full duplex:** both ways simultaneously (e.g., phone call).

47. Answer: (C) AWS EC2 → IaaS

**Explanation:**

Cloud service models:

- **IaaS (Infrastructure as a Service):** Provides virtualized computing resources — e.g., AWS EC2, Microsoft Azure Virtual Machines.
- **PaaS (Platform as a Service):** Developer platforms — e.g., Google App Engine, Heroku.
- **SaaS (Software as a Service):** End-user software — e.g., Gmail, Google Docs.

So, AWS EC2 correctly represents **IaaS**.

48. Answer: (A) 14975<sub>10</sub>

**Explanation:**

Convert (3A7F)<sub>16</sub> to decimal:

$$(3A7F)_{16} = (3 \times 16^3) + (10 \times 16^2) + (7 \times 16^1) + (15 \times 16^0)$$

$$= (3 \times 4096) + (10 \times 256) + (7 \times 16) + 15$$

$$= 12288 + 2560 + 112 + 15$$

$$= 14975$$

49. Answer: (D) REL

**Explanation:**

The **rel** (relationship) attribute specifies how the current document is related to the linked resource.

Example:

```
<link rel="stylesheet" href="styles.css">
```

Here, the link defines a **relationship** (stylesheet) between the HTML and CSS file.

- **NAME** and **ALIGN** are used in different contexts.
- **LINK** is an HTML tag, not an attribute.

50. Answer: (B) chkdsk /f

**Explanation:**

**chkdsk** stands for **Check Disk**.

- The **/f** parameter tells Windows to **fix detected errors**.
- **/r** locates **bad sectors** and recovers readable information.

Other commands:

- **scanreg** → checks Windows registry.
- **defrag** → rearranges fragmented data.
- **diskpart** → manages disk partitions.

**51. Answer: (B) 17500**

**Explanation**

12% = 2100 so 100% would be 17500

**52. Answer: (D) 2000**

**Explanation**

60% of spoiled fruits = 48 , so total spoiled fruits = 100% = 80

Since there is one spoiled fruit for every 25 fruits , hence total number of fruits to have 80 spoiled fruits =  $25 \times 80 = 2000$

**53. Answer: (B) 1500**

**Explanation**

Area of floor =  $100\text{dm} \times 60\text{dm} = 6000\text{dm}^2$

Required number of tiles =  $6000/4 = 1500$

**54. Answer: (D) All are correct**

**Explanation**

$72 = 2^3 \times 3^2$  So total number of factors =  $(3+1)(2+1) = 12$

Sum of first 20 odd numbers =  $n^2$  , hence sum of first 20 off numbers =  $20^2 = 400$

Yes, 97 is the largest two-digit Prime number.

**55. Answer: (A) 3**

**56. Answer: (C) 18**

**Explanation**

$\text{LCM}(15,18,36) = 180$  ,

$180K+9$  will be divisible by 11 when  $k=6$  (You can check by putting values )

Number = 1089 , sum of digits = 18

**57. Answer: (A) 76**

**Explanation**

Maximum number of animals in each flock =  $\text{HCF}(945,2475) = 45$

Total number of flocks =  $945/45 + 2475/45 = 21 + 55 = 76$

**58. Answer: (D) 360km**

**Explanation**

$d/72 - d/90 = 1/1$  ,  $d = 360\text{km}$

**59. Answer: (C) 4/9**

**Explanation**

Let the total work be 36. Efficiency of Suraj = 3 , Ayush = 2

Working together for 4 days  $(3+2) \times 4 = 20$ -unit work will be completed . Left fraction =  $16/36 = 4/9$

60. Answer: (B) 606.02

**Explanation**

Rate per quarter =  $\frac{4}{4} = 1\%$  , Principal = 20,000

$$\begin{array}{llll} 1 & 1 & 1 & 1\% \text{ of } 20,000 = 200 \rightarrow 200 \times 3 = 600 \\ & 1 & 2 & 1\% \text{ of } 200 = 2 \rightarrow 2 \times 3 = 6 \\ & & 1 & 1\% \text{ of } 2 = 0.02 \rightarrow 0.02 \times 1 = 0.02 \end{array}$$

**Total interest = 606.02**

61. Answer: (A) 13800

**Explanation**

Let share of C = x , hence share of B = x+6000 , share of A = x+ 11000

$$x+x+6000+x+11000 = 53000 , 3x = 36000 , x=12000$$

$$A:B:C = 23:18:12 , 53 \text{ UNIT} = 31800 \text{ then share of A} = 12 \text{ unit} = 23 \times 600 = 13800$$

62. Answer: (C) 62

**Explanation**

60 STUDENTS -24 girls , 36 boys

$$\text{Total weight of all students} = 59.2 \times 60 = 3552$$

$$\text{Total weight of Girls} = 55 \times 24 = 1320$$

$$\text{Average weight of boys} = \frac{2232}{36} = 62$$

63. Answer (b) Motor Third Party Legal Liability

**Explanation**

Under the Motor Vehicles Act, 1988, every vehicle owner in India is legally required to have Third Party Liability (TPL) insurance before using the vehicle on public roads

64. Answer (a) employees

**Explanation**

A Fidelity Guarantee Policy is a type of insurance policy that protects an employer from financial losses caused by the dishonest or fraudulent acts of employees.

65. Answer (C) brokers

**Explanation**

Insurance brokers are licensed intermediaries who act as agents between the insured (customer) and multiple insurance companies

66. Answer (c) Carbon copies of sales invoices inspected by the auditor

**Explanation**

carbon copies of sales invoices are internal documents prepared by the client and subject to manipulation or bias, making them the least persuasive form of audit evidence.

In contrast, bank statements (even obtained from client) and documents obtained directly from third parties carry higher credibility.

Auditor's own computations are based on verifiable data, so they are considered fairly reliable.

67. Answer (d) All of the above

**Explanation:**

Analytical procedures performed during the planning stage of an audit serve multiple purposes. They help the auditor gain an understanding of the client's business and identify areas that may require special attention.

68. Answer is D Checking of selected number of transactions

**Explanation:**

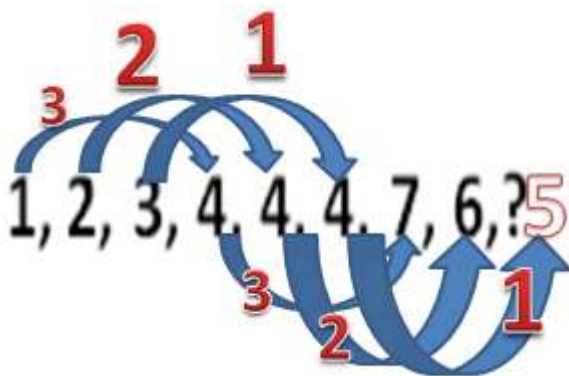
Test Checking is an audit technique where the auditor does not verify all transactions, but instead selects a representative sample to check in detail.

69. Answer: (D) gup buf

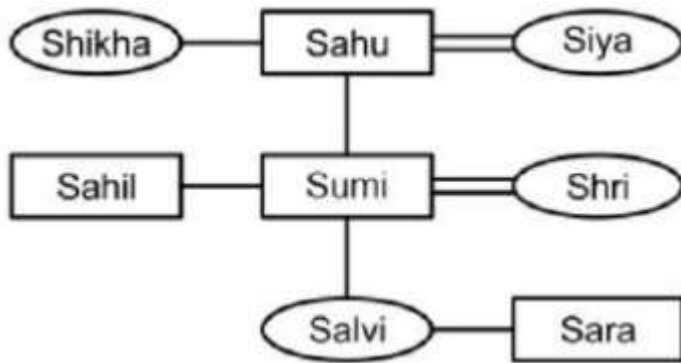
**Explanation**

hunger and poverty remain = ner gup jil mub  
people count poverty records = abc gup xyz def  
count remain **unchanged** records = **buf** ner def xyz  
people and poverty rate = abc mub for gup

70. Answer: (D) 5



71. Answer: (B) Nephew

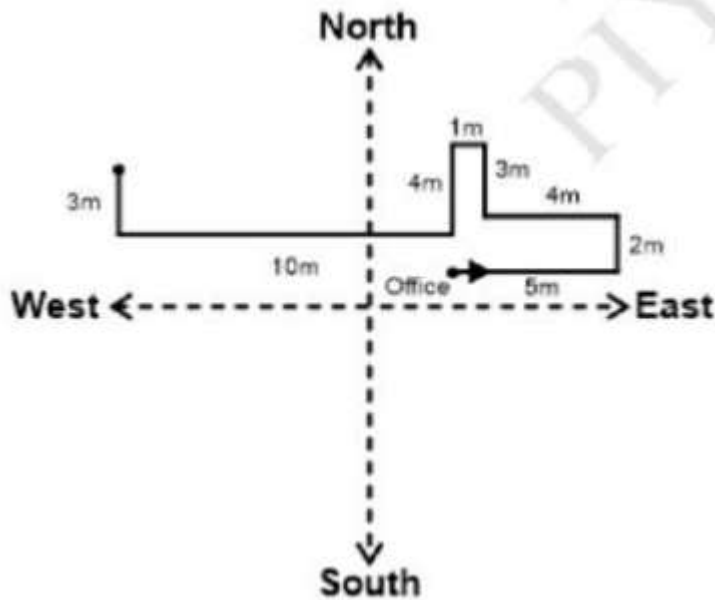


72. Answer: (A) 5:36 p.m.

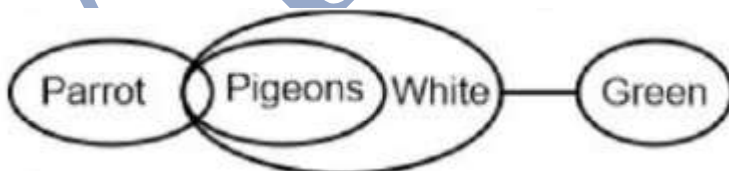
**Explanation**

10 minutes in every 24 hours .  
Hence 24 minutes in 58 hours

73. Answer: (C) Northwest



74. Answer: (A) Only I follow



75. Answer: (B) 32

**Explanation**

Rama's position from the right will be:  $17+10 = 27$   
Sheela's position from the right will be:  $27-4=23$   
Sheela is 23rd from the right. Sheela is also 10th from the left.  
Therefore, total girls in a row =  $23+10-1 = 32$

76. Answer: (C) All non-European advocates who are honest swimmers.

77. Answer: (b) 1, 2 and 3 only

**Explanation:**

- **Statement 1 – Correct:** Workers' Participation in Management (WPM) was first introduced through provisions under the Industrial Disputes Act, 1947 (e.g., Works Committees under Section 3). These committees were meant to promote measures for securing and preserving amity and good relations between employer and workers.
- **Statement 2 – Correct:** The 20-Point Programme of 1975 indeed emphasized WPM and led to the creation of Shop Councils and Joint Councils in industrial establishments to foster participative management.
- **Statement 3 – Correct:** WPM operates at three levels — information-sharing, consultative, and decision-making. The lowest level involves sharing information; consultative level involves discussion and advice.
- **Statement 4 – Incorrect:** The Directive Principles of State Policy (DPSPs) encourage worker participation (Article 43A), but it was inserted later by the 42nd Amendment Act, 1976, not originally mandated under the Constitution.

78. Answer: (a) 1 and 2 only

**Explanation:**

- **Statement 1 – Correct:** Under the Industrial Disputes Act, 1947, conciliation is indeed compulsory for public utility services but optional for other industries. This ensures the prevention of disruptions in essential services.
- **Statement 2 – Correct:** Adjudication refers to the legal determination of industrial disputes by Labour Courts, Industrial Tribunals, or National Tribunals. The awards passed by these authorities are binding and enforceable under Section 17A of the Act.
- **Statement 3 – Incorrect:** Voluntary arbitration can only begin when both parties agree to refer a dispute voluntarily. Unilateral initiation is not legally valid.
- **Statement 4 – Incorrect:** The Industrial Relations Code, 2020 retains conciliation as a mechanism for all establishments, not just public sector undertakings. Its scope has not been restricted; instead, it streamlined and modernized the process.

79. Answer: (d) 1, 2 and 3 only

**Explanation:**

- **Statement 1 – Correct:** In *public utility services*, a strike without a **14-day notice** is automatically **illegal** under Sections 22(1) and 24(1)(i) of IDA Act, 1947.
- **Statement 2 – Correct:** A *lockout* continuing after a dispute is referred to *adjudication* becomes **illegal** (Section 23 (c)).
- **Statement 3 – Correct:** Participation in an illegal strike makes workers liable for disciplinary action, **including dismissal**, though inquiry and due process apply; hence, substantively the statement reflects the employer's power under law. So, yes they **CAN** be dismissed.
- **Statement 4 – Incorrect:** Strikes and lockouts are **prohibited during conciliation/adjudication** both in *public utility* and *non-public utility* sectors (Sections 22 & 23), though the procedural scope differs.

80. Answer: (a) 1, 2 and 4 only

**Explanation**

- **Police Theory:** State-imposed statutory compulsion to maintain discipline and avert unrest.

- **Functional Theory:** Welfare viewed as investment to enhance productivity and morale.
- **Religious Theory:** Based on moral or ethical duty.
- **Placating Theory:** Based on expediency — to pacify workers and prevent strikes, not moral obligation.
- **Philanthropic Theory:** Voluntary, generous welfare acts without any utilitarian motive.

**81. Answer: (b) 2 and 3 only**

**Explanation:**

The **Code of Discipline (1958)** was a **voluntary, non-statutory framework** adopted at the **16th Indian Labour Conference** to promote industrial harmony and discipline through mutual understanding. It aimed to **eliminate unfair labour practices** by voluntary consent rather than legal coercion. It had **no legal backing or connection** with the Standing Orders Act, 1946.

**82. Answer: (b) Gratuity benefit**

**Explanation:**

The ESI Scheme provides **comprehensive social security** to employees earning up to a prescribed wage ceiling in case of sickness, maternity, employment injury, and death. **Gratuity** is governed separately under the **Payment of Gratuity Act, 1972**, not under the ESI Act.

**83. Answer: (d) 1, 2 and 3**

**Explanation:**

EPFO administers **all three schemes** under the **Employees' Provident Funds and Miscellaneous Provisions Act, 1952** — providing retirement savings (EPF), pension (EPS), and insurance cover (EDLI) for private sector employees.

**84. Answer: (c) Unemployment benefit to insured persons under ESI**

**Explanation:**

Launched in **2018**, ABVKY is implemented by the **Employees' State Insurance Corporation (ESIC)** to provide **temporary financial assistance** (50% of average wages for up to 90 days) to workers who lose their jobs and are covered under ESI.

**85. Answer: (c) Mass can neither be created nor destroyed in a chemical reaction.**

**Explanation:**

Proposed by **Antoine Lavoisier**, the law states that in a chemical reaction, the total mass of reactants equals the total mass of products. No new matter is created or lost — only rearranged.

**86. Answer: (d) Sodium atom**

**Explanation:**

Atomic number = number of protons.

O (8), N (7), F (9), Na (11).

Hence, Sodium (Na) has the maximum protons among these.

**87. Answer: (b) Formation of rainbow**

**Explanation:**

Rainbow formation is due to **dispersion, refraction, and total internal reflection**, but the key cause is **dispersion of light** through water droplets — separating white light into colors

**88. Answer: (a) Oxygen and moisture**

**Explanation:**

Rusting is an **electrochemical process** requiring both **oxygen and moisture**, forming hydrated iron oxide ( $\text{Fe}_2\text{O}_3 \cdot x\text{H}_2\text{O}$ ).

**89. Answer: (b) A swimmer pushes water backward to move forward.**

**Explanation:**

Newton's Third Law: *"For every action, there is an equal and opposite reaction."*

The swimmer pushes water backward (action), water pushes swimmer forward (reaction).

**90. Answer: (c) Sulphur dioxide and nitrogen oxides**

**Explanation:**

$\text{SO}_2$  and  $\text{NO}_x$  released from factories and vehicles react with water vapour to form  $\text{H}_2\text{SO}_4$  and  $\text{HNO}_3$ , leading to acid rain that damages soil, water, and monuments.

**91. Answer: (d) 20  $\Omega$**

**Explanation:**

Using **Ohm's Law:**

$$V = IR \rightarrow R = V/I = 10 / 0.5 = 20 \Omega.$$

**92. Answer: (b) The UK and India resolved to finalise a Comprehensive Economic Partnership Agreement, enhancing market access for both countries.**

**Explanation:**

The UK Prime Minister's visit followed a trade pact signed earlier and highlighted efforts to deepen trade and market access.

**93. Answer: (b) Remission of Duties and Taxes on Exported Products (RoDTEP).**

**Explanation:** The committee was asked to review export rebate rates under RoDTEP and RoSCTL based on FY25 data

**94. Answer: (c) It shows expansion/growth in manufacturing activity.**

**Explanation:** A PMI value above 50 indicates that overall manufacturing activity is expanding (below 50 would indicate contraction).

**95. Answer: (b) Averages.**

**Explanation:**

Measures of central tendency (mean, median, mode) describe the "average" or center of a data set, so they are called averages.

**96. Answer: (d) Coefficient of variation.**

**Explanation**

Coefficient of variation ( $\text{CV} = \text{SD} / \text{mean}$ ) is a relative measure of dispersion — it standardizes spread by the mean, so it allows comparison between series with different units or magnitudes

**97. Answer: (c) Observation with maximum frequency**

**Explanation:**

Mode = value that occurs most frequently (i.e., the observation with maximum frequency)

**98. Answer: (b) 0.50**

**Explanation**

When three unbiased coins are tossed, each coin has two possible outcomes (Head or Tail).  
Therefore, the total number of possible outcomes =  $2^3 = 8$ .

The sample space is:

HHH, HHT, HTH, THH, HTT, THT, TTH, TTT

The event "at most one head" includes the cases where there are 0 heads or 1 head.

0 heads → TTT → 1 outcome

1 head → HTT, THT, TTH → 3 outcomes

Hence, the number of favourable outcomes =  $1 + 3 = 4$ .

Probability = (Number of favourable outcomes) / (Total number of outcomes)  
=  $4 / 8 = 1 / 2 = 0.50$

**99. Answer: (b) 35/132**

**Explanation**

Total clips = 7 purple + 5 brown = 12 clips

Step 1: Probability that the first clip is brown =  $5/12$

Step 2: After one brown clip is taken out, remaining clips = 11

Now, number of purple clips = 7

Probability that the second clip is purple =  $7/11$

Step 3: Required probability =  $(5/12) \times (7/11) = 35/132$

**100. Answer: (b) 6.6**

**Explanation**

Given data:

Category | n | Mean | Standard Deviation

Male | 30 | 20 | 4

Female | 20 | 30 | 5

Formula for Combined Standard Deviation ( $\sigma_c$ ):

$$\sigma_c = \sqrt{[ (n_1(\sigma_1^2 + (\bar{x}_1 - \bar{x}_c)^2) + n_2(\sigma_2^2 + (\bar{x}_2 - \bar{x}_c)^2) ) / (n_1 + n_2) ]}$$

Where

$$\bar{X}_c = (n_1\bar{x}_1 + n_2\bar{x}_2) / (n_1 + n_2)$$

Step 1: Calculate Combined Mean ( $\bar{x}_c$ )

$$\bar{X}_c = (30 \times 20 + 20 \times 30) / (30 + 20)$$

$$\bar{X}_c = (600 + 600) / 50$$

$$\bar{X}_c = 1200 / 50 = 24$$

Step 2: Substitute in formula for  $\sigma_c$

$$\Sigma c = \sqrt{[ (30(4^2 + (20 - 24)^2) + 20(5^2 + (30 - 24)^2)) / 50 ]}$$

$$\Sigma c = \sqrt{[ (30(16 + 16) + 20(25 + 36)) / 50 ]}$$

$$\Sigma c = \sqrt{[ (30 \times 32 + 20 \times 61) / 50 ]}$$

$$\Sigma c = \sqrt{[ (960 + 1220) / 50 ]}$$

$$\Sigma c = \sqrt{(2180 / 50)}$$

$$\Sigma c = \sqrt{43.6}$$

$$\Sigma c = 6.6$$

**101. Answer: (B) An underground prospecting site employing fewer than 20 persons and not using explosives.**

**Explanation:**

Under Section 3 of the Mines Act, 1952, the Central Government may, by notification, exempt certain mines or parts of mines from the application of all or any provisions of the Act, subject to specified conditions.

However, this exemption is not automatic — it applies only to small-scale, non-commercial prospecting or exploratory operations that meet all of the following conditions:

1. The operation is for prospecting or exploration, not for commercial mineral extraction.
2. Fewer than 20 persons are employed underground or fewer than 50 persons on the surface.
3. No explosives are used in the operation.

When these conditions are satisfied, such a site may be exempted by government notification under Section 3.

**102. Answer: (B) Address for communication, nature of manufacturing processes to be carried on, and total rated horse power installed or to be installed**

**Explanation:**

Under Section 7(1) and (2) of the Factories Act, 1948, every occupier of a factory must give a written notice to the Chief Inspector at least 15 days before beginning any manufacturing process in a newly established factory.

This notice must include specific statutory particulars to be considered valid and complete.

Mandatory particulars under Section 7:

1. Name and situation of the factory.
2. Name and address of the occupier.
3. Address for communication.
4. Nature of manufacturing processes to be carried on.
5. Name of the manager.
6. Number of workers likely to be employed.

7. Total rated horse power installed or to be installed.
8. Name of the owner of the premises or building (if different from occupier).

**103. Answer: (a) 1 and 2 only**

**Explanation:**

Under Section 6A of the EPF & MP Act, 1952 and Paragraph 39 of the Employees' Pension Scheme, 1995, an establishment may seek exemption from EPS if it maintains a pension scheme offering benefits equal or superior to the statutory one.

- Statement 1: Correct — Out of the employer's 12 % EPF contribution, 8.33 % is diverted to the Pension Fund, while 3.67 % remains in EPF.
- Statement 2: Correct — Exemption is granted only when the Central Provident Fund Commissioner (CPFC) certifies that the alternative scheme provides superior benefits.
- Statement 3: Incorrect — Employee consent is not required for EPS exemption; it applies only to PF-trust exemptions under Section 17 of the EPF Scheme, 1952.

**104. Answer: (a) The occupier, through compensation under the Employees' Compensation Act, 1923**

**Explanation :**

Under the Factories Act, 1948, the occupier holds primary responsibility for ensuring safety and medical supervision in dangerous operations (Section 87).

Failure to provide such supervision amounts to a breach of statutory duty.

The certifying surgeon only examines and reports conditions; liability does not rest with them.

Since the establishment is not covered under the ESI Act, the injured 16-year-old worker's remedy lies under the Employees' Compensation Act, 1923, which provides compensation for injuries arising out of and in the course of employment.

**105. Answer: (d) None of the above**

**Explanation :**

- Statement 1 — Correct. Section 2(oo)(bb) (ID Act) excludes non-renewal/expiry of a fixed-term contract from the definition of *retrenchment* — so expiry without renewal is not retrenchment.
- Statement 2 — Correct. Section 25F(b) prescribes 15 days' average pay for each completed year of continuous service (or part > six months) as retrenchment compensation.
- Statement 3 — Correct (with statutory clarity). Section 2(s) excludes from the term "*workman*" persons in supervisory capacity drawing wages exceeding ₹10,000/month (statutory threshold introduced by the 2010 amendment); such persons are therefore not "workmen" and retrenchment provisions do not apply to them. (Note: ₹18,000 is sometimes cited in contemporary commentary as a modern benchmark under newer labour-code discussions, but it is not the statutory limit under the ID Act — the legal threshold remains ₹10,000/month.)

Therefore, all three statements are correct; none are incorrect.

**106. Answer: (C) It is defined independently to cover all emoluments in cash or kind**

**Explanation:**

Under Section 2(g) of the Minimum Wages Act, 1948, “wages” means all remuneration payable in money or capable of being expressed in money — including basic pay, dearness allowance, and house rent allowance — but excluding PF contributions, travel allowances, and gratuity.

Although the definition resembles that in the Payment of Wages Act, 1936, it is independently defined under this Act and applies to all employees in scheduled employments, not merely to contract labour.

**107. Answer: (a) Both A and R are true, and R is the correct explanation of A.**

**Explanation:**

Under Section 41A of the Factories Act, 1948 (inserted by the Factories (Amendment) Act, 1987), the State Government is empowered to constitute a Site Appraisal Committee (SAC).

The purpose of this committee is precisely to examine applications for the establishment or expansion of factories involving hazardous processes before granting permission for their location or construction.

The committee assesses:

- Site suitability,
- Proximity to population and water sources,
- Environmental and safety safeguards, and
- Measures for prevention of industrial disasters.

Thus, the Reason (R) correctly explains why the State Government may appoint a Site Appraisal Committee.

**108. Answer: (b) 1 and 3 only**

**Explanation: Under Section 2(1)(pp) of the Mines Act, 1952, a “reportable injury” means:**

*“Any injury, other than a serious bodily injury, which involves or is likely to involve the enforced absence of the injured person from work for a period of seventy-two hours or more.”*

Thus, the legal threshold for a reportable injury is enforced absence from work for 72 hours or more, which is equivalent to temporary disablement exceeding three days.

Minor injuries that cause hospitalization for less than 24 hours or do not result in 72-hour absence are not reportable under the Act.

**109. Answer: (c) A is true, but R is false.**

**Explanation:**

- Assertion (A): True.  
Section 87A(1) explicitly authorizes the Inspector to issue a written order prohibiting work in a factory or part thereof when conditions create a serious hazard to workers or the public.  
This power is preventive, ensuring immediate control of dangerous situations.
- Reason (R): False.  
Under Section 87A(2), the Inspector’s order is valid for only three days, and may be extended by the Chief Inspector if the hazard continues.

Therefore, the prohibition is temporary, not permanent.

The Act specifically provides a defined time limit and an appeal process — it is never a “permanent ban.”

**110. Answer: (c) All correct as per table**

Worker Category	Maximum Daily Hours	Relevant Act & Section	Text Summary
A. Adult worker (Factory)	9 hours/day	Factories Act, 1948 — Section 54	No adult to work > 9 hours in any day.
B. Below-ground mine worker	8 hours/day	Mines Act, 1952 — Section 31	No worker below ground > 8 hours/day.
C. Above-ground mine worker	9 hours/day	Mines Act, 1952 — Section 30	No worker above ground > 9 hours/day.
D. Child worker (Factory)	4½ hours/day	Factories Act, 1948 — Section 71(1)	No child to work > 4½ hours/day.

**111. Answer: (a) Chief Inspector of Factories**

**Explanation:**

Under Section 2(ca) of the Factories Act, 1948, a “*competent person*” means a person or institution recognized by the Chief Inspector of Factories to conduct tests, examinations, and inspections required under the Act.

The Chief Inspector grants this recognition after verifying qualifications, experience, and facilities available for such inspections.

The State Government may frame rules governing the recognition process but does not directly confer recognition itself.

**112. Answer: (b)**

**Explanation:**

The passage calls multitasking “rapid task-switching—an illusion of efficiency.”

**113. Answer: (c)**

**Explanation:**

The text clearly states reduced working memory and lower creative output as effects of digital stimuli

**114. Answer: (b)**

**Explanation:**

“Technology promises connectivity, it often deepens isolation.” — a direct paradox.

**115. Answer: (c)**

**Explanation:**

The last line directly mentions “reclaiming attention as a finite resource.”

**116. Answer: (B)**

**Explanation:**

“Each” is singular → should be “was given,” not “were given.”

**117. Answer: (c)**

**Explanation:**

When subjects are joined by “neither...nor,” the verb agrees with the nearest subject → plural → “were ready.”

**118. Answer: (b)**

**Explanation:**

After “did,” the base form of the verb is used → “speak.”

**119. Answer: (b)**

**Explanation:**

*Ephemeral* means short-lived or temporary.

**120. Answer: (b)**

**Explanation:**

*Pragmatic* means practical; *Idealistic* is its antonym.