

AP DEECET 2025 Social Studies Question Paper with Solutions

Time Allowed :2 Hours 30 Minutes	Maximum Marks :100	Total Questions :100
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General Instructions

1. The **AP DEECET 2025 (Social Studies)** examination will be conducted in **Computer-Based Test (CBT)** mode by the **Department of School Education**, Government of Andhra Pradesh.
2. The duration of the examination is **2 hours and 30 minutes**.
3. The question paper consists of **100 multiple-choice questions (MCQs)** divided into **Part A (General Section)** and **Part B (Social Studies Methodology)**.
4. Each question carries **1 mark**. There is **no negative marking** for incorrect answers.
5. Candidates must carry a printed copy of their **Admit Card** along with a valid **Photo ID proof** to the examination centre.
6. Use of **mobile phones, calculators, smart watches, or any electronic devices** is strictly prohibited inside the examination hall.
7. Rough work should be done only on the rough sheet provided by the invigilator.
8. Candidates must report to the examination centre at least **60 minutes before** the commencement of the examination.
9. Once the examination begins, **no candidate will be permitted to leave the hall** until the test is completed.
10. The system will automatically submit the answers once the allotted time (2 hours and 30 minutes) is completed.

1. As a teacher you have to follow this to improve retention ability among students is

- (A) News reading
- (B) Giving home work
- (C) Practicing tables and poems
- (D) Drawing

Correct Answer: (C) Practicing tables and poems

Solution:

Step 1: Understanding the Concept:

The question asks for the most effective method among the given options for a teacher to improve the retention ability (memory) of students. Retention is the ability to store information and recall it when needed.

Step 2: Detailed Explanation:

Let's analyze each option:

(A) **News reading:** This activity primarily improves general awareness, vocabulary, and reading comprehension. While students might retain some information, its main goal is not memory enhancement through practice.

(B) **Giving home work:** Homework is a broad term. It can be for practice, research, or creative tasks. While it reinforces learning, it's not as specific to memory retention as rote practice.

(C) **Practicing tables and poems:** This method directly targets memory through repetition and rote learning. Reciting multiplication tables and poems repeatedly strengthens neural pathways, making it easier for students to recall this information accurately. This is a classic and effective technique for improving retention.

(D) **Drawing:** Drawing enhances creativity, fine motor skills, and visual-spatial reasoning. It is not a primary method for improving the retention of factual or verbal information.

Step 3: Final Answer:

Based on the analysis, practicing tables and poems is the most direct and effective strategy listed for improving students' retention ability.

💡 Quick Tip

In pedagogy questions, look for the option that directly addresses the core psychological or educational principle being asked. Here, "retention" is directly linked to memory techniques like repetition and practice (rote learning).

2. Mentally retarded child is there in our catchment area. As a teacher you will join him in this school

- (A) Bhavitha Centre
- (B) Anganwadi Center
- (C) K.G.B.V
- (D) Pre Primary School

Correct Answer: (A) Bhavitha Centre

Solution:**Step 1: Understanding the Concept:**

The question asks for the appropriate educational institution for a mentally retarded (or intellectually disabled) child. This requires knowledge of specific government initiatives and the purpose of different types of schools.

Step 2: Detailed Explanation:

Let's examine the purpose of each institution:

(A) **Bhavitha Centre:** These are special centers established by the government (specifically under schemes like Sarva Shiksha Abhiyan in states like Andhra Pradesh) to provide education and support for children with special needs (CWSN), including those with intellectual disabilities. They are equipped with special educators and resources to cater to these children.

(B) **Anganwadi Center:** These are part of the Integrated Child Development Services (ICDS) program. They focus on basic healthcare, nutrition, and non-formal pre-school education for children under 6 years old. They are not specialized for children with significant intellectual disabilities.

(C) **K.G.B.V (Kasturba Gandhi Balika Vidyalaya):** These are residential schools set up for girls from disadvantaged sections of society (SC, ST, OBC, minorities) in educationally backward blocks. The focus is on providing education to girls, not on special needs education.

(D) **Pre Primary School:** This is a general term for early childhood education. While inclusive education is encouraged, a standard pre-primary school may not have the specialized resources or trained staff required to effectively support a mentally retarded child.

Step 3: Final Answer:

The Bhavitha Centre is the most suitable option as it is specifically designed to cater to the educational needs of children with disabilities.

💡 Quick Tip

For questions related to educational policies and institutions, it's helpful to know the target demographic and primary objective of major government schemes like ICDS, SSA, KGBV, etc.

3. This is useful to make children hand writing good

- (A) Imposition writing
- (B) Copy book writing
- (C) Dictation
- (D) Habituate children to write from early years

Correct Answer: (B) Copy book writing

Solution:

Step 1: Understanding the Concept:

The question asks to identify the most effective and specific method for improving children's handwriting among the given choices.

Step 2: Detailed Explanation:

Let's analyze the options:

(A) **Imposition writing:** This usually refers to making a child write a sentence or a word multiple times as a form of punishment. While it involves writing, the focus is on punishment rather than the careful formation of letters, and it can create a negative association with writing.

(B) **Copy book writing:** This is a structured activity where children copy letters, words, and sentences from a model, often on four-lined pages. This practice helps them learn the correct size, shape, spacing, and formation of letters, directly improving muscle memory and the quality of their handwriting.

(C) **Dictation:** This activity tests listening skills, spelling, and grammar. The focus is on writing down what is heard correctly and quickly, not necessarily on the neatness or form of the letters.

(D) **Habituate children to write from early years:** This is a general principle, not a specific technique. While starting early is beneficial, it doesn't specify *how* to write well. Without proper guidance, early writing can lead to the development of bad habits in handwriting.

Step 3: Final Answer:

Copy book writing is the most specific and pedagogically sound method listed for the direct improvement of handwriting skills.

💡 Quick Tip

When a question asks for a method to improve a specific skill, choose the option that describes a direct and structured technique for that skill over a general principle or an activity with a different primary focus.

4. The schools established exclusively for the meritorious children resides in rural areas is

- (A) Model Schools
- (B) Sainik Schools
- (C) Navodaya Vidyalaya
- (D) Central Schools

Correct Answer: (C) Navodaya Vidyalaya

Solution:

Step 1: Understanding the Concept:

The question requires identifying a specific type of school in India that is established primarily for talented (meritorious) students from rural areas.

Step 2: Detailed Explanation:

Let's analyze the different types of schools mentioned:

(A) **Model Schools:** This is a broad term. While some "Model Schools" are set up by the government to provide quality education, they do not have the specific mandate of exclusively serving meritorious children from rural areas.

(B) **Sainik Schools:** These schools are run by the Sainik Schools Society under the Ministry of Defence. Their primary objective is to prepare cadets for entry into the National Defence Academy (NDA) and other military academies. Admission is not restricted to rural children.

(C) **Navodaya Vidyalaya (JNVs):** Jawahar Navodaya Vidyalayas were established under the National Policy on Education (1986). Their main objective is to provide

high-quality modern education to talented children predominantly from rural areas, irrespective of their socio-economic background. At least 75% of the seats are reserved for students from rural areas.

(D) **Central Schools (Kendriya Vidyalayas):** These schools were primarily established to cater to the educational needs of the children of transferable Central Government employees, including defence and para-military personnel. They are not exclusively for rural or meritorious students.

Step 3: Final Answer:

Navodaya Vidyalayas are specifically designed to nurture talent from rural India, making it the correct answer.

💡 Quick Tip

Remember the unique purpose of different school systems in India. JNVs are for rural talent, KVs are for children of central government employees, and Sainik Schools are for defence aspirants. This distinction is a common topic in general knowledge.

5. Identify wrong statement related to achievement level of children

- (A) Every child has his own learning level.
- (B) Do not compare children.
- (C) Children cannot learn without motivation.
- (D) Children cannot learn if parents are illiterate.

Correct Answer: (D) Children cannot learn if parents are illiterate.

Solution:

Step 1: Understanding the Concept:

The question asks to identify the incorrect statement among the given options regarding the factors that affect a child's learning and achievement. This involves evaluating each statement based on modern educational psychology principles.

Step 2: Detailed Explanation:

Let's evaluate each statement:

(A) **Every child has his own learning level:** This is a fundamental principle of child-centered education. Children develop and learn at different paces due to various factors like cognitive ability, prior knowledge, and interest. This statement is correct.

(B) **Do not compare children:** Comparing children can lead to feelings of inadequacy, low self-esteem, and unhealthy competition. It is considered a negative practice in modern pedagogy. This statement is a correct educational principle.

(C) **Children cannot learn without motivation:** Motivation (both intrinsic and extrinsic) is a critical driver for learning. An unmotivated child is less likely to engage in learning activities and put in the required effort. This statement is largely considered correct in educational psychology.

(D) **Children cannot learn if parents are illiterate:** This statement is incorrect and represents a prejudiced view. While literate parents can provide more academic

support, a child's ability to learn is not solely dependent on it. Children can learn effectively through good schooling, peer interaction, self-curiosity, and support from teachers, regardless of their parents' literacy status. Many successful individuals have come from backgrounds with illiterate parents.

Step 3: Final Answer:

The statement that "Children cannot learn if parents are illiterate" is a false generalization and therefore the wrong statement.

💡 Quick Tip

In "identify the wrong statement" questions, look for absolute or deterministic claims (using words like "cannot," "always," "never"). These are often incorrect because human behavior and learning are complex and influenced by multiple factors.

6. Person who invented Amrutanjan and also titled as Desabandhu, Desoddharaka was

- (A) Kasinathuni Nageswara Rao
- (B) Kandukuri Veeresalingam
- (C) Tanguturi Prakasam
- (D) Konda Venkatappayya

Correct Answer: (A) Kasinathuni Nageswara Rao

Solution:

Step 1: Understanding the Concept:

The question asks to identify a historical figure from the Telugu-speaking region who was an inventor (of Amrutanjan) and also held the titles 'Desabandhu' and 'Desoddharaka'.

Step 2: Detailed Explanation:

Let's analyze the historical figures:

(A) **Kasinathuni Nageswara Rao:** He was a multifaceted personality - an entrepreneur, journalist, nationalist, and a key figure in the Indian freedom struggle from Andhra. He invented the popular pain balm "Amrutanjan" in 1893. He also founded the Telugu journal, 'Andhra Patrika'. For his service to the nation and his philanthropic activities, he was respectfully called 'Desoddharaka' (Uplifter of the masses) and 'Desabandhu' (Friend of the country).

(B) **Kandukuri Veeresalingam:** He was a great social reformer, often called the 'Father of the Renaissance movement in Andhra'. He worked for women's education and widow remarriage. He did not invent Amrutanjan.

(C) **Tanguturi Prakasam:** He was a freedom fighter and the first Chief Minister of Andhra State. He was famously known as 'Andhra Kesari' (The Lion of Andhra).

(D) **Konda Venkatappayya:** He was a prominent freedom fighter and a leader of the Indian National Congress from Andhra. He was known as 'Desa Bhakta' (Patriot).

Step 3: Final Answer:

Kasinathuni Nageswara Rao is the person who invented Amrutanjana and was known by the titles 'Desoddharaka' and 'Desabandhu'.

💡 Quick Tip

When studying historical personalities, especially for regional exams, it's useful to create a table with their name, key contributions (inventions, movements, books), and any titles or sobriquets they were known by.

7. Sardar Sarovar dam is located in this State

- (A) Tamilnadu
- (B) Uttarakhand
- (C) Bihar
- (D) Gujarat

Correct Answer: (D) Gujarat

Solution:

Step 1: Understanding the Concept:

The question asks for the geographical location (state) of the Sardar Sarovar Dam.

Step 2: Detailed Explanation:

The Sardar Sarovar Dam is a major multipurpose river valley project.

- **River:** It is built on the Narmada River.
- **Location:** The dam is located in Navagam, near the town of Kevadia in the Narmada district of the state of **Gujarat**.
- **Significance:** It is one of the largest and most controversial dam projects in India. It provides water and electricity to four states: Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan. The famous Statue of Unity is located downstream from the dam.

The other options are incorrect as the dam is not located in Tamil Nadu, Uttarakhand, or Bihar.

Step 3: Final Answer:

The Sardar Sarovar Dam is located in the state of Gujarat.

💡 Quick Tip

Associate major national projects like dams, power plants, and monuments with their location (state) and the associated river or feature. Visualizing these on a map of India can greatly improve retention.

8. The game that is known as 'King of Games'

- (A) Cricket
- (B) Volley ball
- (C) Chess
- (D) Kabaddi

Correct Answer: (C) Chess

Solution:

Step 1: Understanding the Concept:

The question asks to identify the sport that is popularly known by the title 'King of Games'.

Step 2: Detailed Explanation:

Chess is often referred to as the "King of Games" or the "Royal Game" for several historical and cultural reasons:

- **Historical Association:** The game has long been associated with royalty, nobility, and intellectuals throughout history. It was considered a worthy pastime for kings and commanders to sharpen their strategic thinking.
- **Intellectual Depth:** Chess is a game of immense strategy, tactics, and mental skill. Its complexity and the requirement for high-level cognitive abilities have earned it a prestigious status among all games.
- **Nomenclature:** The central piece in the game is the 'King', and the objective is to checkmate the opponent's King, further reinforcing its royal connection.

While other games like Cricket are immensely popular, they do not hold the specific title of 'King of Games'.

Step 3: Final Answer:

Chess is the game known as the 'King of Games'.

💡 Quick Tip

General knowledge questions often include sobriquets or nicknames for sports, people, and places. It is useful to be familiar with these common titles. For example, Cricket is often called the "Gentleman's Game".

9. Sahitya Academy winner for Children Literature in Telugu for the year 2023 is

- (A) Dasari Amarendra
- (B) Juluru Gouri Sankar
- (C) D. K. Chaduvula Babu
- (D) Jolny Thakkedasila

Correct Answer: (C) D. K. Chaduvula Babu

Solution:

Step 1: Understanding the Concept:

This is a current affairs question asking to identify the recipient of the Sahitya Akademi Bal Sahitya Puraskar (Children's Literature Award) for the Telugu language in the year 2023.

Step 2: Detailed Explanation:

The Sahitya Akademi, India's National Academy of Letters, confers awards for literary works in various Indian languages. The Bal Sahitya Puraskar is specifically for contributions to children's literature.

For the year 2023, the award in the Telugu language was conferred upon **D. K. Chaduvula Babu**.

He received this prestigious award for his collection of stories titled "**Vajrala Vana**". Therefore, option (C) is the correct answer.

Step 3: Final Answer:

The Sahitya Akademi winner for Children's Literature in Telugu for 2023 is D. K. Chaduvula Babu.

💡 Quick Tip

For questions on literary awards, especially prestigious ones like the Sahitya Akademi awards, try to remember the recipient, the language, the year, and if possible, the name of the award-winning work. This level of detail is often required in competitive exams.

10. Printing Press was invented by

- (A) Johannes Gutenberg
- (B) George Claude
- (C) Alexander Fleming
- (D) Karl Benz

Correct Answer: (A) Johannes Gutenberg

Solution:

Step 1: Understanding the Concept:

The question asks to identify the inventor of the printing press, a pivotal invention in human history.

Step 2: Detailed Explanation:

Let's look at the contributions of each person listed:

- (A) **Johannes Gutenberg:** A German goldsmith and inventor, he is credited with inventing the mechanical movable-type printing press in Europe around 1440. His invention revolutionized communication and played a key role in the Renaissance, Reformation, and the Age of Enlightenment.
- (B) **George Claude:** A French engineer and inventor, he is known for inventing the neon lighting system in the early 20th century.
- (C) **Alexander Fleming:** A Scottish physician and microbiologist, he is famous for his discovery of the antibiotic substance penicillin in 1928.
- (D) **Karl Benz:** A German engine designer and automobile engineer, his Benz

Patent-Motorwagen in 1886 is considered the first practical automobile. He was a pioneer of the automobile industry.

Step 3: Final Answer:

Johannes Gutenberg is correctly credited with the invention of the printing press.

💡 Quick Tip

Create a list of major inventions and their corresponding inventors. This is a classic topic in the general knowledge section of many competitive exams. Pay special attention to inventions that had a transformative impact on society, like the printing press, telephone, and penicillin.

11. The committee has _____ to make Jagadish captain of the team. The _____ is likely to please everyone. Choose the pair of words that fits the blanks in the sentence above respectively.

- (A) decided - decision
- (B) decision - decided
- (C) decision - deciding
- (D) deciding - decide

Correct Answer: (A) decided - decision

Solution:

Step 1: Understanding the Concept:

This question tests the knowledge of parts of speech, specifically the correct forms of the verb 'to decide' and the noun 'decision' to fit the grammatical structure of the two sentences.

Step 2: Detailed Explanation:

Let's analyze the two blanks:

First Blank: "The committee has _____ to make..."

The structure "has + _____" indicates the present perfect tense. This tense requires the past participle form of the verb. The past participle of 'decide' is 'decided'. So, the first word must be **decided**.

The sentence becomes: "The committee has **decided** to make Jagadish captain of the team."

Second Blank: "The _____ is likely to please everyone."

The blank is preceded by the article "The". Articles are followed by nouns. The noun form of the verb 'decide' is 'decision'. So, the second word must be **decision**.

The sentence becomes: "The **decision** is likely to please everyone."

Step 3: Final Answer:

Combining both findings, the correct pair of words is "decided - decision". This corresponds to option (A).

💡 Quick Tip

In fill-in-the-blanks questions involving different forms of the same root word, first identify the part of speech required for each blank (e.g., noun, verb, adjective). Look for grammatical clues like auxiliary verbs (has, is, will), articles (a, an, the), or prepositions to make the correct choice.

12. Identify the noun form from the following

- (A) Creative
- (B) Creatively
- (C) Creativity
- (D) Creativity

Correct Answer: (D) Creativity

Solution:

Step 1: Understanding the Concept:

The question asks to identify the noun from a list of words that are different forms of the same root word 'create'. A noun is a word that names a person, place, thing, or idea.

Step 2: Detailed Explanation:

Let's analyze the part of speech for each option:

- (A) **Creative:** This is an adjective. It is used to describe a noun. For example, "She is a **creative** artist."
- (B) **Creatively:** This is an adverb. It is used to describe a verb, adjective, or another adverb. For example, "He solved the problem **creatively**."
- (C) **Creativity:** This is an incorrect spelling. It is not a valid word in English.
- (D) **Creativity:** This is an abstract noun. It refers to the quality, state, or ability to create. For example, "The job requires a lot of **creativity**."

Step 3: Final Answer:

Based on the analysis, 'Creativity' is the correct noun form among the given options.

💡 Quick Tip

To identify nouns, look for common noun-forming suffixes such as **-ity**, **-ness**, **-ion**, **-ment**, and **-ance**. In this case, the suffix '-ity' is a clear indicator of a noun.

13. At the age of 15, Einstein felt so satisfied that he left the school for good. Identify the meaning of the phrase 'for good'

- (A) permanently
- (B) for a short time
- (C) for his benefit
- (D) for a sorrowful reason

Correct Answer: (A) permanently

Solution:

Note: The provided answer key marks (C) as correct, which is a contextual interpretation. However, the standard idiomatic meaning is (A). We will explain both perspectives.

Step 1: Understanding the Idiom:

The phrase "for good" is an idiom. An idiom is a phrase whose meaning is not predictable from the usual meanings of its constituent elements. The standard, literal meaning of the idiom "for good" is **permanently** or **forever**.

Example: "After the argument, he left the house for good." (This means he left permanently).

Step 2: Detailed Explanation of Options:

(A) **permanently:** This is the direct and most accurate meaning of the idiom "for good". In the sentence, it means Einstein left the school permanently and did not intend to return.

(B) **for a short time:** This is the opposite of the idiom's meaning.

(C) **for his benefit:** This describes the *reason* or *outcome* of his action, not the meaning of the phrase itself. He left the school because he felt it would be better for him. While true in context, it's not the definition of "for good". The answer key might have chosen this based on the overall context that the decision was beneficial for Einstein's intellectual freedom.

(D) **for a sorrowful reason:** This is contrary to the sentence which states he "felt so satisfied".

Step 3: Final Answer:

The direct and correct meaning of the idiom 'for good' is **permanently**. Therefore, option (A) is the most accurate answer. The answer key's choice of (C) interprets the question as "Why did he leave?" rather than "What does 'for good' mean?". In an exam, if forced to choose based on the provided key, one would have to justify that the act of leaving permanently was ultimately for his own benefit.

💡 Quick Tip

Be careful with idioms. They have fixed meanings. While context is important, the primary meaning of the idiom itself should be the first consideration. "For good" always means permanently.

14. I took out a small black tin box. Identify the word that indicates size in the sentence above.

- (A) box
- (B) tin
- (C) black
- (D) small

Correct Answer: (D) small

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the adjective of size in the given sentence. Adjectives are words that describe or modify nouns. There are different types of adjectives, such as those describing size, color, material, quality, etc.

Step 2: Detailed Explanation:

Let's break down the phrase "a small black tin box":

- **box:** This is the noun, the name of the object.
- **tin:** This is an adjective of material, describing what the box is made of.
- **black:** This is an adjective of color, describing the color of the box.
- **small:** This is an adjective of size, describing how big the box is.

The word that specifically indicates the size of the box is 'small'.

Step 3: Final Answer:

Therefore, the correct word indicating size is 'small'.

💡 Quick Tip

In English, adjectives usually appear in a specific order before a noun: Opinion, Size, Age, Shape, Color, Origin, Material, Purpose (OSASCOMP). In "small black tin box," the order is Size (small), Color (black), Material (tin).

15. I visited Delhi last month. The above sentence is in

- (A) the simple present tense
- (B) the past perfect tense
- (C) the simple past tense
- (D) the simple future tense

Correct Answer: (C) the simple past tense

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the tense of the given sentence. Tense indicates the time of an action or event.

Step 2: Key Formula or Approach:

The structure of the simple past tense is: **Subject + Past Tense form of Verb (V2) + Object.**

It is used to describe actions that started and finished at a specific time in the past.

Step 3: Detailed Explanation:

Let's analyze the sentence: "I visited Delhi last month."

- **Subject:** I
- **Verb:** visited (This is the past tense form, or V2, of the verb 'visit').

- **Time Indicator:** "last month". This phrase clearly indicates a specific, completed time in the past.

The sentence structure and the time indicator ("last month") are both characteristic of the simple past tense.

- **Simple Present Tense** would be: "I visit Delhi." (for a habitual action).
- **Past Perfect Tense** would be: "I had visited Delhi." (implying it happened before another past event).
- **Simple Future Tense** would be: "I will visit Delhi." (for a future action).

Step 4: Final Answer:

The sentence uses the past tense form of the verb ('visited') to describe a completed action in the past ('last month'), so it is in the simple past tense.

🔑 Quick Tip

Look for two main clues to identify the tense: 1) The form of the main verb (e.g., visit, visited, had visited). 2) Time adverbs or phrases in the sentence (e.g., now, yesterday, last month, tomorrow).

16. "పనిని ప్రారంభించు" అనే అర్థంలో ఉపయోగించు జాతీయం

- (A) మిన్నందుకొను
- (B) గజ్జెకట్టు
- (C) కాలక్షేపం
- (D) చరమాంకం

Correct Answer: (B) గజ్జెకట్టు

Solution:

Step 1: Understanding the Concept:

ఈ ప్రశ్నలో, "పనిని ప్రారంభించు" (to start a work) అనే అర్థాన్ని ఇచ్చే జాతీయాన్ని గుర్తించమని అడిగారు. జాతీయం అనేది ఒక భాషలో కొన్ని పదాల కలయికతో ఏర్పడి, వాటి సాధారణ అర్థానికి భిన్నమైన ప్రత్యేక అర్థాన్ని ఇచ్చే ఒక నుడికారం.

Step 2: Detailed Explanation:

ఇక్కడ ఇచ్చిన ఎంపికలను విశ్లేషిద్దాం:

(A) **మిన్నందుకొను:** ఈ జాతీయం యొక్క అర్థం 'అధిగమించు' లేదా 'శ్రేష్ఠంగా ఉండుట'.

ఉదాహరణకు, "అతను చదువులో అందరినీ మిన్నందుకొన్నాడు." ఇది పనిని ప్రారంభించడాన్ని సూచించదు.

(B) **గజ్జెకట్టు:** ఈ జాతీయం యొక్క అక్షరార్థం 'గజ్జెలు కట్టుకోవడం'. నాట్యం చేసేవారు ప్రదర్శనకు ముందు గజ్జెలు కట్టుకుంటారు, ఇది వారు ప్రదర్శనకు సిద్ధమయ్యారని సూచిస్తుంది. అదేవిధంగా, ఈ జాతీయం ఒక పనిని చేయడానికి పూనుకోవడం, సిద్ధపడటం లేదా ప్రారంభించడం అనే అర్థంలో వాడతారు. ఉదాహరణకు, "అతను ఆ పని పూర్తి చేయడానికి గజ్జెకట్టాడు." ఇది అడిగిన ప్రశ్నకు సరైన సమాధానం.

(C) **కాలక్షేపం:** దీని అర్థం 'సమయాన్ని గడపడం' లేదా 'పని లేకుండా గడపడం'. ఇది పనిని ప్రారంభించడానికి వ్యతిరేక అర్థాన్ని ఇస్తుంది.

(D) **చరమాంకం:** దీని అర్థం 'చివరి ఘట్టం' లేదా 'ముగింపు'. ఇది ఒక పని యొక్క ముగింపును సూచిస్తుంది, కానీ ప్రారంభాన్ని కాదు.

Step 3: Final Answer:

పై విశ్లేషణ ప్రకారం, "పనిని ప్రారంభించు" అనే అర్థాన్ని ఇచ్చే జాతీయం "గజ్జెకట్టు". కాబట్టి, ఎంపిక

(B) సరైన సమాధానం.

Quick Tip

జాతీయాలు మరియు సామెతల నుండి ప్రశ్నలు తరచుగా వస్తాయి. ముఖ్యమైన జాతీయాల జాబితాను తయారు చేసుకొని, వాటి అర్థాలు మరియు వాక్య ప్రయోగాలను నేర్చుకోవడం పరీక్షలో మంచి మార్కులు సాధించడానికి సహాయపడుతుంది.

17. కింది వాటిలో నిత్య బహువచనం

- (A) ఇనుము
- (B) బియ్యము
- (C) కందులు
- (D) వరి

Correct Answer: (C) కందులు

Solution:

Step 1: Understanding the Concept:

ఈ ప్రశ్నలో, ఇచ్చిన పదాలలో 'నిత్య బహువచనం' (always in plural form) ఏదో గుర్తించమని అడిగారు. తెలుగు వ్యాకరణంలో, కొన్ని పదాలకు ఏకవచన రూపం ఉండదు, అవి ఎల్లప్పుడూ బహువచన రూపంలోనే వాడబడతాయి. అటువంటి పదాలను నిత్య బహువచనాలు అంటారు.

Step 2: Detailed Explanation:

ఇచ్చిన ఎంపికలను పరిశీలిద్దాం:

(A) **ఇనుము:** ఇది ఒక లోహం పేరు. ఇది ఒక పదార్థవాచకం మరియు ఏకవచనంలో ఉంది. దీనికి బహువచన రూపం లేదు.

(B) **బియ్యము:** ఇది ఒక ధాన్యం పేరు. ఇది కూడా పదార్థవాచకం మరియు ఏకవచన రూపంలోనే పరిగణించబడుతుంది.

(C) **కందులు:** ఇది ఒక రకమైన పప్పుధాన్యం. ఈ పదం ఎల్లప్పుడూ బహువచన రూపంలోనే ఉపయోగించబడుతుంది. దీనికి ఏకవచన రూపం 'కంది' ఉన్నప్పటికీ, సాధారణ వాడుకలో 'కందులు' అనే పదాన్నే ఉపయోగిస్తారు. పాలు, నీళ్లు, పెసలు, వడ్లు వంటివి కూడా నిత్య బహువచనాలకు ఇతర ఉదాహరణలు.

(D) **వరి:** ఇది ఒక రకమైన పంట. ఇది ఏకవచన పదం. దీని బహువచన రూపం 'వరులు'.

Step 3: Final Answer:

పై విశ్లేషణ ఆధారంగా, 'కందులు' అనేది నిత్య బహువచన పదం. కాబట్టి, ఎంపిక (C) సరైన సమాధానం.

📌 Quick Tip

తెలుగులో నిత్య ఏకవచనాలు (ఉదా: బంగారం, వెండి) మరియు నిత్య బహువచనాలు (ఉదా: పాలు, నీళ్లు, కందులు) మధ్య తేడాను తెలుసుకోవడం చాలా ముఖ్యం. పరీక్షలలో ఈ అంశంపై ప్రశ్నలు సాధారణంగా అడుగుతారు.

18. 'ఆదికవి' అని వీరి బిరుదు

- (A) నన్నయ
- (B) తిక్కన
- (C) ఎర్రన
- (D) పోతన

Correct Answer: (A) నన్నయ

Solution:

Step 1: Understanding the Concept:

ఈ ప్రశ్న తెలుగు సాహిత్యంలో 'ఆదికవి' అనే బిరుదు ఎవరికి ఉందో అడుగుతోంది. 'ఆదికవి' అంటే 'మొదటి కవి' అని అర్థం.

Step 2: Detailed Explanation:

తెలుగు సాహిత్యంలో 'ఆదికవి'గా నన్నయ భట్టారకుడు ప్రసిద్ధి చెందారు.

- **నన్నయ (11వ శతాబ్దం):** ఈయన రాజరాజ నరేంద్రుని ఆస్థాన కవి. ఈయన సంస్కృతంలో ఉన్న మహాభారతాన్ని తెలుగులోకి అనువదించడం ప్రారంభించి, ఆది పర్వం, సభా పర్వం మరియు అరణ్య పర్వంలో కొంత భాగాన్ని పూర్తి చేశారు. తెలుగులో లభించిన మొదటి గ్రంథం కావడంతో, నన్నయను 'ఆదికవి' అని గౌరవిస్తారు. ఆయన వాడిన భాష, ఛందస్సు తర్వాతి కవులకు మార్గదర్శకంగా నిలిచాయి.
- **తిక్కన (13వ శతాబ్దం):** నన్నయ అసంపూర్తిగా వదిలిన మహాభారతంలోని 15 పర్వాలను (విరాట పర్వం నుండి స్వర్గారోహణ పర్వం వరకు) అనువదించారు.
- **ఎర్రన (14వ శతాబ్దం):** నన్నయ అరణ్య పర్వంలో అసంపూర్తిగా వదిలిన భాగాన్ని పూర్తి చేసి, భారతాన్ని పూర్తి చేసిన మూడవ కవిగా నిలిచారు.
- **పోతన (15వ శతాబ్దం):** ఈయన భాగవతాన్ని తెలుగులోకి అనువదించి 'భక్త కవి'గా ప్రసిద్ధి చెందారు.

నన్నయ, తిక్కన, ఎర్రనలను కలిపి 'కవిత్రయం' అని పిలుస్తారు. వీరిలో మొదటివాడైన నన్నయకు 'ఆదికవి' అనే బిరుదు ఉంది.

Step 3: Final Answer:

కాబట్టి, 'ఆదికవి' అనే బిరుదు నన్నయకు చెందినది. ఎంపిక (A) సరైన సమాధానం.

📌 Quick Tip

తెలుగు సాహిత్యంలోని ముఖ్య కవులు, వారి బిరుదులు, మరియు వారి ప్రసిద్ధ రచనల గురించి తెలుసుకోవడం చాలా ముఖ్యం. 'కవిత్రయం', 'అష్టదిగ్గజాలు' వంటి అంశాలపై ప్రత్యేక శ్రద్ధ పెట్టాలి.

19. 'మానవ చరిత్ర' - ఈ సమాసానికి సరిపోయే విగ్రహవాక్యం

- (A) మానవుల వలన చరిత్ర
- (B) మానవుల చేత చరిత్ర
- (C) మానవుల కొరకు చరిత్ర
- (D) మానవుల యొక్క చరిత్ర

Correct Answer: (D) మానవుల యొక్క చరిత్ర

Solution:

Step 1: Understanding the Concept:

ఈ ప్రశ్నలో 'మానవ చరిత్ర' అనే సమాస పదానికి సరైన విగ్రహవాక్యం కనుక్కోవాలి. సమాసం అంటే రెండు లేదా అంతకంటే ఎక్కువ పదాలు కలిసి ఒకే పదంగా ఏర్పడటం. విగ్రహవాక్యం అంటే సమాసంలోని పదాల మధ్య ఉన్న సంబంధాన్ని వివరించే వాక్యం.

Step 2: Detailed Explanation:

'మానవ చరిత్ర' అనే సమాసాన్ని విశ్లేషిస్తే, 'మానవుల' మరియు 'చరిత్ర' అనే రెండు పదాలు ఉన్నాయి. ఈ రెండు పదాల మధ్య ఉన్న సంబంధం "మానవులకు సంబంధించిన చరిత్ర" లేదా "మానవుల యొక్క చరిత్ర" (History of Humans).

తెలుగు వ్యాకరణంలో, 'యొక్క' అనే విభక్తి ప్రత్యయం సంబంధాన్ని సూచిస్తుంది. ఇది షష్ఠీ విభక్తికి చెందింది. కాబట్టి, ఈ సమాసం షష్ఠీ తత్పురుష సమాసం అవుతుంది.

ఇప్పుడు ఎంపికలను పరిశీలిద్దాం:

- (A) మానవుల వలన చరిత్ర - ఇది తృతీయా విభక్తిని (కారణార్థం) సూచిస్తుంది. ఇది సరైనది కాదు.
- (B) మానవుల చేత చరిత్ర - ఇది కూడా తృతీయా విభక్తిని (కర్తరి అర్థం) సూచిస్తుంది. ఇది సరైనది కాదు.
- (C) మానవుల కొరకు చరిత్ర - ఇది చతుర్థి విభక్తిని (కొరకు, కై) సూచిస్తుంది. ఇది సరైనది కాదు.
- (D) మానవుల యొక్క చరిత్ర - ఇది షష్ఠీ విభక్తిని (సంబంధార్థం) సూచిస్తుంది. ఇది "History of humans" అనే సరైన అర్థాన్ని ఇస్తుంది.

Step 3: Final Answer:

'మానవ చరిత్ర' అనే సమాసానికి సరైన విగ్రహవాక్యం 'మానవుల యొక్క చరిత్ర'. కాబట్టి, ఎంపిక (D) సరైన సమాధానం.

📌 Quick Tip

సమాసాలను గుర్తించడానికి, సమాసంలోని పదాల మధ్య ఏ విభక్తి ప్రత్యయం (డు, ము, వు, లు; నిన్, నున్, లన్, కూర్చి, గురించి; చేతన్, చేన్, తోడన్, తోన్; మొ.) సరిపోతుందో ఆలోచించాలి. ఇది సమాసం రకాన్ని మరియు సరైన విగ్రహవాక్యాన్ని కనుక్కోవడానికి సహాయపడుతుంది.

20. కింది వాటిలో అనునాసికాలు

- (A) శ, ష, స, హ
- (B) య, ర, ల, వ
- (C) క, చ, ట, త, ప
- (D) జ, ఞ, ణ, న, మ

Correct Answer: (D) జ, ఞ, ణ, న, మ

Solution:

Step 1: Understanding the Concept:

ఈ ప్రశ్నలో ఇచ్చిన అక్షరాల సమూహాలలో 'అనునాసికాలు' ఏవో గుర్తించమని అడిగారు. అనునాసికాలు అంటే ముక్కు సహాయంతో పలికే అక్షరాలు (nasal consonants).

Step 2: Detailed Explanation:

తెలుగు వర్ణమాలలో హల్లులను ఉచ్చారణ స్థానం మరియు విధానం ఆధారంగా వర్గీకరించారు.

- **క-వర్గం:** క, ఖ, గ, ఘ, **జ**
- **చ-వర్గం:** చ, ఛ, జ, ఝ, **ఞ**
- **ట-వర్గం:** ట, ఠ, డ, ఢ, **ణ**
- **త-వర్గం:** త, థ, ద, ధ, **న**
- **ప-వర్గం:** ప, ఫ, బ, భ, **మ**

ప్రతి వర్గంలోని ఐదవ అక్షరాన్ని అనునాసికం అంటారు. కాబట్టి, అనునాసికాలు: **జ, ఞ, ణ, న, మ**.

(A) **శ, ష, స, హ:** వీటిని 'ఊష్మాలు' (Sibilants/Fricatives) అంటారు. ఇవి గాలిని ఊది పలికే అక్షరాలు.

(B) **య, ర, ల, వ:** వీటిని 'అంతస్థాలు' (Approximants) అంటారు. ఇవి అచ్చులకు, హల్లులకు మధ్యస్థంగా ఉంటాయి.

(C) **క, చ, ట, త, ప:** వీటిని 'పరుషాలు' (Unvoiced stops) అంటారు. ఇవి కఠినంగా పలికే హల్లులు.

(D) **జ, ఞ, ణ, న, మ:** ఇవి అనునాసికాలు.

Step 3: Final Answer:

పై విశ్లేషణ ప్రకారం, జ, ఞ, ణ, న, మ అనేవి అనునాసికాలు. కాబట్టి, ఎంపిక (D) సరైన సమాధానం.

📌 Quick Tip

తెలుగు వర్ణమాలలోని హల్లుల వర్గీకరణను (పరుషాలు, సరళాలు, స్థిరాలు, ఊష్మాలు, అంతస్థాలు, అనునాసికాలు) గుర్తుంచుకోవడం వ్యాకరణ సంబంధిత ప్రశ్నలకు సమాధానం ఇవ్వడంలో చాలా ఉపయోగపడుతుంది.

21. I understand your problems; _____ I can't help you. Choose the linker that fits the blank in the sentence

- (A) neither
- (B) in spite of
- (C) similarly at the same time
- (D) however

Correct Answer: (D) however

Solution:

Step 1: Understanding the Concept:

The question asks for a linker (also called a conjunctive adverb or conjunction) that correctly connects two independent clauses. The choice of linker depends on the logical relationship between the clauses.

Step 2: Detailed Explanation:

Let's analyze the two clauses:

Clause 1: "I understand your problems"

Clause 2: "I can't help you"

The relationship between these two ideas is one of **contrast** or **opposition**. The first statement expresses empathy, while the second expresses an inability to act, which is contrary to what might be expected. We need a linker that shows this contrast.

Let's evaluate the options:

(A) **neither**: Used for joining two negative statements. It doesn't fit here.

(B) **in spite of**: This is a preposition and must be followed by a noun or a gerund (e.g., "in spite of understanding..."). It cannot connect two independent clauses in this way.

(C) **similarly at the same time**: This phrase is awkward and used to show similarity, not contrast.

(D) **however**: This is a conjunctive adverb used to introduce a statement that contrasts with or seems to contradict what has been said before. It fits the logical relationship perfectly.

Sentence: "I understand your problems; **however**, I can't help you."

Step 3: Final Answer:

The linker 'however' correctly expresses the contrast between the two clauses.

 Quick Tip

When connecting two clauses that show opposite ideas, use contrast linkers like 'however', 'but', 'although', 'nevertheless', or 'yet'.

22. She fainted when she saw a tiger. Choose the meaning of the word 'fainted'

- (A) treated kindly
- (B) found something
- (C) gained profit
- (D) lost consciousness

Correct Answer: (D) lost consciousness

Solution:

Step 1: Understanding the Concept:

This is a vocabulary question that asks for the meaning (synonym) of the verb 'fainted'.

Step 2: Detailed Explanation:

The verb **to faint** means to lose consciousness for a short period, usually because of a temporary lack of oxygen to the brain, often caused by shock, fear, pain, or heat.

Let's analyze the context: "She fainted **when she saw a tiger**." Seeing a tiger would likely cause extreme fear or shock. A common physiological reaction to such intense emotion is fainting.

Now let's look at the options:

- (A) treated kindly - This is unrelated to the meaning.
- (B) found something - This is unrelated to the meaning.
- (C) gained profit - This is unrelated to the meaning.
- (D) lost consciousness - This is the precise medical and common definition of fainting.

Step 3: Final Answer:

Based on the definition and the context of the sentence, the correct meaning of 'fainted' is 'lost consciousness'.

💡 Quick Tip

Use context clues within the sentence to help determine the meaning of an unfamiliar word. The phrase "when she saw a tiger" strongly suggests a reaction of fear, making "lost consciousness" a logical consequence.

23. The blue umbrella was _____ for brother and sister. Choose the best option that fit the blank.

- (A) anxious enough
- (B) serious enough
- (C) big enough
- (D) kind enough

Correct Answer: (C) big enough

Solution:

Step 1: Understanding the Concept:

This question tests both grammar and semantic (meaning) correctness. We need to choose an adjective that logically describes an "umbrella" in a way that makes it suitable for "brother and sister" (two people).

Step 2: Detailed Explanation:

The sentence requires an adjective to describe the umbrella. Let's evaluate the options based on whether they can logically describe an inanimate object like an umbrella and fit the context of being used by two people.

(A) **anxious enough:** 'Anxious' is an emotion. An umbrella cannot feel anxious. This is semantically incorrect.

(B) **serious enough:** 'Serious' describes a mood or a situation. An umbrella cannot be serious. This is semantically incorrect.

(C) **big enough:** 'Big' describes size. An umbrella can be big. For an umbrella to be suitable for two people ("brother and sister"), it needs to be of a sufficient size. This is both grammatically and semantically correct.

(D) **kind enough:** 'Kind' is a personality trait. An umbrella cannot be kind. This is semantically incorrect.

Step 3: Final Answer:

The only adjective that makes logical sense in this context is 'big enough', as it relates to the umbrella's size, which is the relevant quality for sheltering two people.

💡 Quick Tip

In sentence completion questions, always check for semantic coherence. The word you choose must make logical sense with the other words in the sentence. Ask yourself, "Can an umbrella be [adjective]?"

24. Read the following passage.

My austere father used to avoid all inessential comforts and luxuries. However all necessities were provided for, in terms of food, medicine or cloths.

The above passage says that

- (A) The speaker allowed his father to enjoy all inessential comforts and luxuries.
- (B) The speaker's father is fond of luxuries.
- (C) Food and medicine are inessential.
- (D) The speaker's father was a strict person.

Correct Answer: (D) The speaker's father was a strict person.

Solution:

Step 1: Understanding the Concept:

This is a reading comprehension question. The goal is to understand the main idea of the passage and choose the option that is best supported by the text.

Step 2: Detailed Explanation:

Let's break down the information given in the passage:

- **"My austere father...":** The word 'austere' is key. It means severe or strict in manner, attitude, or appearance; self-disciplined; and avoiding luxury.
- **"...used to avoid all inessential comforts and luxuries.":** This phrase reinforces the meaning of 'austere'. It explicitly states that the father lived a simple life without non-essential items.
- **"However all necessities were provided for...":** This shows that despite being strict and avoiding luxuries, he was responsible and made sure the family had everything they needed to live (food, medicine, etc.).

Now let's evaluate the options based on this analysis:

- (A) The speaker allowed his father to enjoy... - This is incorrect. The passage says the father himself avoided luxuries.
- (B) The speaker's father is fond of luxuries. - This is the direct opposite of what the passage states.
- (C) Food and medicine are inessential. - This is incorrect. The passage explicitly lists them as "necessities".
- (D) The speaker's father was a strict person. - This is the correct inference. The word "austere" directly means strict or severe, and his behavior of avoiding all comforts supports this description.

Step 3: Final Answer:

The passage describes the father as "austere" and someone who avoided luxuries, which strongly supports the conclusion that he was a strict person.

💡 Quick Tip

In reading comprehension, pay close attention to descriptive adjectives (like 'austere') as they often contain the key to the author's intended meaning or tone. Look up unfamiliar words if possible.

25. Identify the noun form from the following

- (A) dense
(B) stable
(C) ability
(D) pleasant

Correct Answer: (C) ability

Solution:

Step 1: Understanding the Concept:

The question requires identifying which of the given words is a noun. A noun is a word that functions as the name of a specific object or set of objects, such as living creatures, places, actions, qualities, states of existence, or ideas. The other words provided are adjectives.

Step 2: Detailed Explanation:

Let's analyze the part of speech for each word:

- (A) **dense:** This is an adjective. It is used to describe something that is closely compacted. For example, "a **dense** forest."
- (B) **stable:** This is an adjective. It is used to describe something that is not likely to give way or overturn; firmly fixed. For example, "a **stable** government." The noun form is 'stability'.
- (C) **ability:** This is an abstract noun. It refers to the possession of the means or skill to do something. For example, "She has the **ability** to solve complex problems." It is the noun form of the adjective 'able'.
- (D) **pleasant:** This is an adjective. It describes something that gives a sense of happy satisfaction or enjoyment. For example, "We had a **pleasant** evening."

Step 3: Final Answer:

Among the given options, 'ability' is the only word that functions as a noun.

💡 Quick Tip

A simple test to see if a word can be a noun is to try putting an article ('a', 'an', 'the') or a possessive pronoun ('my', 'his', 'her') before it. You can say "an ability" or "my ability", but you wouldn't typically say "a dense" or "my pleasant" (unless they are followed by a noun).

26. During a drought, the African Lungfish digs a pit and _____ itself in a capsule of slime and earth. Choose the verb that fits the blank.

- (A) enclosing
- (B) enclose
- (C) enclosed
- (D) encloses

Correct Answer: (D) encloses

Solution:

Step 1: Understanding the Concept:

This question tests subject-verb agreement in the simple present tense. The simple present tense is used for actions that happen regularly, are habitual, or are general truths. The verb form must agree with the subject in number (singular or plural).

Step 2: Detailed Explanation:

The subject of the sentence is "the African Lungfish". This is a singular subject. For a third-person singular subject (he, she, it, or a singular noun) in the simple present tense, the verb usually ends in "-s" or "-es".

Let's analyze the options:

(A) **enclosing:** This is the present participle form, used in continuous tenses (e.g., "is enclosing"). It doesn't fit the structure of the sentence.

(B) **enclose:** This is the base form of the verb, used with plural subjects (e.g., "they enclose") or with 'I' and 'you'.

(C) **enclosed:** This is the past tense form. The sentence describes a habitual action of the lungfish during a drought, not a specific past event.

(D) **encloses:** This is the third-person singular present tense form. It correctly agrees with the singular subject "the African Lungfish". The sentence structure is: The lungfish (subject) digs (verb 1) and encloses (verb 2). Both verbs are in the simple present singular form.

Step 3: Final Answer:

The correct verb form to agree with the singular subject "The African Lungfish" in the simple present tense is "encloses".

💡 Quick Tip

In a sentence with a compound predicate (one subject performing two or more actions), ensure all verbs agree with the subject. Here, "The lungfish **digs** ... and **encloses** ...". Both verbs end in '-s'.

27. Mohan advises people what to do about jobs, personal problems etc. He works as a _____ in our college. Choose the word that fits the blank meaningfully.

- (A) Counsellor
- (B) Journalist
- (C) Engineer
- (D) Navigator

Correct Answer: (A) Counsellor

Solution:

Step 1: Understanding the Concept:

This is a vocabulary question that requires understanding the definitions of different professions to choose the one that matches the description given in the sentence.

Step 2: Detailed Explanation:

The sentence describes Mohan's job: "advises people what to do about jobs, personal problems etc." We need to find the job title that corresponds to this activity.

Let's analyze the options:

(A) **Counsellor:** A counsellor is a person trained to give guidance on personal, social, or psychological problems. This perfectly matches the description of advising people on jobs and personal issues.

(B) **Journalist:** A journalist investigates, collects, and presents information as news. They do not typically provide personal advice as a profession.

(C) **Engineer:** An engineer designs, builds, and maintains engines, machines, structures, and systems. This is unrelated to giving personal advice.

(D) **Navigator:** A navigator is a person who plans and directs the route of a ship, aircraft, or other form of transport.

Step 3: Final Answer:

The profession that involves advising people on jobs and personal problems is that of a Counsellor.

💡 Quick Tip

When faced with vocabulary questions about professions, focus on the primary action verb in the description. Here, the verb "advises" is the key clue that points directly to the role of a "Counsellor".

28. My friend lost his chemistry book. Now he doesn't know _____

to do and _____ to look for it. Choose the correct pair of words that fit the blanks in the sentence above.

- (A) what - which
- (B) where - what
- (C) what - where
- (D) when - when

Correct Answer: (C) what - where

Solution:

Step 1: Understanding the Concept:

This question tests the correct usage of interrogative words (wh-words) like what, where, when, and which in noun clauses. The choice of word depends on the type of information being asked about (an action, a place, a time, or a choice).

Step 2: Detailed Explanation:

Let's analyze the two blanks separately.

First Blank: "he doesn't know _____ to do"

This part of the sentence refers to the action or plan that is unknown. The word 'what' is used to ask about things or actions. The phrase "what to do" means "which action to take". This fits perfectly.

Second Blank: "and _____ to look for it."

This part of the sentence refers to the location for the search. The word 'where' is used to ask about a place or location. The phrase "where to look for it" means "in which place to search". This also fits the context perfectly.

Therefore, the complete sentence should be: "Now he doesn't know **what** to do and **where** to look for it."

Step 3: Final Answer:

The correct pair of words is 'what' for the first blank (referring to the action) and 'where' for the second blank (referring to the location).

 Quick Tip

Remember the primary function of common wh-words: **What** (thing/action), **Where** (place), **When** (time), **Who** (person), **Why** (reason), **How** (manner), and **Which** (choice from a limited set).

29. I wish I _____ a cup of milk. Choose the verb that fits the blank

- (A) have
- (B) have to
- (C) have been
- (D) had

Correct Answer: (D) had

Solution:

Step 1: Understanding the Concept:

This question tests the use of the subjunctive mood in English. The phrase "I wish..." is used to talk about things that we want to be different in the present or future. These are unreal or hypothetical situations.

Step 2: Key Formula or Approach:

The grammatical structure for expressing a present wish is:

Subject + wish(es) + (that) + Subject + Simple Past Tense Verb.

Step 3: Detailed Explanation:

The sentence "I wish I _____ a cup of milk" expresses a desire for something in the present that is not true (the speaker does not currently have a cup of milk).

According to the rule for the subjunctive mood after 'wish', we must use the simple past tense of the verb.

The main verb is 'have' (to possess). The simple past tense of 'have' is 'had'.

Let's analyze the options:

(A) **have:** This is the simple present tense, which is incorrect in this structure.

(B) **have to:** This expresses obligation and is in the wrong tense.

(C) **have been:** This is the present perfect tense, which is incorrect.

(D) **had:** This is the simple past tense, which is the correct form to use after "I wish" to express a present desire.

The correct sentence is: "I wish I **had** a cup of milk."

Step 4: Final Answer:

The correct verb form to use in the subjunctive mood after "I wish" for a present situation is the simple past tense, which is 'had'.

💡 Quick Tip

Remember this key rule: for wishes about the present, use the past tense (e.g., "I wish I **knew** the answer."). For wishes about the past (regrets), use the past perfect tense (e.g., "I wish I **had studied** harder.").

30. Seema asked her, "how long have you lived here?" Choose the indirect speech of the sentence above.

(A) Seema told her how long had she lived there.

(B) Seema asked her how long she had lived there.

(C) Seema asked how long if she had lived there.

(D) Seema asked him if she lived there.

Correct Answer: (B) Seema asked her how long she had lived there.

Solution:**Step 1: Understanding the Concept:**

The task is to convert a sentence from direct speech (the exact words spoken) to indirect speech (reported speech). This involves changes in reporting verbs, pronouns, tenses, and adverbs of time/place.

Step 2: Key Formula or Approach:

Rules for converting a Wh-question to indirect speech:

1. The reporting verb 'said' or 'asked' becomes 'asked'.
2. The question mark is removed and a full stop is used.
3. The wh-word (how, what, where, etc.) acts as the conjunction. No 'that' or 'if' is used.
4. The sentence structure changes from interrogative (verb before subject) to declarative (subject before verb).
5. Pronouns change according to the speaker and listener.
6. The tense "backshifts": Present Perfect ('have lived') changes to Past Perfect ('had lived').
7. Adverbs of place/time change: 'here' becomes 'there'.

Step 3: Detailed Explanation:

Let's apply the rules to the sentence: **Seema asked her, "how long have you lived here?"**

1. Reporting verb: 'asked' remains 'asked'. -> **Seema asked her...**
2. Conjunction: The wh-word 'how long' is used. -> **Seema asked her how long...**
3. Pronoun change: 'you' refers to 'her', so it becomes 'she'. -> **...she...**
4. Tense backshift: Present Perfect 'have lived' becomes Past Perfect 'had lived'. -> **...she had lived...**
5. Change of word order: The question 'have you lived' becomes the statement 'she had lived'.
6. Adverb of place: 'here' becomes 'there'. -> **...there.**

Combining these changes gives: **Seema asked her how long she had lived there.** This matches option (B). Option (A) is incorrect because the word order is wrong ('had she lived'). Option (C) incorrectly adds 'if'. Option (D) incorrectly changes 'her' to 'him' and omits 'how long'.

Step 4: Final Answer:

The correct indirect speech conversion is "Seema asked her how long she had lived there."

💡 Quick Tip

The most common mistake in converting questions to indirect speech is forgetting to change the word order from question form (verb-subject) to statement form (subject-verb). Always put the subject before the verb in the reported clause.

31. If $A = (2^2) \times 3$, $B = (2^3)^2$, then which of the following is TRUE.

(A) $A > B$

- (B) $A < B$
 (C) $A = B$
 (D) It cannot be decided

Correct Answer: (B) $A < B$

Solution:

Step 1: Understanding the Concept:

The question asks to compare the values of two expressions, A and B, which involve exponents. We need to calculate the value of each expression and then determine their relationship (greater than, less than, or equal to).

Step 2: Key Formula or Approach:

We will use the rules of exponents:

1. $x^n = x \times x \times \cdots \times x$ (n times)
2. $(x^m)^n = x^{m \times n}$

Step 3: Detailed Explanation:

First, let's calculate the value of A:

$$A = (2^2) \times 3$$

$$A = 4 \times 3$$

$$A = 12$$

Next, let's calculate the value of B:

$$B = (2^3)^2$$

Using the power of a power rule $(x^m)^n = x^{mn}$:

$$B = 2^{3 \times 2}$$

$$B = 2^6$$

$$B = 2 \times 2 \times 2 \times 2 \times 2 \times 2 = 64$$

Now, compare the values of A and B: We have $A = 12$ and $B = 64$.

Since 12 is less than 64, we can conclude that $A < B$.

Step 4: Final Answer:

The calculation shows that $A = 12$ and $B = 64$. Therefore, A is less than B.

💡 Quick Tip

Be careful with the order of operations and the rules of exponents. Remember that $(x^m)^n$ is different from $x^{(m^n)}$. The former is x^{mn} , while the latter involves calculating the exponent first.

32. The heights of 10 boys were measured in cm and the results are as follows: 135, 150, 139, 128, 151, 132, 146, 149, 143, 141. How many boys have heights more than the median height?

- (A) 2
- (B) 3
- (C) 4
- (D) 5

Correct Answer: (D) 5

Solution:

Step 1: Understanding the Concept:

The question asks us to first find the median of a given set of data and then count the number of data points that are greater than the median. The median is the middle value of a dataset when it is arranged in ascending or descending order.

Step 2: Key Formula or Approach:

1. Arrange the data in ascending order.
2. Determine the number of observations (n).
3. If n is odd, the median is the $(\frac{n+1}{2})^{th}$ term.
4. If n is even, the median is the average of the $(\frac{n}{2})^{th}$ term and the $(\frac{n}{2} + 1)^{th}$ term.
5. Count the number of values in the original dataset that are greater than the calculated median.

Step 3: Detailed Explanation:

1. Arrange the data:

The given heights are: 135, 150, 139, 128, 151, 132, 146, 149, 143, 141.

Arranging them in ascending order: 128, 132, 135, 139, 141, 143, 146, 149, 150, 151.

2. Find the median:

The number of observations, $n = 10$ (an even number).

The median will be the average of the $(\frac{10}{2})^{th}$ term and the $(\frac{10}{2} + 1)^{th}$ term.

This is the average of the 5th and 6th terms.

The 5th term is 141.

The 6th term is 143.

$$\text{Median} = \frac{141 + 143}{2} = \frac{284}{2} = 142 \text{ cm}$$

3. Count the heights more than the median:

We need to count how many boys have a height greater than 142 cm.

Looking at the sorted list, the heights greater than 142 are: 143, 146, 149, 150, 151.

There are 5 such heights.

Step 4: Final Answer:

There are 5 boys whose height is more than the median height of 142 cm.

💡 Quick Tip

For an evenly sized dataset, the median splits the data into two equal halves. Half the values will be less than or equal to the median, and half will be greater than or equal to the median. Since $n=10$, exactly $n/2 = 5$ values will be above the median.

33. Two concentric circles drawn with radii of 5 cm and 4 cm respectively. What is the length of the chord of the larger circle which touches the smaller circle?

- (A) 5 cm
- (B) 6 cm
- (C) 8 cm
- (D) 10 cm

Correct Answer: (B) 6 cm

Solution:

Step 1: Understanding the Concept:

The problem involves two concentric circles (circles with the same center). A chord of the larger circle is tangent to the smaller circle. We need to find the length of this chord. This problem can be solved by applying the properties of circles and the Pythagorean theorem.

Step 2: Key Formula or Approach:

1. A tangent to a circle is perpendicular to the radius at the point of tangency. 2. The perpendicular drawn from the center of a circle to a chord bisects the chord. 3.

Pythagorean Theorem: In a right-angled triangle,
 $(\text{Hypotenuse})^2 = (\text{Base})^2 + (\text{Perpendicular})^2$.

Step 3: Detailed Explanation:

Let the center of the two concentric circles be O.

Let the radius of the larger circle be $R = 5$ cm.

Let the radius of the smaller circle be $r = 4$ cm.

Let AB be the chord of the larger circle that is tangent to the smaller circle at point P.

Now, we can form a triangle $\triangle OPA$.

- OA is the radius of the larger circle, so $OA = R = 5$ cm. This is the hypotenuse of the right-angled triangle.
- OP is the radius of the smaller circle, and since AB is tangent at P, OP is perpendicular to AB. So, $OP = r = 4$ cm.
- $\triangle OPA$ is a right-angled triangle with the right angle at P.

Using the Pythagorean theorem in $\triangle OPA$:

$$OA^2 = OP^2 + AP^2$$

$$5^2 = 4^2 + AP^2$$

$$25 = 16 + AP^2$$

$$AP^2 = 25 - 16 = 9$$

$$AP = \sqrt{9} = 3 \text{ cm}$$

Since the perpendicular from the center (OP) bisects the chord (AB), we have $AP = PB$.

The length of the chord AB is $2 \times AP$.

$$\text{Length of chord AB} = 2 \times 3 = 6 \text{ cm}$$

Step 4: Final Answer:

The length of the chord of the larger circle which touches the smaller circle is 6 cm.

💡 Quick Tip

Recognize common Pythagorean triplets like (3, 4, 5). In this problem, the hypotenuse was 5 and one side was 4, so the third side must be 3. This saves calculation time. The length of the chord will be twice this value.

34. The angle that lies between $\frac{1}{4}$ and $\frac{1}{2}$ of a revolution

- (A) Straight angle
- (B) Acute angle
- (C) Obtuse angle
- (D) Reflex angle

Correct Answer: (C) Obtuse angle

Solution:**Step 1: Understanding the Concept:**

The question asks to classify an angle based on its size relative to a full revolution. A full revolution is equivalent to 360 degrees.

Step 2: Key Formula or Approach:

1. A full revolution = 360° . 2. Calculate the angle values for the given fractions of a revolution. 3. Identify the type of angle that falls within the calculated range. Angle classifications:

- Acute angle: $0^\circ < \theta < 90^\circ$
- Right angle: $\theta = 90^\circ$
- Obtuse angle: $90^\circ < \theta < 180^\circ$
- Straight angle: $\theta = 180^\circ$
- Reflex angle: $180^\circ < \theta < 360^\circ$

Step 3: Detailed Explanation:

First, calculate the lower bound of the angle range:

$$\text{Angle}_1 = \frac{1}{4} \text{ of a revolution} = \frac{1}{4} \times 360^\circ = 90^\circ$$

This is a right angle.

Next, calculate the upper bound of the angle range:

$$\text{Angle}_2 = \frac{1}{2} \text{ of a revolution} = \frac{1}{2} \times 360^\circ = 180^\circ$$

This is a straight angle.

The question asks for the angle that lies **between** these two values. So, we are looking for an angle θ such that:

$$90^\circ < \theta < 180^\circ$$

According to the standard classification of angles, an angle that is greater than 90 degrees and less than 180 degrees is called an **obtuse angle**.

Step 4: Final Answer:

An angle between $\frac{1}{4}$ (90°) and $\frac{1}{2}$ (180°) of a revolution is an obtuse angle.

💡 Quick Tip

Memorize the angle classifications based on fractions of a circle: a quarter turn is a right angle (90°), a half turn is a straight angle (180°), and a full turn is a revolution (360°). This helps in quickly visualizing the angle types.

35. Factorization of $4b - 6ab - 6 + 9a$

- (A) $(2b - 3)(2 - 3a)$
- (B) $(2b - 3)(2 + 3a)$
- (C) $(3 - 2b)(2 + 3a)$
- (D) $(2b + 3)(2 - 3a)$

Correct Answer: (A) $(2b - 3)(2 - 3a)$

Solution:

Step 1: Understanding the Concept:

The question requires factoring a polynomial with four terms. A common method for this is factorization by grouping. This involves grouping the terms into pairs, factoring out the greatest common factor (GCF) from each pair, and then factoring out the common binomial factor.

Step 2: Key Formula or Approach:

Factorization by Grouping: 1. Rearrange the terms if necessary to create pairs with common factors. 2. Group the terms into pairs: $(ax + bx) + (ay + by)$. 3. Factor out the GCF from each pair: $x(a + b) + y(a + b)$. 4. Factor out the common binomial factor: $(a + b)(x + y)$.

Step 3: Detailed Explanation:

The expression is $4b - 6ab - 6 + 9a$.

1. Group the terms:

Let's group the first two terms and the last two terms.

$$(4b - 6ab) + (-6 + 9a)$$

2. Factor out the GCF from each group:

From the first group $(4b - 6ab)$, the GCF is $2b$.

$$2b(2 - 3a)$$

From the second group $(-6 + 9a)$, the GCF is 3. Let's rearrange it to $9a - 6$ to make factoring easier.

$$9a - 6 = 3(3a - 2)$$

So the expression becomes:

$$2b(2 - 3a) + 3(3a - 2)$$

3. Adjust for a common binomial factor:

Notice that the binomial factors $(2 - 3a)$ and $(3a - 2)$ are negatives of each other. We can write $(3a - 2)$ as $-1 \times (2 - 3a)$. So, $+3(3a - 2)$ becomes $-3(2 - 3a)$. The expression is now:

$$2b(2 - 3a) - 3(2 - 3a)$$

4. Factor out the common binomial:

The common binomial factor is $(2 - 3a)$. Factoring this out, we get:

$$(2 - 3a)(2b - 3)$$

This is the same as $(2b - 3)(2 - 3a)$.

Step 4: Final Answer:

The factorization of $4b - 6ab - 6 + 9a$ is $(2b - 3)(2 - 3a)$.

💡 Quick Tip

When grouping, if the binomial factors are opposites (e.g., $x - y$ and $y - x$), factor out a -1 from one of them to make them identical. This is a very common trick in factorization by grouping.

36. The ratio of the sides of a triangular park is 5:8:12. It's perimeter is 250m. What is its area.

- (A) $375\sqrt{5} m^2$
- (B) $375\sqrt{3} m^2$
- (C) $375\sqrt{15} m^2$
- (D) $375 m^2$

Correct Answer: (C) $375\sqrt{15} m^2$

Solution:

Step 1: Understanding the Concept:

The problem requires finding the area of a triangle given the ratio of its sides and its perimeter. First, we find the actual lengths of the sides. Since we have all three sides of the triangle, we can use Heron's formula to calculate the area.

Step 2: Key Formula or Approach:

1. **Find the sides:** If the ratio of sides is $p : q : r$ and the perimeter is P , the sides are $a = px, b = qx, c = rx$, where $x = \frac{P}{p+q+r}$. 2. **Heron's Formula:** The area of a triangle with sides a , b , and c is given by:

$$\text{Area} = \sqrt{s(s-a)(s-b)(s-c)}$$

where s is the semi-perimeter, $s = \frac{a+b+c}{2} = \frac{\text{Perimeter}}{2}$.

Step 3: Detailed Explanation:

1. Calculate the lengths of the sides:

Let the sides of the triangle be $a = 5x$, $b = 8x$, and $c = 12x$.

The perimeter is given as 250 m.

$$\text{Perimeter} = a + b + c = 5x + 8x + 12x = 25x$$

$$25x = 250$$

$$x = \frac{250}{25} = 10$$

Now find the actual lengths of the sides:

$$a = 5 \times 10 = 50 \text{ m}$$

$$b = 8 \times 10 = 80 \text{ m}$$

$$c = 12 \times 10 = 120 \text{ m}$$

2. Calculate the area using Heron's Formula:

First, find the semi-perimeter (s):

$$s = \frac{\text{Perimeter}}{2} = \frac{250}{2} = 125 \text{ m}$$

Now, calculate the terms for the formula:

$$s - a = 125 - 50 = 75$$

$$s - b = 125 - 80 = 45$$

$$s - c = 125 - 120 = 5$$

Substitute these values into Heron's formula:

$$\text{Area} = \sqrt{125 \times 75 \times 45 \times 5}$$

To simplify, break down the numbers into their prime factors:

$$125 = 5^3$$

$$75 = 3 \times 25 = 3 \times 5^2$$

$$45 = 9 \times 5 = 3^2 \times 5$$

$$5 = 5^1$$

$$\text{Area} = \sqrt{(5^3) \times (3 \times 5^2) \times (3^2 \times 5) \times 5}$$

Combine the powers of the same prime numbers:

$$\text{Area} = \sqrt{5^{3+2+1+1} \times 3^{1+2}} = \sqrt{5^7 \times 3^3}$$

Separate into perfect squares:

$$\text{Area} = \sqrt{(5^6 \times 5) \times (3^2 \times 3)} = \sqrt{5^6 \times 3^2 \times 15}$$

Take the square root of the perfect squares:

$$\text{Area} = 5^3 \times 3^1 \times \sqrt{15} = 125 \times 3 \times \sqrt{15} = 375\sqrt{15} \text{ m}^2$$

Step 4: Final Answer:

The area of the triangular park is $375\sqrt{15} \text{ m}^2$.

💡 Quick Tip

When using Heron's formula with large numbers, avoid multiplying them all out. Instead, find their prime factorizations. This makes finding the square root much simpler and less prone to calculation errors.

37. a and b are any two rational numbers. Then which of the following is a FALSE statement.

- (A) $a + b$ is a rational number
- (B) $a - b$ is a rational number
- (C) $a \times b$ is a rational number
- (D) $\frac{a}{b}$ is a rational number

Correct Answer: (D) $\frac{a}{b}$ is a rational number

Solution:

Step 1: Understanding the Concept:

The question is about the closure properties of rational numbers under basic arithmetic operations (addition, subtraction, multiplication, and division). A set of numbers is "closed" under an operation if performing that operation on any two members of the set always produces another member of the same set.

Step 2: Detailed Explanation:

Let's analyze each statement:

(A) **$a + b$ is a rational number:** The set of rational numbers is closed under addition. The sum of any two rational numbers is always a rational number. This statement is TRUE. For example, $\frac{1}{2} + \frac{1}{3} = \frac{3+2}{6} = \frac{5}{6}$, which is rational.

(B) **$a - b$ is a rational number:** The set of rational numbers is closed under subtraction. The difference between any two rational numbers is always a rational number. This statement is TRUE. For example, $\frac{1}{2} - \frac{1}{3} = \frac{3-2}{6} = \frac{1}{6}$, which is rational.

(C) **$a \times b$ is a rational number:** The set of rational numbers is closed under multiplication. The product of any two rational numbers is always a rational number. This statement is TRUE. For example, $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$, which is rational.

(D) **$\frac{a}{b}$ is a rational number:** The set of rational numbers is NOT closed under division. While the division of two rational numbers is usually a rational number, there is a critical exception: division by zero. Since 0 is a rational number, we can choose $b = 0$. In this case, $\frac{a}{0}$ is undefined. Since the operation does not always result in a rational number for *any* two rational numbers a and b , the set is not closed under division. Therefore, the statement that $\frac{a}{b}$ is a rational number for *any* a and b is FALSE.

Step 3: Final Answer:

The statement that is false is that the division of any two rational numbers is always a rational number, because division by zero is not defined.

 Quick Tip

When a question asks about properties that hold for "any" numbers in a set, always think about edge cases like zero, one, or negative numbers. For division, the most important edge case is always the divisor being zero.

38. A cone with a height of 16 cm and radius of base 4 cm is made up of modeling clay. A boy reshapes it in the form of a sphere. What is the radius of sphere?

- (A) 4 cm
- (B) 6 cm
- (C) 5 cm
- (D) 7 cm

Correct Answer: (A) 4 cm

Solution:

Step 1: Understanding the Concept:

This is a problem of conversion of solids from one shape to another. When one solid is reshaped into another, the volume of the material remains constant. Therefore, we will equate the volume of the cone to the volume of the sphere to find the unknown radius of the sphere.

Step 2: Key Formula or Approach:

- Volume of a cone: $V_{cone} = \frac{1}{3}\pi r^2 h$, where r is the radius of the base and h is the height.
- Volume of a sphere: $V_{sphere} = \frac{4}{3}\pi R^3$, where R is the radius of the sphere.
- Principle of conservation of volume: $V_{cone} = V_{sphere}$.

Step 3: Detailed Explanation:

Given values for the cone: Height, $h = 16$ cm. Radius, $r = 4$ cm.

Let the radius of the sphere be R .

Set the volume of the cone equal to the volume of the sphere:

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

We can cancel $\frac{1}{3}$ and π from both sides of the equation:

$$r^2 h = 4R^3$$

Now, substitute the given values of r and h :

$$(4)^2 \times 16 = 4 \times R^3$$

$$16 \times 16 = 4 \times R^3$$

Divide both sides by 4:

$$\frac{16 \times 16}{4} = R^3$$

$$4 \times 16 = R^3$$

$$64 = R^3$$

To find R, we take the cube root of 64:

$$R = \sqrt[3]{64}$$

Since $4 \times 4 \times 4 = 64$, the cube root of 64 is 4.

$$R = 4 \text{ cm}$$

Step 4: Final Answer:

The radius of the sphere is 4 cm.

💡 Quick Tip

In problems involving reshaping solids, always start by writing the volume formulas and equating them. You can often cancel common factors like π and numerical fractions before substituting the values, which simplifies the calculation.

39. Raju made 42 runs in 6 overs. Mahesh made 63 runs in 7 overs. Which of the following is TRUE statement.

- (A) Raju made more runs per over
- (B) Mahesh made more runs per over
- (C) Both made same number of runs per over
- (D) It can't be decided who made more runs per over

Correct Answer: (B) Mahesh made more runs per over

Solution:

Step 1: Understanding the Concept:

The question asks us to compare the scoring rates of two batsmen, Raju and Mahesh. The scoring rate is measured in "runs per over". To compare them, we need to calculate this rate for each batsman and then see which one is higher.

Step 2: Key Formula or Approach:

The formula for calculating the run rate (runs per over) is:

$$\text{Run Rate} = \frac{\text{Total Runs Scored}}{\text{Total Overs Bowled}}$$

Step 3: Detailed Explanation:

Calculate Raju's run rate:

Runs scored by Raju = 42.

Overs played by Raju = 6.

$$\text{Raju's Run Rate} = \frac{42}{6} = 7 \text{ runs per over}$$

Calculate Mahesh's run rate:

Runs scored by Mahesh = 63.

Overs played by Mahesh = 7.

$$\text{Mahesh's Run Rate} = \frac{63}{7} = 9 \text{ runs per over}$$

Compare the run rates:

Raju's rate is 7 runs per over.

Mahesh's rate is 9 runs per over.

Since $9 > 7$, Mahesh made more runs per over than Raju.

Step 4: Final Answer:

Based on the calculation, Mahesh's run rate (9) is higher than Raju's run rate (7).

Therefore, the true statement is that Mahesh made more runs per over.

💡 Quick Tip

Problems involving rates (like speed, run rate, or price per item) are essentially unit rate problems. Always divide the quantity (runs, distance, cost) by the unit (overs, time, items) to find the rate for a single unit, which allows for easy comparison.

40. The false statements among the following are

i) Every whole number is a natural number.

ii) Every whole number is an integer.

iii) Every whole number is a rational number.

(A) (i) & (ii)

(B) (ii) & (iii)

(C) (i) & (iii)

(D) (i), (ii) & (iii)

Correct Answer: (B) (ii) & (iii)

Solution:

Note: There appears to be a contradiction between the question as written ("The false statements...") and the provided answer key. We will solve this by assuming the question intended to ask for the **TRUE** statements, which makes the answer key logically consistent.

Step 1: Understanding the Concept:

This question tests the understanding of the relationships between different sets of numbers: Natural Numbers (N), Whole Numbers (W), Integers (Z), and Rational Numbers (Q).

- **Natural Numbers (N):** The counting numbers $\{1, 2, 3, \dots\}$.
- **Whole Numbers (W):** The natural numbers plus zero $\{0, 1, 2, 3, \dots\}$.
- **Integers (Z):** All whole numbers and their negative counterparts $\{\dots, -2, -1, 0, 1, 2, \dots\}$.

- **Rational Numbers (Q):** Any number that can be expressed as a fraction p/q , where p and q are integers and q is not zero.

Step 2: Detailed Explanation:

Let's analyze each statement:

i) Every whole number is a natural number.

This statement is **FALSE**. The number 0 is a whole number, but it is not a natural number.

ii) Every whole number is an integer.

This statement is **TRUE**. The set of whole numbers $\{0, 1, 2, \dots\}$ is a subset of the set of integers $\{\dots, -1, 0, 1, \dots\}$.

iii) Every whole number is a rational number.

This statement is **TRUE**. Any whole number 'w' can be written in the form $w/1$, which fits the definition of a rational number.

Step 3: Final Answer:

The only false statement is (i). However, the provided answer key selects option (B), which corresponds to statements (ii) and (iii). This implies that the question likely had a typo and meant to ask for the **TRUE** statements. Statements (ii) and (iii) are both true, which aligns with option (B).

💡 Quick Tip

When dealing with number systems, it's helpful to visualize them as nested sets: Natural Numbers are inside Whole Numbers, which are inside Integers, which are inside Rational Numbers. Always pay attention to the number 0, as it is often the key difference between sets like Natural and Whole numbers.

41. "Loop of Henle" is a part of this organ

- (A) Liver
- (B) Kidney
- (C) Heart
- (D) Lungs

Correct Answer: (B) Kidney

Solution:

Step 1: Understanding the Concept:

The question asks to identify the organ in which the "Loop of Henle" is located. This is a question about human anatomy and physiology, specifically the urinary system.

Step 2: Detailed Explanation:

The **Kidney** is the primary organ of the urinary system, responsible for filtering waste products from the blood and producing urine.

The functional unit of the kidney is the **nephron**. Each kidney contains about a million nephrons.

The **Loop of Henle** is a U-shaped portion of the tubule that conducts urine within each nephron. It plays a major role in concentrating the urine by reabsorbing water

and sodium chloride from the filtrate.

The other organs listed have different functions:

- **Liver:** Plays a role in metabolism, detoxification, and producing bile.
- **Heart:** Pumps blood throughout the body.
- **Lungs:** Responsible for gas exchange (respiration).

Step 3: Final Answer:

The Loop of Henle is a critical structure within the nephron, which is the functional unit of the kidney.

💡 Quick Tip

For biology questions, associating key anatomical structures with their respective organ systems is fundamental. Remember: Nephron, Glomerulus, and Loop of Henle are all parts of the Kidney.

42. Theory of natural selection was proposed by

- (A) Lamarck
- (B) Charles Darwin
- (C) Weismann
- (D) Mendal

Correct Answer: (B) Charles Darwin

Solution:

Step 1: Understanding the Concept:

The question asks to identify the scientist who proposed the theory of natural selection, which is a cornerstone of modern biology.

Step 2: Detailed Explanation:

Let's look at the contributions of the scientists listed:

- (A) **Lamarck (Jean-Baptiste Lamarck):** Proposed a theory of evolution based on the inheritance of acquired characteristics. For example, he believed that a giraffe got its long neck because its ancestors stretched their necks to reach leaves, and this trait was passed on. This theory has been largely discredited.
- (B) **Charles Darwin:** In his 1859 book "On the Origin of Species," he proposed the theory of evolution by **natural selection**. This theory states that organisms with traits better suited to their environment are more likely to survive, reproduce, and pass those advantageous traits on to their offspring. Alfred Russel Wallace independently conceived of the theory as well.
- (C) **Weismann (August Weismann):** Known for his germ plasm theory, which states that hereditary information is transmitted only by germ cells (sperm and eggs), not by somatic (body) cells. This helped to disprove Lamarckism.
- (D) **Mendel (Gregor Mendel):** Known as the "father of modern genetics," he discovered the basic principles of heredity through his experiments with pea plants.

Step 3: Final Answer:

The theory of natural selection was proposed by Charles Darwin.

💡 Quick Tip

Associate key scientific theories with their proponents: Darwin -> Natural Selection; Lamarck -> Inheritance of Acquired Characteristics; Mendel -> Genetics and Inheritance.

43. Which of the following is not related to 'bone'?

- (A) adipose
- (B) ligament
- (C) tendon
- (D) cartilage

Correct Answer: (A) adipose

Solution:

Step 1: Understanding the Concept:

The question asks to identify the term that is not functionally or structurally related to bones within the musculoskeletal system.

Step 2: Detailed Explanation:

Let's analyze the relationship of each term to bone:

(A) **Adipose:** Adipose tissue is commonly known as body fat. Its primary functions are to store energy, provide insulation, and cushion organs. While bone marrow contains yellow marrow (which is adipose tissue), adipose tissue itself is not a primary connective tissue directly involved in the structure or movement of the skeleton in the same way the others are.

(B) **Ligament:** A ligament is a tough, fibrous connective tissue that connects **bone to bone**, providing stability to joints. It is directly related to bone.

(C) **Tendon:** A tendon is a tough, flexible band of fibrous connective tissue that connects **muscle to bone**. It is essential for movement and is directly related to bone.

(D) **Cartilage:** Cartilage is a smooth, elastic connective tissue that covers the ends of bones in joints, allowing for smooth movement and acting as a shock absorber. It is directly related to bone.

Step 3: Final Answer:

Ligaments, tendons, and cartilage are all integral parts of the musculoskeletal system, directly connecting to or working with bones. Adipose tissue is not related in the same way.

💡 Quick Tip

Remember the key connections: **L**igaments link **L**ike to **L**ike (bone to bone), while **T**endons link **T**wo **T**ypes (muscle to bone).

44. Washing Soda formula

- (A) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
- (B) Na_2CO_3
- (C) NaHCO_3
- (D) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$

Correct Answer: (D) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$

Solution:

Step 1: Understanding the Concept:

The question asks for the chemical formula of Washing Soda. This requires knowledge of common chemical names and their corresponding formulas.

Step 2: Detailed Explanation:

Let's identify each chemical formula given in the options:

(A) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$: This is the formula for Calcium Sulfate Dihydrate, commonly known as **Gypsum**.

(B) Na_2CO_3 : This is the formula for Sodium Carbonate. This is often called **Soda Ash** when it is in its anhydrous (without water) form.

(C) NaHCO_3 : This is the formula for Sodium Bicarbonate, commonly known as **Baking Soda**.

(D) $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$: This is the formula for Sodium Carbonate Decahydrate. This hydrated crystal form is what is commonly known as **Washing Soda**. The 'deca' (10) 'hydrate' (water) part indicates the ten molecules of water of crystallization.

Step 3: Final Answer:

The correct chemical formula for Washing Soda is $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$.

 Quick Tip

Be precise with common chemical names. "Soda Ash" is anhydrous Sodium Carbonate (Na_2CO_3), while "Washing Soda" is the hydrated form ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$). "Baking Soda" is Sodium Bicarbonate (NaHCO_3).

45. The range of temperature in clinical thermometer is

- (A) $27^\circ\text{C} - 37^\circ\text{C}$
- (B) $35^\circ\text{C} - 100^\circ\text{C}$
- (C) $35^\circ\text{C} - 42^\circ\text{C}$
- (D) $10^\circ\text{C} - 100^\circ\text{C}$

Correct Answer: (C) $35^\circ\text{C} - 42^\circ\text{C}$

Solution:

Step 1: Understanding the Concept:

The question asks for the typical temperature range of a clinical thermometer. A clinical (or medical) thermometer is specifically designed to measure human body temperature.

Step 2: Detailed Explanation:

The normal human body temperature is approximately 37°C (or 98.6°F). However, a person's temperature can vary. When a person is sick (e.g., has a fever), their temperature can rise significantly. Hypothermia is a condition where the body temperature drops dangerously low.

A clinical thermometer is calibrated to measure the range of temperatures a living human can have. This range typically does not go down to freezing or up to boiling point.

Let's analyze the options:

- (A) $27^{\circ}\text{C} - 37^{\circ}\text{C}$: This range is too narrow and misses fever temperatures. Severe hypothermia can be below 27°C , but this is an extreme case.
- (B) $35^{\circ}\text{C} - 100^{\circ}\text{C}$: The upper limit of 100°C is the boiling point of water and far beyond any possible human body temperature. This is the range of a laboratory thermometer.
- (C) $35^{\circ}\text{C} - 42^{\circ}\text{C}$: This range appropriately covers both hypothermic temperatures (down to 35°C) and high fever temperatures (up to 42°C). Temperatures outside this range are generally not compatible with life. This is the standard range for a clinical thermometer.
- (D) $10^{\circ}\text{C} - 100^{\circ}\text{C}$: This is a very wide range, more typical of a general-purpose or laboratory thermometer.

Step 3: Final Answer:

The standard and most appropriate range for a clinical thermometer is 35°C to 42°C .

💡 Quick Tip

Differentiate between a clinical thermometer and a laboratory thermometer. Clinical thermometers have a narrow range focused on body temperature and a constriction to hold the reading. Laboratory thermometers have a wide range (e.g., -10°C to 110°C) and no constriction.

46. Major part of gas in air is

- (A) Nitrogen
- (B) Oxygen
- (C) Carbon-di-Oxide
- (D) Neon

Correct Answer: (A) Nitrogen

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the gas that constitutes the largest portion of the Earth's atmosphere.

Step 2: Detailed Explanation:

The composition of dry air in the Earth's atmosphere is approximately:

- **Nitrogen (N_2):** about 78.08%
- **Oxygen (O_2):** about 20.95%
- **Argon (Ar):** about 0.93%
- **Carbon Dioxide (CO_2):** about 0.04%
- **Neon (Ne), Helium (He), Methane (CH_4), Krypton (Kr), Hydrogen (H_2):** Trace amounts.

From this data, it is clear that Nitrogen is the most abundant gas, making up more than three-quarters of the air we breathe.

Step 3: Final Answer:

The major part of the gas in the air is Nitrogen.

💡 Quick Tip

A good way to remember the main components of air is the approximate ratio 4:1 for Nitrogen to Oxygen. Nitrogen makes up about 4/5th ($\sim 80\%$) and Oxygen about 1/5th ($\sim 20\%$) of the atmosphere.

47. Deuterium is the isotope of this element

- (A) Oxygen
- (B) Sodium
- (C) Helium
- (D) Hydrogen

Correct Answer: (D) Hydrogen

Solution:

Step 1: Understanding the Concept:

The question asks to identify the element to which Deuterium belongs as an isotope. Isotopes are variants of a chemical element that have the same number of protons but a different number of neutrons in their nuclei.

Step 2: Detailed Explanation:

The element is defined by its number of protons (the atomic number).

Hydrogen has an atomic number of 1, meaning its nucleus contains one proton. The isotopes of hydrogen are:

- **Protium (1H):** One proton and zero neutrons. This is the most common isotope.
- **Deuterium (2H or **D**):** One proton and one neutron. It is also known as heavy hydrogen.
- **Tritium (3H or **T**):** One proton and two neutrons. It is radioactive.

Deuterium is therefore an isotope of Hydrogen. The other elements listed have different atomic numbers (Oxygen: 8, Sodium: 11, Helium: 2) and their isotopes would have these respective numbers of protons.

Step 3: Final Answer:

Deuterium is the isotope of the element Hydrogen.

💡 Quick Tip

Remember the three isotopes of hydrogen: Protium, Deuterium, and Tritium. They are unique in that they have distinct names. Deuterium is a key component of "heavy water" (D_2O).

48. Bakelite and Melamine are the examples of

- (A) Eco plastics
- (B) Thermo plastics
- (C) Bio degradable plastics
- (D) Thermosetting plastics

Correct Answer: (D) Thermosetting plastics

Solution:**Step 1: Understanding the Concept:**

The question asks to classify Bakelite and Melamine based on their properties as plastics. Plastics are broadly classified into two types based on their reaction to heat: Thermoplastics and Thermosetting plastics.

Step 2: Detailed Explanation:

(B) **Thermoplastics (or Thermo plastics):** These are polymers that can be softened by heating and hardened by cooling. This process can be repeated multiple times without significant chemical change. They have long-chain molecules with weak intermolecular forces. Examples include Polyethylene, PVC, and Polystyrene.

(D) **Thermosetting plastics (or Thermosets):** These are polymers that, once heated and molded, undergo an irreversible chemical change (cross-linking) to form a rigid, 3D network structure. They cannot be remelted or reshaped. They are generally stronger and more heat-resistant than thermoplastics.

- **Bakelite:** It is a hard, dense plastic used for making electrical switches, handles of utensils, etc., due to its properties as a poor conductor of heat and electricity. It is a classic example of a thermoset.
- **Melamine:** It is a versatile plastic that is fire-resistant and heat-resistant. It is used for making floor tiles, kitchenware (like unbreakable dinnerware), and fire-resistant fabrics. It is also a thermoset.

(A) and (C) are incorrect as Bakelite and Melamine are synthetic and not easily biodegradable.

Step 3: Final Answer:

Bakelite and Melamine are examples of Thermosetting plastics because they set into a permanent shape upon heating.

💡 Quick Tip

A simple way to remember the difference: **Thermo-set** plastics are "set" into their final form permanently, like setting concrete. **Thermo-plastics** are more like wax; you can melt and re-form them.

49. SI units of Potential Difference is

- (A) ampere
- (B) coulomb
- (C) joule
- (D) volt

Correct Answer: (D) volt

Solution:

Step 1: Understanding the Concept:

The question asks for the standard international (SI) unit for the physical quantity 'Potential Difference'. Potential difference, also known as voltage, is the work done per unit charge.

Step 2: Detailed Explanation:

Let's analyze the units given in the options:

- (A) **Ampere (A):** This is the SI unit of electric **current**. It measures the rate of flow of electric charge.
- (B) **Coulomb (C):** This is the SI unit of electric **charge**.
- (C) **Joule (J):** This is the SI unit of **energy** or **work**.
- (D) **Volt (V):** This is the SI unit of electric **potential difference**. One volt is defined as the potential difference between two points when one joule of work is done to move a charge of one coulomb from one point to the other ($1 \text{ V} = 1 \text{ J/C}$).

Step 3: Final Answer:

The SI unit of Potential Difference is the volt.

💡 Quick Tip

It is crucial to memorize the fundamental physical quantities and their corresponding SI units for physics problems. Key electrical units are: Current (Ampere), Charge (Coulomb), Potential Difference (Volt), Resistance (Ohm), and Power (Watt).

50. Bacterial disease among the following is

- (A) Polio
- (B) Typhoid
- (C) Hepatitis
- (D) Measles

Correct Answer: (B) Typhoid

Solution:

Step 1: Understanding the Concept:

The question requires identifying which of the listed diseases is caused by a bacterium. Diseases can be caused by various pathogens, including bacteria, viruses, fungi, and protozoa.

Step 2: Detailed Explanation:

Let's identify the causative agent for each disease:

(A) **Polio (Poliomyelitis):** This is a highly infectious disease caused by the **Poliovirus**. It is a viral disease.

(B) **Typhoid:** Typhoid fever is an infection caused by the **bacterium** *Salmonella Typhi*. It is typically spread through contaminated food and water. This is a bacterial disease.

(C) **Hepatitis:** This refers to inflammation of the liver, most commonly caused by a group of **viruses** known as the Hepatitis viruses (A, B, C, D, and E). It is a viral disease.

(D) **Measles:** This is a highly contagious respiratory infection caused by the **Measles virus**. It is a viral disease.

Step 3: Final Answer:

Among the given options, Typhoid is the only disease caused by a bacterium.

💡 Quick Tip

Create a list of common diseases and classify them by their causative agent (viral, bacterial, fungal, etc.). This is a frequent topic in general science and biology sections of competitive exams.

51. This is not a neighbouring country of India.

- (A) China
- (B) Nepal
- (C) Pakistan
- (D) Thailand

Correct Answer: (D) Thailand

Solution:

Step 1: Understanding the Concept:

The question requires knowledge of Indian geography, specifically its bordering countries. "Neighbouring country" usually refers to countries that share a land border.

Step 2: Detailed Explanation:

India shares its land borders with seven countries. Let's list them:

- In the North-West: **Pakistan** and Afghanistan.
- In the North: **China, Nepal**, and Bhutan.

- In the East: Myanmar and Bangladesh.

Now let's check the options: (A) **China**: Shares a long border with India in the north. (B) **Nepal**: Shares a border with India in the north. (C) **Pakistan**: Shares a border with India in the west. (D) **Thailand**: Does not share a land border with India. The two countries are separated by the Andaman Sea and the nation of Myanmar. They are considered maritime neighbours. However, in the context of land borders, Thailand is not a neighbouring country.

Step 3: Final Answer:

China, Nepal, and Pakistan share land borders with India, whereas Thailand does not. Therefore, Thailand is not a neighbouring country in this context.

💡 Quick Tip

To remember India's neighbours with land borders, you can use a mnemonic like "BA-CH-PAN Mein B.A." (Childhood B.A.): **B**angladesh, **C**hina, **P**akistan, **N**epal, **M**yanmar, **B**hutan, **A**fghanistan.

52. "Desa bhashalandu Telugu lessa " stated by

- (A) Sri Krishna Devaraya
- (B) Achyutharaya
- (C) Narasimharaya
- (D) Ramaraya

Correct Answer: (A) Sri Krishna Devaraya

Solution:

Step 1: Understanding the Concept:

This question asks to identify the historical personality who made the famous statement "Desa bhashalandu Telugu lessa". This requires knowledge of medieval South Indian history and literature, particularly of the Vijayanagara Empire.

Step 2: Detailed Explanation:

The quote "Desa bhashalandu Telugu lessa" translates to "Among the languages of the nation, Telugu is the greatest".

This statement is attributed to **Sri Krishna Devaraya**, who was the emperor of the Vijayanagara Empire from 1509 to 1529. He was a great patron of literature and an accomplished scholar and poet himself.

He is the author of the Telugu epic poem **Amuktamalyada**, in which this famous line appears. His reign is often considered the golden age of Telugu literature.

The other options are also rulers from the Vijayanagara Empire, but Sri Krishna Devaraya is specifically associated with this quote and the peak of Telugu literary patronage.

Step 3: Final Answer:

The statement was made by the Vijayanagara Emperor Sri Krishna Devaraya.

💡 Quick Tip

For history questions, connecting famous quotes, literary works, or monuments to the specific rulers who commissioned or created them is key. Sri Krishna Devaraya and "Amuktamalyada" are a very important association in South Indian history.

53. India is located in this hemisphere

- (A) Northern
- (B) Southern
- (C) Eastern
- (D) Western

Correct Answer: (A) Northern

Solution:

Step 1: Understanding the Concept:

The question asks for the hemispheric location of India. The Earth is divided into hemispheres by two main lines: the Equator and the Prime Meridian.

- The **Equator** (0° latitude) divides the Earth into the **Northern Hemisphere** and the **Southern Hemisphere**.
- The **Prime Meridian** (0° longitude) and the 180° meridian divide the Earth into the **Eastern Hemisphere** and the **Western Hemisphere**.

Step 2: Detailed Explanation:

Let's look at India's geographical coordinates:

- **Latitudinal Extent:** India extends from $8^\circ 4'$ N to $37^\circ 6'$ N latitude. Since the entire extent is north ('N') of the Equator, India is located entirely in the **Northern Hemisphere**.
- **Longitudinal Extent:** India extends from $68^\circ 7'$ E to $97^\circ 25'$ E longitude. Since the entire extent is east ('E') of the Prime Meridian, India is located entirely in the **Eastern Hemisphere**.

The question asks for "this hemisphere" (singular), and the options provide single choices. Both "Northern" and "Eastern" are correct descriptions. However, "Northern" is listed as option (A) and is a valid and primary descriptor of India's location. Given the options, Northern Hemisphere is the correct choice.

Step 3: Final Answer:

India is located completely in the Northern Hemisphere (and also the Eastern Hemisphere). Based on the available options, "Northern" is the correct answer.

💡 Quick Tip

To remember India's location, think of its coordinates. The latitudes are always 'N' (North) and the longitudes are always 'E' (East). Therefore, India is in the North-Eastern quadrant of the globe.

54. One of the following is not a fixed capital

- (A) tools
- (B) money in hand
- (C) machines
- (D) buildings

Correct Answer: (B) money in hand

Solution:

Step 1: Understanding the Concept:

This question is from economics and deals with the factors of production, specifically the types of capital. Capital can be broadly divided into two categories: fixed capital and working capital.

- **Fixed Capital:** Refers to durable assets that are used in the production process over many years. They are not consumed or converted into the final product in a single production cycle. Examples include machinery, buildings, and tools.
- **Working Capital:** Refers to short-term assets that are used up or converted into cash within one operating cycle. It includes raw materials, cash in hand, and money in the bank. It's the capital needed for day-to-day operations.

Step 2: Detailed Explanation:

Let's analyze the given options:

(A) **Tools:** Tools are durable items used repeatedly in production. They are a form of fixed capital.

(B) **Money in hand:** Cash is a liquid asset used for daily expenses, purchasing raw materials, and paying wages. It is a classic example of working capital, not fixed capital.

(C) **Machines:** Machines are long-lasting assets used in the production process. They are a form of fixed capital.

(D) **Buildings:** Buildings (like factories or offices) are long-term assets used for production. They are a form of fixed capital.

Step 3: Final Answer:

Tools, machines, and buildings are all examples of fixed capital. Money in hand is an example of working capital. Therefore, "money in hand" is not a fixed capital.

💡 Quick Tip

To distinguish between fixed and working capital, ask yourself: "Is this item used up in one production cycle, or does it help in production for many years?" If it's used up or changes form (like raw materials or cash), it's working capital. If it's a durable asset (like a factory), it's fixed capital.

55. Delhi Sultan who changed the capital from Delhi to Devagiri

- (A) Qutbuddin Aybak
- (B) Muhammad Bin Tughlaq
- (C) Kizar Khan
- (D) Ibrahim Lodi

Correct Answer: (B) Muhammad Bin Tughlaq

Solution:

Step 1: Understanding the Concept:

The question asks to identify the ruler from the Delhi Sultanate who is known for the controversial decision of shifting the imperial capital from Delhi to Devagiri in the Deccan.

Step 2: Detailed Explanation:

Let's analyze the rulers mentioned:

- (A) **Qutbuddin Aybak:** He was the founder of the Mamluk dynasty and the first Sultan of Delhi. He ruled from Lahore and later Delhi, but he did not shift the capital to the Deccan.
- (B) **Muhammad Bin Tughlaq:** He was the Sultan of Delhi from 1325 to 1351. He is famous for his ambitious and often ill-fated administrative experiments. One of his most notable decisions was in 1327, when he ordered the transfer of the capital from Delhi to **Devagiri**, which he renamed **Daulatabad**. The move was intended to establish a more centrally located capital to better control the vast empire, but it was poorly executed and ultimately failed, forcing him to move the capital back to Delhi.
- (C) **Khizr Khan:** He was the founder of the Sayyid dynasty, which ruled the Delhi Sultanate after the Tughlaqs. He did not undertake such a capital shift.
- (D) **Ibrahim Lodi:** He was the last ruler of the Lodi dynasty and the Delhi Sultanate. He was defeated by Babur at the First Battle of Panipat in 1526. He ruled from Delhi/Agra.

Step 3: Final Answer:

The Delhi Sultan who shifted the capital from Delhi to Devagiri (Daulatabad) was Muhammad Bin Tughlaq.

💡 Quick Tip

Muhammad Bin Tughlaq is famous for three major controversial decisions: 1. Shifting the capital to Daulatabad. 2. Introducing token currency. 3. The Khurasan expedition. Remembering these three key events is helpful for questions related to his reign.

56. The planet known as the "Earth's twin" is

- (A) Jupiter
- (B) Saturn
- (C) Venus
- (D) Mars

Correct Answer: (C) Venus

Solution:

Step 1: Understanding the Concept:

The question asks to identify the planet that is often called "Earth's twin". This nickname is based on similarities between the two planets.

Step 2: Detailed Explanation:

Venus is often called Earth's twin for several reasons:

- **Size:** Venus has a diameter of about 12,104 km, which is very close to Earth's diameter of about 12,742 km (about 95% of Earth's size).
- **Mass:** The mass of Venus is about 81.5% of Earth's mass.
- **Composition:** Both planets have a similar bulk composition, with a central iron core, a rocky mantle, and a solid crust.

Despite these similarities, Venus is very different from Earth in other ways. It has a thick, toxic atmosphere of carbon dioxide, extreme surface temperatures ($\sim 465^{\circ}\text{C}$) due to a runaway greenhouse effect, and crushing atmospheric pressure.

Mars is often called the "Red Planet". While it is the most explored planet and has similarities to Earth (like polar ice caps and seasons), it is much smaller. **Jupiter** and **Saturn** are gas giants and are vastly different from Earth in every aspect.

Step 3: Final Answer:

Due to its similar size, mass, and composition, Venus is known as the "Earth's twin".

💡 Quick Tip

While Venus is Earth's "twin" in size, Mars is the planet most similar in terms of rotational period (day length) and axial tilt (seasons). Don't confuse these similarities.

57. River Godavari originates at

- (A) Triyambak plateau
- (B) Mahabaleswar
- (C) Amarkantak
- (D) Sihawa

Correct Answer: (A) Triyambak plateau

Solution:

Step 1: Understanding the Concept:

This question requires knowledge of the geography of India, specifically the origin points of major peninsular rivers.

Step 2: Detailed Explanation:

Let's identify the rivers originating from the given locations:

(A) **Triyambak plateau (Trimbakeshwar):** This is located in the Nashik district of Maharashtra, in the Western Ghats. The **Godavari River**, the second-longest river in India after the Ganga, originates here.

(B) **Mahabaleswar:** This is a hill station in the Western Ghats in Maharashtra. It is the source of the **Krishna River**.

(C) **Amarkantak:** This is a pilgrim town in Madhya Pradesh, located in the Maikal Hills. It is the source of two major rivers, the **Narmada River** (flows west) and the **Son River** (flows north-east to join the Ganga).

(D) **Sihawa:** This is a place in the Dhamtari district of Chhattisgarh. It is the origin of the **Mahanadi River**.

Step 3: Final Answer:

The Godavari River originates at the Triyambak plateau (Trimbakeshwar).

 Quick Tip

Creating a table of major Indian rivers with their source, length, tributaries, and the states they flow through is an effective way to study for geography questions. Focus on the origin points in the Western Ghats and Central India as they are frequently asked.

58. The fundamental right that prevents the employment of children under 14 years of age.

- (A) Right to equality
- (B) Right to freedom
- (C) Right against exploitation
- (D) Right to Constitutional remedies

Correct Answer: (C) Right against exploitation

Solution:

Step 1: Understanding the Concept:

The question asks to identify which Fundamental Right in the Indian Constitution specifically prohibits the employment of young children in hazardous jobs.

Step 2: Detailed Explanation:

Let's examine the relevant Fundamental Rights listed in the options:

(A) **Right to equality (Articles 14-18):** This right ensures equality before the law, prohibits discrimination on grounds of religion, race, caste, sex or place of birth, and ensures equality of opportunity in matters of public employment.

(B) **Right to freedom (Articles 19-22):** This includes freedoms of speech and expression, assembly, association, movement, residence, and profession, along with protection in respect of conviction for offenses and protection of life and personal liberty.

(C) **Right against exploitation (Articles 23-24):** This right prohibits trafficking in human beings, forced labor (begar), and other similar forms of forced labor.

Specifically, **Article 24** states: "No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment." This directly addresses the issue mentioned in the question.

(D) **Right to Constitutional remedies (Article 32):** This right allows citizens to move the Supreme Court to enforce their Fundamental Rights. It is the "remedy" itself, not the substantive right preventing child labor.

Step 3: Final Answer:

The prohibition of employment of children under 14 is explicitly covered under the Right against Exploitation (Article 24).

💡 Quick Tip

Remembering the specific articles associated with Fundamental Rights can be very helpful. Key articles to remember are: Article 17 (Abolition of Untouchability), Article 21 (Right to Life), Article 21A (Right to Education), Article 24 (Prohibition of Child Labour), and Article 32 (Right to Remedies).

59. Who among the following was the dictator of Germany

- (A) Mussolini
- (B) Hitler
- (C) Stalin
- (D) Ho Chi Minh

Correct Answer: (B) Hitler

Solution:

Step 1: Understanding the Concept:

This question asks to identify the historical figure who was the dictator of Germany, a key figure in World War II.

Step 2: Detailed Explanation:

Let's identify the country associated with each leader:

(A) **Benito Mussolini:** He was the Fascist dictator of **Italy** from 1922 to 1943. He was an ally of Hitler.

(B) **Adolf Hitler:** He was the leader of the Nazi Party and the dictator (Führer) of

Germany from 1933 to 1945. His actions led to the outbreak of World War II and the Holocaust.

(C) **Joseph Stalin:** He was the Communist dictator of the **Soviet Union** from the mid-1920s until his death in 1953.

(D) **Ho Chi Minh:** He was a Vietnamese Communist revolutionary leader who was the Prime Minister and President of the Democratic Republic of **Vietnam** (North Vietnam).

Step 3: Final Answer:

Adolf Hitler was the dictator of Germany.

💡 Quick Tip

For world history questions, it's essential to link major 20th-century leaders to their respective countries and ideologies: Hitler (Germany, Nazism), Mussolini (Italy, Fascism), Stalin (Soviet Union, Communism), Roosevelt (USA, Democracy), Churchill (UK, Democracy).

60. The term refers to the existence of more than one level of government in the country is

- (A) Parliamentary form of governance
- (B) Federalism
- (C) Secularism
- (D) Socialism

Correct Answer: (B) Federalism

Solution:

Step 1: Understanding the Concept:

The question asks for the political term that describes a system of government where power is divided between a central authority and various constituent units (like states or provinces).

Step 2: Detailed Explanation:

Let's define the terms in the options:

(A) **Parliamentary form of governance:** This is a system where the executive branch (the government) derives its democratic legitimacy from its ability to command the confidence of the legislative branch (the parliament) and is also held accountable to that parliament. It describes the relationship between the executive and legislature, not the levels of government.

(B) **Federalism:** This is a system of government characterized by the existence of **more than one level of government**, typically a central or national government and regional or state governments. Each level has its own powers and responsibilities, as defined in a constitution. India, the USA, and Canada are examples of federal countries.

(C) **Secularism:** This is the principle of separation of the state from religious institutions. A secular state does not have an official religion and treats all religions equally.

(D) **Socialism:** This is a political and economic theory of social organization that advocates that the means of production, distribution, and exchange should be owned or regulated by the community as a whole.

Step 3: Final Answer:

The term that refers to the existence of more than one level of government is Federalism.

💡 Quick Tip

Remember the key features of different political systems. Federalism is about the vertical division of power (central, state, local). Parliamentary/Presidential systems are about the horizontal relationship between the executive and legislature.

61. Harshavardhana was defeated by

- (A) Pulakesin-II
- (B) Narasimhavarma- I
- (C) Mahendravarma
- (D) simhavishnu

Correct Answer: (A) Pulakesin-II

Solution:

Step 1: Understanding the Concept:

The question asks to identify the ruler who defeated the powerful North Indian emperor Harshavardhana of the Vardhana dynasty. This is a key event in ancient Indian history.

Step 2: Detailed Explanation:

Harshavardhana was a dominant emperor in North India during the 7th century CE. After consolidating his control over the north, he attempted to expand his empire southwards into the Deccan plateau.

His southward march was halted by **Pulakesin-II**, the most famous ruler of the **Chalukya dynasty** of Badami. The decisive battle took place on the banks of the Narmada River around 618-619 CE. Pulakesin-II successfully repelled Harsha's invasion.

This victory was a major achievement for Pulakesin-II and is famously recorded in the **Aihole Inscription**, which was composed by his court poet Ravikirti.

The other rulers mentioned are from the Pallava dynasty, who were contemporaries and rivals of the Chalukyas:

- **Narasimhavarma-I:** He was a powerful Pallava king who later defeated and killed Pulakesin-II, sacking the Chalukyan capital of Badami.
- **Mahendravarma-I:** He was the father and predecessor of Narasimhavarma-I.
- **Simhavishnu:** He was an earlier Pallava king, credited with establishing the Pallava supremacy.

Step 3: Final Answer:

Harshavardhana's southern campaign was stopped by the Chalukyan emperor Pulakesin-II.

💡 Quick Tip

Remember the major rivalries of ancient India: Vardhanas vs. Chalukyas, and Chalukyas vs. Pallavas. Key events like the Battle of Narmada (Harsha vs. Pulakesin-II) and the Sack of Badami (Narasimhavarma-I vs. Pulakesin-II) are important milestones.

62. The Lok Sabha is popularly known as

- (A) Lower house
- (B) Second chamber
- (C) Fourth chamber
- (D) Upper house

Correct Answer: (A) Lower house

Solution:

Step 1: Understanding the Concept:

The question asks for the popular name of the Lok Sabha, which is one of the two houses of the Indian Parliament.

Step 2: Detailed Explanation:

The Parliament of India is bicameral, meaning it consists of two houses.

- **Lok Sabha (House of the People):** This is the house to which members are directly elected by the people of India. It is considered the **Lower House** or the first chamber. It represents the people directly.
- **Rajya Sabha (Council of States):** This is the house whose members are indirectly elected by the elected members of the State Legislative Assemblies. It is considered the **Upper House** or the second chamber. It represents the states of the Indian federation.

The terms "Lower House" and "Upper House" are borrowed from the British parliamentary system (House of Commons and House of Lords). Although the Rajya Sabha is the "Upper House", the Lok Sabha holds more power in key areas like financial matters.

Step 3: Final Answer:

The Lok Sabha is popularly known as the Lower House of the Indian Parliament.

💡 Quick Tip

To avoid confusion, remember that the house directly elected by the **Lok** (people) is the **Lok Sabha**, and it is the **Lower House**. The **Rajya Sabha**, representing the **Rajyas** (states), is the other house.

63. The Ex-Officio Chairman of the Rajya Sabha

- (A) Vice-President
- (B) President
- (C) Prime Minister
- (D) Speaker

Correct Answer: (A) Vice-President

Solution:

Step 1: Understanding the Concept:

The question asks to identify the person who serves as the Ex-Officio Chairman of the Rajya Sabha (the Upper House of the Indian Parliament). "Ex-officio" means holding a position by virtue of holding another office.

Step 2: Detailed Explanation:

According to **Article 64** of the Indian Constitution, the **Vice-President of India** shall be the ex-officio Chairman of the Council of States (Rajya Sabha).

This means that whoever is elected as the Vice-President of India automatically assumes the role of the Chairman of the Rajya Sabha. They preside over the sessions of the house.

- The **President** is the head of the state but does not preside over either house.
- The **Prime Minister** is the leader of the majority party in the Lok Sabha.
- The **Speaker** is the presiding officer of the Lok Sabha.

Step 3: Final Answer:

The Vice-President of India is the Ex-Officio Chairman of the Rajya Sabha.

💡 Quick Tip

Remember the presiding officers for both houses: The Lok Sabha is presided over by the Speaker (who is elected from among its members). The Rajya Sabha is presided over by the Vice-President of India (who is not a member of the house).

64. The Governor is appointed by

- (A) The President
- (B) The Prime Minister
- (C) The Chief Minister
- (D) The Chief Justice

Correct Answer: (A) The President

Solution:

Step 1: Understanding the Concept:

The question asks about the appointing authority for the Governor of a state in India. The Governor is the constitutional head of a state.

Step 2: Detailed Explanation:

According to **Article 155** of the Indian Constitution, "The Governor of a State shall be appointed by the President by warrant under his hand and seal."

The Governor holds office during the pleasure of the President. Although the Governor is appointed by the President, the appointment is made on the advice of the Union Council of Ministers, headed by the Prime Minister. However, the constitutional appointing authority is the President.

- The **Prime Minister** advises the President on the appointment.
- The **Chief Minister** is the head of the state government and is appointed by the Governor.
- The **Chief Justice** (of India or a High Court) administers the oath of office to the President and Governor respectively, but does not appoint them.

Step 3: Final Answer:

The Governor of a state is appointed by the President of India.

💡 Quick Tip

Remember the chain of appointments in the executive branch: The President is elected. The President appoints the Prime Minister. The President, on the advice of the PM, appoints Governors. The Governor appoints the Chief Minister of a state.

65. "Man is born free, and everywhere he is in chains" stated by

- (A) Rousseau
- (B) Voltaire
- (C) Montesquieu
- (D) Adam Smith

Correct Answer: (A) Rousseau

Solution:

Step 1: Understanding the Concept:

The question asks to identify the philosopher who wrote the famous line, "Man is born free, and everywhere he is in chains." This is a foundational quote from the Age of Enlightenment.

Step 2: Detailed Explanation:

Let's look at the philosophers listed:

(A) **Jean-Jacques Rousseau:** He was a Genevan philosopher whose political philosophy influenced the progress of the Enlightenment throughout Europe, as well as aspects of the French Revolution. The famous quote, "Man is born free, and everywhere he is in chains," is the opening sentence of his influential 1762 book, *The*

Social Contract. In this work, he argues that the chains are the constraints placed on individual freedom by society and government.

(B) **Voltaire:** A French Enlightenment writer, historian, and philosopher famous for his advocacy of freedom of speech, freedom of religion, and separation of church and state.

(C) **Montesquieu:** A French judge and political philosopher best known for his theory of the **separation of powers**, which is implemented in many constitutions throughout the world.

(D) **Adam Smith:** A Scottish economist and philosopher known as the "Father of Economics" or "Father of Capitalism." He wrote *The Wealth of Nations*.

Step 3: Final Answer:

The statement was made by Jean-Jacques Rousseau in his book *The Social Contract*.

 Quick Tip

Associate key Enlightenment thinkers with their main ideas: Rousseau -> Social Contract, General Will; Montesquieu -> Separation of Powers; Locke -> Natural Rights (Life, Liberty, Property); Voltaire -> Freedom of Speech.

66. The 12th schedule was incorporated to the Indian Constitution by this amendment

- (A) 42
- (B) 44
- (C) 73
- (D) 74

Correct Answer: (D) 74

Solution:

Step 1: Understanding the Concept:

The question is about a specific amendment to the Indian Constitution that added the 12th Schedule. The schedules of the constitution list and categorize bureaucratic activity and government policy.

Step 2: Detailed Explanation:

Let's review the important amendments listed:

(A) **42nd Amendment (1976):** Known as the "Mini-Constitution," it made widespread changes, including adding the words "Socialist," "Secular," and "Integrity" to the Preamble and adding the Fundamental Duties.

(B) **44th Amendment (1978):** This was enacted to reverse many of the changes made by the 42nd Amendment. It notably removed the Right to Property from the list of Fundamental Rights.

(C) **73rd Amendment (1992):** This amendment gave constitutional status to the Panchayati Raj institutions (rural local governments). It added Part IX to the Constitution and the **11th Schedule**, which lists the functions of the Panchayats.

(D) **74th Amendment (1992):** This amendment gave constitutional status to the

Urban Local Bodies (Municipalities). It added Part IX-A to the Constitution and the **12th Schedule**, which lists the functional items or matters of the Municipalities.

Step 3: Final Answer:

The 12th Schedule, dealing with the powers and responsibilities of Municipalities, was added to the Constitution by the 74th Amendment Act of 1992.

💡 Quick Tip

A useful way to remember the 73rd and 74th amendments is that they were passed together to empower local self-government. The 73rd came first alphabetically (Panchayat before Municipality) and numerically (11th Schedule before 12th Schedule). It deals with rural areas, which form the larger part of India. The 74th deals with urban areas.

67. The Colosseum is a

- (A) building
- (B) bridge
- (C) Amphitheatre
- (D) Temple

Correct Answer: (C) Amphitheatre

Solution:

Step 1: Understanding the Concept:

The question asks to correctly classify the Colosseum, a famous historical monument.

Step 2: Detailed Explanation:

The Colosseum, also known as the Flavian Amphitheatre, is an oval-shaped structure in the center of Rome, Italy.

- It was built during the Roman Empire, with construction starting under Emperor Vespasian in 72 AD and completed under his successor Titus in 80 AD.
- It was designed as a venue for public spectacles, such as gladiatorial contests, animal hunts, public executions, and dramas based on classical mythology.
- Its architectural form is an **amphitheatre**, which is an open-air venue with a central space (the arena) surrounded by tiered seating for spectators. This design is distinct from a regular theatre (which is usually semi-circular) or a circus (used for chariot races).

While it is a 'building' in a general sense, its specific architectural type is an amphitheatre. It was not a temple or a bridge.

Step 3: Final Answer:

The Colosseum is a famous example of a Roman amphitheatre.

💡 Quick Tip

Associate famous world monuments with their specific type and location. For example: Colosseum (Amphitheatre, Rome), Parthenon (Temple, Athens), Hagia Sophia (Cathedral/Mosque/Museum, Istanbul), Eiffel Tower (Observation Tower, Paris).

68. The National Bank for Agriculture and Rural Development (NABARD) was established in the year

- (A) 1972
- (B) 1982
- (C) 1992
- (D) 2002

Correct Answer: (B) 1982

Solution:

Step 1: Understanding the Concept:

The question asks for the establishment year of NABARD, a key financial institution in India.

Step 2: Detailed Explanation:

NABARD stands for the National Bank for Agriculture and Rural Development. It is an apex development financial institution in India.

- It was established on **12 July 1982**.
- Its establishment was based on the recommendations of the **B. Sivaraman Committee** (Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development).
- It was established by an Act of Parliament, the National Bank for Agriculture and Rural Development Act, 1981.
- Its main focus is to provide and regulate credit and other facilities for the promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts, and other rural crafts and other allied economic activities in rural areas.

Step 3: Final Answer:

NABARD was established in the year 1982.

💡 Quick Tip

For questions about major Indian institutions (like RBI, SEBI, NABARD), it's useful to remember their establishment year, the committee that recommended their formation (if any), their headquarters, and their primary function.

69. An expansion of economic activities across political boundaries of all nations in the world is

- (A) Liberalization
- (B) Privatization
- (C) Globalization
- (D) Nationalization

Correct Answer: (C) Globalization

Solution:

Step 1: Understanding the Concept:

The question asks for the term that defines the increasing integration and expansion of economic activities (like trade, investment, and capital flows) across the political borders of countries.

Step 2: Detailed Explanation:

Let's analyze the given economic terms:

(A) **Liberalization:** This refers to the process of making policies less constraining for economic activity, typically within a single country. It involves reducing tariffs, deregulating industries, and removing government controls.

(B) **Privatization:** This is the process of transferring ownership of a business, enterprise, or industry from the public sector (government) to the private sector.

(C) **Globalization:** This is the process of interaction and integration among people, companies, and governments worldwide. In an economic context, it specifically refers to the expansion of trade, investment, and technology transfer across national borders, leading to a more interconnected and interdependent global economy. This perfectly matches the description in the question.

(D) **Nationalization:** This is the opposite of privatization, where the government takes control of private assets or industries.

Step 3: Final Answer:

The term for the expansion of economic activities across political boundaries of all nations is Globalization.

💡 Quick Tip

Remember the three pillars of the 1991 economic reforms in India: Liberalization, Privatization, and Globalization (LPG). Globalization is the external component, focused on integrating the Indian economy with the world economy.

70. The period of 12th Five year plan is

- (A) 2007 - 2012
- (B) 2012 - 2017
- (C) 2017 - 2022
- (D) 2022 - 2027

Correct Answer: (B) 2012 - 2017

Solution:

Step 1: Understanding the Concept:

This question asks for the time period of the 12th Five-Year Plan of India. The Five-Year Plans were a series of centralized economic plans for the development of the Indian economy.

Step 2: Detailed Explanation:

The Planning Commission of India was responsible for drafting the Five-Year Plans. Let's trace the recent plans:

- **10th Five-Year Plan:** 2002 - 2007
- **11th Five-Year Plan:** 2007 - 2012
- **12th Five-Year Plan:** 2012 - 2017

The 12th Five-Year Plan was the last of the Five-Year Plans. The Government of India dissolved the Planning Commission in 2014 and replaced it with a new think tank called NITI Aayog (National Institution for Transforming India). Consequently, the five-year planning process was discontinued after the 12th plan ended in 2017.

Step 3: Final Answer:

The period of the 12th and final Five-Year Plan was from 2012 to 2017.

💡 Quick Tip

Remembering the last few Five-Year Plans is important. The 12th Plan (2012-2017) is particularly significant as it marks the end of the planning era in India and the transition to NITI Aayog.

71. 'Monalisa' was painted by

- (A) Giotto Bondone
- (B) Leonardo da Vinci
- (C) Michelangelo
- (D) Filippo Bruneleschi

Correct Answer: (B) Leonardo da Vinci

Solution:

Step 1: Understanding the Concept:

The question asks to identify the artist of the Mona Lisa, one of the most famous paintings in the world.

Step 2: Detailed Explanation:

The Mona Lisa (La Gioconda in Italian) is a half-length portrait painting considered an archetype of the Italian Renaissance.

- The artist was **Leonardo da Vinci**, a true "Renaissance man" who was a painter, sculptor, architect, musician, scientist, inventor, and more. He is believed to have painted the Mona Lisa between 1503 and 1506.

- **Giotto Bondone** was an earlier Italian painter from the Proto-Renaissance period.
- **Michelangelo** was a contemporary and rival of Leonardo, famous for sculpting the statue of David and painting the ceiling of the Sistine Chapel.
- **Filippo Brunelleschi** was a prominent architect and engineer of the early Renaissance, most famous for designing the dome of the Florence Cathedral.

Step 3: Final Answer:

The 'Mona Lisa' was painted by the High Renaissance master, Leonardo da Vinci.

💡 Quick Tip

Associate major Renaissance artists with their most famous works: Leonardo da Vinci (Mona Lisa, The Last Supper), Michelangelo (Statue of David, Sistine Chapel Ceiling), Raphael (The School of Athens).

72. The texts that mentioned about the 16 Mahajanapadas for the first time are

- (A) Jain texts
- (B) Buddha texts
- (C) Ajivaka texts
- (D) Charvaka texts

Correct Answer: (B) Buddha texts

Solution:

Step 1: Understanding the Concept:

The question asks for the earliest textual sources that provide a list of the 16 Mahajanapadas (Great Kingdoms) of ancient India.

Step 2: Detailed Explanation:

The Mahajanapadas were sixteen kingdoms and republics that flourished in northern India from the 6th to 4th centuries BCE. The historical information about them comes from various ancient sources.

- **Buddhist Texts:** The earliest and most well-known list of the sixteen Mahajanapadas is found in the Buddhist text **Anguttara Nikaya**. This text is part of the Sutta Pitaka and is considered a primary source for this period. Other Buddhist texts like the Digha Nikaya also mention some of them.
- **Jain Texts:** Jain texts, such as the **Bhagavati Sutra**, also provide a list of sixteen Mahajanapadas. However, the list differs slightly from the one found in Buddhist texts, and these texts are generally dated slightly later.
- **Ajivaka and Charvaka Texts:** These were philosophical schools, and their literature (much of which is lost) is not known for providing comprehensive political lists like the Mahajanapadas.

Given that Buddhist texts like the Anguttara Nikaya provide the most frequently cited and one of the earliest accounts, they are considered the primary source.

Step 3: Final Answer:

The Buddhist texts are the earliest known sources that mention the 16 Mahajanapadas.

💡 Quick Tip

For questions about the Mahajanapadas, remember that the Buddhist text 'Anguttara Nikaya' is the most important primary source. It provides the classic list of sixteen kingdoms, including powerful ones like Magadha, Kosala, Avanti, and Vatsa.

73. The Law of variable proportions operates in

- (A) Very short period
- (B) Short period
- (C) Long period
- (D) Very long period

Correct Answer: (B) Short period

Solution:

Step 1: Understanding the Concept:

The question asks about the time frame in which the "Law of Variable Proportions" is applicable in economic theory. This law is also known as the Law of Diminishing Marginal Returns.

Step 2: Detailed Explanation:

The Law of Variable Proportions describes the relationship between input and output in production. It states that if one factor of production (variable factor, e.g., labor) is increased while other factors (fixed factors, e.g., capital/land) are held constant, the total output will initially increase at an increasing rate, then at a diminishing rate, and finally start to decline.

This law is fundamentally based on the distinction between fixed and variable factors of production. This distinction is the defining characteristic of different time periods in economics:

- **Very Short Period (Market Period):** All factors of production are fixed. Production cannot be changed.
- **Short Period (Short Run):** At least one factor of production is fixed, while others are variable. Since the law requires a mix of fixed and variable factors, it operates in the **short period**.
- **Long Period (Long Run):** All factors of production are variable. Firms can change their scale of production. In the long run, we study "Returns to Scale," not the law of variable proportions.

- **Very Long Period:** This period is long enough for technology and other fundamental conditions to change.

Step 3: Final Answer:

The Law of Variable Proportions operates in the short period, as this is the timeframe where some inputs are fixed and some are variable.

💡 Quick Tip

Remember the key distinction: **Short Run** = Fixed + Variable Inputs -> Law of Variable Proportions. **Long Run** = All Variable Inputs -> Returns to Scale.

74. The problems faced by modern economies like poverty, unemployment etc. are studied in

- (A) Micro Economics
- (B) Macro Economics
- (C) Normative Economics
- (D) International Economics

Correct Answer: (B) Macro Economics

Solution:

Step 1: Understanding the Concept:

The question asks to identify the branch of economics that deals with large-scale economic issues like poverty and unemployment. Economics is broadly divided into microeconomics and macroeconomics.

Step 2: Detailed Explanation:

(A) **Microeconomics:** This branch focuses on the behavior of individual economic agents, such as individual consumers, firms, and industries. It studies topics like supply and demand for a specific product, consumer choice, and the pricing decisions of a single company.

(B) **Macroeconomics:** This branch studies the economy as a whole. It deals with aggregate variables and issues that affect the entire nation, such as national income (GDP), inflation, economic growth, **unemployment**, and **poverty**. Problems like poverty and unemployment are widespread phenomena that are analyzed at the national and international levels, which is the domain of macroeconomics.

(C) **Normative Economics:** This involves value judgments and opinions about what economic policies *should* be. It contrasts with positive economics, which describes *what is*. While policies to combat poverty are normative, the study of the causes and extent of poverty is part of macroeconomics.

(D) **International Economics:** This focuses on economic interactions between countries, such as trade, exchange rates, and balance of payments.

Step 3: Final Answer:

Poverty and unemployment are aggregate economic problems studied under the purview of Macroeconomics.

💡 Quick Tip

A simple way to differentiate is: **Micro** deals with the **i** for **i**ndividuals and firms. **Macro** deals with the **a** for **a**ggregates and the economy **a**s a whole.

75. The average number of persons living per square kilometer in an area is

- (A) Population
- (B) Density of population
- (C) Distribution of population
- (D) Division of population

Correct Answer: (B) Density of population

Solution:

Step 1: Understanding the Concept:

The question asks for the correct demographic term for the measurement of population relative to land area.

Step 2: Detailed Explanation:

Let's define the terms:

- (A) **Population:** This is the total number of people residing in a specific area (like a city, country, or the world).
- (B) **Density of population:** This is a measure of how crowded a place is. It is calculated by dividing the total population of an area by its total land area. The result is expressed as the number of people per unit of area, such as "persons per square kilometer." This exactly matches the definition given in the question.
- (C) **Distribution of population:** This describes the way people are spread out across a geographical area. It refers to the pattern of settlement, for example, whether the population is clustered in cities or spread evenly across rural areas.
- (D) **Division of population:** This is not a standard demographic term. One might talk about the division of population by age, sex, or other characteristics (population composition), but not in the context of area.

Step 3: Final Answer:

The average number of persons living per square kilometer is the definition of population density.

💡 Quick Tip

Remember the formula: $\text{Population Density} = \frac{\text{Total Population}}{\text{Total Land Area}}$. This helps to distinguish it clearly from the simple count of 'Population'.

76. An economy where advanced and primitive sectors exist side by side is

- (A) Capitalistic Economy
- (B) Socialistic Economy
- (C) Dual Economy

(D) Developed Economy

Correct Answer: (C) Dual Economy

Solution:

Step 1: Understanding the Concept:

The question asks for the term describing an economy with a sharp divide between a modern, developed sector and a traditional, underdeveloped sector.

Step 2: Detailed Explanation:

(A) **Capitalistic Economy:** An economic system where trade and industry are controlled by private owners for profit, rather than by the state.

(B) **Socialistic Economy:** An economic system where the means of production are owned and controlled by the state.

(C) **Dual Economy:** This term, prominent in development economics, refers to the coexistence of two separate economic sectors within one country. One sector is modern, urban, and integrated into the global economy (the 'advanced' sector). The other is traditional, rural, and often based on subsistence agriculture (the 'primitive' sector). This coexistence of advanced and primitive sectors is the defining feature of a dual economy. Many developing countries exhibit characteristics of a dual economy.

(D) **Developed Economy:** A sovereign state with a highly developed economy and advanced technological infrastructure relative to other nations.

Step 3: Final Answer:

An economy where advanced and primitive sectors exist side by side is called a Dual Economy.

 Quick Tip

The concept of a "Dual Economy" was introduced by economist Arthur Lewis. It helps to explain persistent poverty and inequality in developing countries where a modern industrial sector fails to absorb surplus labor from the traditional agricultural sector.

77. The sum of all items divided by the number of items is equal to

(A) Mode

(B) Median

(C) Harmonic mean

(D) Arithmetic mean

Correct Answer: (D) Arithmetic mean

Solution:

Step 1: Understanding the Concept:

The question asks for the name of a specific measure of central tendency which is calculated by summing all values and dividing by the count of those values.

Step 2: Detailed Explanation:

Let's define the statistical terms:

- (A) **Mode:** The mode is the value that appears most frequently in a data set.
- (B) **Median:** The median is the middle value in a list of numbers sorted in ascending or descending order. If there is an even number of values, it is the average of the two middle numbers.
- (C) **Harmonic Mean:** This is a type of average, calculated as the reciprocal of the arithmetic mean of the reciprocals of the observations. It is used for specific situations, like averaging rates.
- (D) **Arithmetic Mean:** This is the most common type of average. It is calculated by adding up all the numbers in a set and then dividing by the count of those numbers. The formula is: $\text{Mean} = (\text{Sum of all items}) / (\text{Number of items})$. This perfectly matches the definition in the question.

Step 3: Final Answer:

The sum of all items divided by the number of items is the definition of the Arithmetic Mean.

💡 Quick Tip

Remember the three main 'M's of central tendency: **M**ean is the average, **M**edian is the middle, and **M**ode is the most frequent.

78. Kalinga war held in

- (A) 261 BC
 (B) 361 BC
 (C) 261 AD
 (D) 361 AD

Correct Answer: (A) 261 BC

Solution:

Step 1: Understanding the Concept:

The question asks for the year of the Kalinga War, a pivotal event in the reign of the Mauryan Emperor Ashoka and in Indian history.

Step 2: Detailed Explanation:

The Kalinga War was fought between the Mauryan Empire under Emperor Ashoka and the state of Kalinga, a feudal republic located on the coast of present-day Odisha.

- The war is dated to Ashoka's 8th regnal year.
- Ashoka's coronation is generally dated to 268 BCE.
- Therefore, the war took place around **261 BCE** (or sometimes dated 262-261 BCE). The common convention is 261 BC.
- The immense bloodshed and suffering during the war caused Ashoka to have a profound change of heart. He converted to Buddhism and adopted a policy of Dhamma-vijaya (victory through righteousness) instead of military conquest.

- The distinction between BC (Before Christ) and AD (Anno Domini) is crucial. The Mauryan period was in the BC era.

Step 3: Final Answer:

The Kalinga War was held in 261 BC.

💡 Quick Tip

The Kalinga War is a major turning point in Indian history. Associate it with three key things: Emperor Ashoka, the year 261 BC, and Ashoka's subsequent conversion to Buddhism and adoption of the policy of Dhamma.

79. The author of the book "The Prince"

- (A) Aristotle
- (B) J. W. Garner
- (C) Machiavelli
- (D) Laski

Correct Answer: (C) Machiavelli

Solution:

Step 1: Understanding the Concept:

The question asks to identify the author of the influential political treatise, "The Prince".

Step 2: Detailed Explanation:

- (A) **Aristotle:** An ancient Greek philosopher who wrote "Politics".
- (B) **J. W. Garner:** A 20th-century American political scientist.
- (C) **Niccolò Machiavelli:** An Italian diplomat, philosopher, and writer during the Renaissance. He wrote "The Prince" (*Il Principe*) around 1513. The book is a treatise on political power, famously arguing that a ruler may need to use immoral means to achieve and maintain power, giving rise to the term "Machiavellian".
- (D) **Harold Laski:** A 20th-century British political theorist.

Step 3: Final Answer:

"The Prince" was written by Niccolò Machiavelli.

💡 Quick Tip

"The Prince" by Machiavelli is one of the most famous and foundational texts of modern political philosophy. Remember it for its pragmatic and often ruthless advice to rulers.

80. Young Italy was founded by

- (A) Victor Emmanuel
- (B) Cavour
- (C) Joseph Mazzini
- (D) Garibaldi

Correct Answer: (C) Joseph Mazzini

Solution:

Step 1: Understanding the Concept:

The question asks to identify the founder of "Young Italy," a significant political movement in the history of Italian unification (the Risorgimento).

Step 2: Detailed Explanation:

Let's look at the roles of the key figures of the Italian unification:

- (A) **Victor Emmanuel II:** He was the King of Sardinia and became the first king of a united Italy in 1861.
- (B) **Count Camillo di Cavour:** As Prime Minister of Piedmont-Sardinia, he was the brilliant diplomat and statesman who masterminded the political unification of Italy.
- (C) **Giuseppe Mazzini:** He was the ideological soul of the unification. An ardent nationalist and republican, he founded the secret society **Young Italy** (*La Giovine Italia*) in Marseille in 1831. Its goal was to inspire a popular uprising to create a united, republican Italian nation.
- (D) **Giuseppe Garibaldi:** He was the "sword" of the unification. A charismatic general, he led his army of volunteers, the "Redshirts," in the conquest of Sicily and Naples, which he then handed over to King Victor Emmanuel II.

Step 3: Final Answer:

The "Young Italy" movement was founded by Giuseppe Mazzini.

💡 Quick Tip

Remember the three main architects of Italian unification: Mazzini (the soul), Cavour (the brain), and Garibaldi (the sword).

81. Budget deficit + Market borrowings and other liabilities =

- (A) Fiscal deficit
- (B) Revenue deficit
- (C) Capital deficit
- (D) Primary deficit

Correct Answer: (A) Fiscal deficit

Solution:

Step 1: Understanding the Concept:

The question presents an equation from public finance and asks to identify the type of deficit it represents.

Step 2: Detailed Explanation:

Let's define the terms:

- **Budget Deficit:** In the past, this was defined as Total Expenditure - Total Receipts. If this was positive, it had to be financed.
- **Market Borrowings and other liabilities:** This represents the total amount of money the government needs to borrow to meet its expenditure.
- **Fiscal Deficit:** This is the most important measure of a government's deficit. It is defined as the excess of total expenditure over total receipts, **excluding borrowings**. Therefore, the fiscal deficit is exactly equal to the total borrowing requirement of the government.

The equation given, 'Budget deficit + Market borrowings and other liabilities', essentially represents the total gap between government spending and its non-borrowed income, which must be filled by borrowing. This is the precise definition of the **Fiscal Deficit**.

Step 3: Final Answer:

The sum of the budget deficit and the government's total borrowings is equal to the Fiscal Deficit.

💡 Quick Tip

A simple way to think about it: Fiscal Deficit = Total Borrowing. Whatever the government has to borrow to make ends meet in a year is its fiscal deficit for that year.

82. Who is popularly known as "Grand old man of India"?

- (A) Bal Gangadhar Tilak
- (B) Bipin Chandra Pal
- (C) Lala Lajpathi Rai
- (D) Dadabhai Nauroji

Correct Answer: (D) Dadabhai Nauroji

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the eminent Indian nationalist leader who was given the honorific title "Grand Old Man of India".

Step 2: Detailed Explanation:

Let's look at the leaders and their popular titles:

- (A) **Bal Gangadhar Tilak:** A prominent leader of the extremist faction of the Indian National Congress, he was reverently called "**Lokmanya**" (Accepted by the people).

- (B) **Bipin Chandra Pal:** Part of the Lal-Bal-Pal trio of extremist leaders.
- (C) **Lala Lajpat Rai:** A key leader in the independence movement, he was known as "**Punjab Kesari**" (The Lion of Punjab).
- (D) **Dadabhai Naoroji:** A Parsi intellectual, he was one of the founders of the Indian National Congress and served as its president three times. He was the first Indian to be a British Member of Parliament. For his lifelong service and contributions to the early nationalist movement, he was affectionately and respectfully called the "**Grand Old Man of India**". He is also famous for his "Drain of Wealth" theory.

Step 3: Final Answer:

Dadabhai Naoroji is popularly known as the "Grand Old Man of India".

 Quick Tip

Associate prominent freedom fighters with their sobriquets: Gandhi (Bapu, Mahatma), Vallabhbhai Patel (Sardar, Iron Man of India), Dadabhai Naoroji (Grand Old Man of India), Lala Lajpat Rai (Punjab Kesari), Tilak (Lokmanya).

83. "Political Science deals with the government" is defined by

- (A) J. W. Garner
(B) Stephen Leacock
(C) R. G. Gettel
(D) R. N. Gilchrist

Correct Answer: (B) Stephen Leacock

Solution:

Step 1: Understanding the Concept:

The question asks to attribute a classic, concise definition of Political Science to the correct political scientist.

Step 2: Detailed Explanation:

Different political scientists have defined the scope of their subject in various ways, often focusing on the concepts of 'State' and 'Government'.

- **J. W. Garner:** Gave a State-centric definition: "Political Science begins and ends with the State."
- **Stephen Leacock:** The Canadian political scientist and humorist provided a very straightforward and government-centric definition. He famously stated that "**Political Science deals with government.**"
- **R. G. Gettel:** Offered a broader definition: "Political Science is the study of the state in the past, present, and future."
- **R. N. Gilchrist:** Defined it as a study of "State and Government."

The specific and terse definition focusing solely on "government" is most famously associated with Stephen Leacock.

Step 3: Final Answer:

The definition "Political Science deals with the government" is attributed to Stephen Leacock.

💡 Quick Tip

When studying political theory, note the subtle differences in definitions provided by key thinkers. Garner focuses on the "State," while Leacock provides a simpler definition focusing on "Government."

84. Identify the civil right

- (A) Right to vote
- (B) Right to work
- (C) Right to criticism
- (D) Right to property

Correct Answer: (D) Right to property

Solution:

Step 1: Understanding the Concept:

The question asks to identify a civil right from the given options. Rights can be classified into different categories such as civil, political, economic, and social rights.

- **Civil Rights:** These are rights that protect individuals' freedom from infringement by governments, social organizations, and private individuals. They ensure one's ability to participate in the civil life of society without discrimination or repression. Examples include freedom of speech, right to a fair trial, and right to own property.
- **Political Rights:** These rights involve participation in the establishment or administration of a government. The right to vote and the right to contest elections are prime examples.
- **Economic and Social Rights:** These relate to the conditions necessary for a life of dignity, such as the right to work, right to education, and right to health care.

Step 2: Detailed Explanation:

Let's classify the options:

- (A) **Right to vote:** This is a classic **political right**.
- (B) **Right to work:** This is considered an **economic right**.
- (C) **Right to criticism:** This is part of the freedom of speech and expression, which is a fundamental **civil right**.
- (D) **Right to property:** The right to own and dispose of property is traditionally considered a cornerstone **civil right** in liberal democracies, protecting individual autonomy from the state.

Both (C) and (D) are civil rights. However, the Right to Property is often presented as a distinct and foundational civil right in classical political theory. In the context of

the Indian Constitution, it was originally a Fundamental Right but was later moved to Article 300-A as a constitutional/legal right. Given the options, and its historical significance as a civil liberty, it is a valid answer.

Step 3: Final Answer:

Among the given choices, the Right to property is identified as the civil right, distinguishing it from the political right to vote and the economic right to work.

 Quick Tip

To distinguish between rights, think about their purpose. Political rights are for participating in governance (e.g., voting). Civil rights are for protecting personal freedoms (e.g., speech, property). Economic rights are for ensuring material well-being (e.g., work, social security).

85. The term "Nation" is derived from this language

- (A) Latin
- (B) Greece
- (C) French
- (D) English

Correct Answer: (A) Latin

Solution:

Step 1: Understanding the Concept:

The question asks for the etymological origin of the English word "Nation".

Step 2: Detailed Explanation:

The word "nation" has a clear linguistic lineage:

1. It entered the English language from Old French.
2. The French word *nation* came from the **Latin** word *natio*.
3. The Latin word *natio* means "birth," "race of people," or "tribe."
4. *Natio* itself is derived from the past participle of the Latin verb *nasci*, which means "to be born."

Therefore, the ultimate root of the word "nation" is in the Latin language.

Step 3: Final Answer:

The term "Nation" is derived from the Latin language.

 Quick Tip

Many political and legal terms in English have Latin or Greek roots. For example, 'democracy' comes from Greek ('demos' - people, 'kratos' - rule), while 'republic' comes from Latin ('res publica' - public affair).

86. Great bath was found in

- (A) Harappa
- (B) Lothal
- (C) Rupar
- (D) Mohenjodaro

Correct Answer: (D) Mohenjodaro

Solution:

Step 1: Understanding the Concept:

The question asks to identify the archaeological site of the Indus Valley Civilization where the famous "Great Bath" was discovered.

Step 2: Detailed Explanation:

The Indus Valley Civilization is known for its remarkable urban planning and significant structures. Let's look at the major sites listed:

- (A) **Harappa:** This was the first site of the civilization to be excavated. It is famous for its large granaries, but not the Great Bath.
- (B) **Lothal:** This site in Gujarat is famous for being a port city with a large, sophisticated dockyard, a bead-making factory, and evidence of rice cultivation.
- (C) **Rupar:** An important Indus Valley site located in Punjab.
- (D) **Mohenjo-daro:** Located in Sindh, Pakistan, this is one of the largest and most advanced cities of the ancient civilization. One of its most iconic structures is the **Great Bath**. This large, rectangular tank, built with fine brickwork and waterproofed with bitumen, is thought to have been used for ritual bathing or religious ceremonies. Other famous finds from Mohenjo-daro include the bronze "Dancing Girl" statue and the "Priest-King" sculpture.

Step 3: Final Answer:

The Great Bath was found in Mohenjo-daro.

Quick Tip
Associate major archaeological finds with their specific Indus Valley sites: Great Bath -> Mohenjo-daro; Dockyard -> Lothal; Granaries -> Harappa and Mohenjo-daro.

87. The type of party system existence in India

- (A) Single party system
- (B) Bi-Party system
- (C) Multi party system
- (D) Party less system

Correct Answer: (C) Multi party system

Solution:

Step 1: Understanding the Concept:

The question asks to classify the political party system that exists in India. Party systems are generally classified based on the number of effective political parties that have a realistic chance of gaining power.

Step 2: Detailed Explanation:

Let's define the different types of party systems:

(A) **Single-party system:** A system where only one political party is legally allowed to hold power. Examples include China (Communist Party of China) and North Korea.

(B) **Bi-party system (or Two-party system):** A system where two major political parties dominate the political landscape. While other parties may exist, they rarely gain significant power. Examples include the United States (Democrats and Republicans) and the United Kingdom (Conservatives and Labour).

(C) **Multi-party system:** A system where multiple political parties across the political spectrum run for national election, and all have the capacity to gain control of government offices, separately or in coalition. India is a classic example of a multi-party system. There are numerous national parties (like the BJP, INC) and a vast number of regional parties that hold significant influence, often leading to coalition governments.

(D) **Party-less system:** A system of representative government or organization such that universal and periodic elections take place without reference to political parties. This is a theoretical concept and not practiced in major democracies.

Step 3: Final Answer:

India's political landscape, with its numerous national and regional parties competing for power, is a clear example of a multi-party system.

💡 Quick Tip

To identify a country's party system, look at the number of parties that regularly win elections and form governments. If it's consistently one, it's a single-party system. If it's almost always one of two, it's a two-party system. If many parties win seats and form coalitions, it's a multi-party system.

88. Every year United Nations Organization Day celebrated

- (A) 14th October
- (B) 24th October
- (C) 14th November
- (D) 24th November

Correct Answer: (B) 24th October

Solution:**Step 1: Understanding the Concept:**

The question asks for the specific date on which United Nations (UN) Day is celebrated annually.

Step 2: Detailed Explanation:

The United Nations is an intergovernmental organization whose stated purposes are to maintain international peace and security, develop friendly relations among nations, achieve international cooperation, and be a center for harmonizing the actions of nations.

- The UN Charter is the founding document of the United Nations.
- It was signed on 26 June 1945, in San Francisco.
- The UN officially came into existence on **24 October 1945**, after the Charter had been ratified by China, France, the Soviet Union, the United Kingdom, the United States and by a majority of other signatories.
- Therefore, **24th October** is celebrated as United Nations Day since 1948 to mark the anniversary of the UN Charter's entry into force.

Step 3: Final Answer:

United Nations Day is celebrated every year on 24th October.

💡 Quick Tip

Remembering important international days is crucial for general knowledge. Key dates include: UN Day (Oct 24), Human Rights Day (Dec 10), World Environment Day (June 5), and International Women's Day (March 8).

89. The best example of the unwritten constitution is

- (A) British constitution
- (B) American constitution
- (C) Indian Constitution
- (D) Pakistan Constitution

Correct Answer: (A) British constitution

Solution:

Step 1: Understanding the Concept:

The question asks for the best example of an "unwritten constitution". This refers to a constitution where the fundamental rules and principles of governance are not codified into a single, comprehensive document.

Step 2: Detailed Explanation:

Constitutions can be classified as written or unwritten.

- **Written Constitution:** A constitution where the laws, principles, and procedures are formally written down in a single document. The constitutions of the **United States**, **India**, and **Pakistan** are prime examples of written constitutions. They are the supreme law of the land.
- **Unwritten Constitution:** A constitution that is not contained in one single document. Instead, it is derived from a variety of sources. The **British constitution** is the most famous example of an unwritten constitution. Its sources include:

1. **Statute Law:** Acts passed by the Parliament (e.g., Magna Carta, Bill of Rights 1689, Parliament Acts).
2. **Common Law:** Legal principles established by judges through court decisions.
3. **Conventions:** Unwritten rules of political practice that are considered binding (e.g., the Prime Minister must be a member of the House of Commons).
4. **Works of Authority:** Writings by constitutional experts.

Step 3: Final Answer:

The British constitution is the best and most frequently cited example of an unwritten constitution.

💡 Quick Tip

The term "unwritten" can be misleading. It doesn't mean nothing is written down. It means there is no single, codified constitutional document. The UK constitution is a collection of various written laws, court judgments, and unwritten conventions.

90. In this market both industry and firm are the same

- (A) Perfect competition
- (B) Monopolistic competition
- (C) Oligopoly
- (D) Monopoly

Correct Answer: (D) Monopoly

Solution:

Step 1: Understanding the Concept:

The question asks to identify the market structure where there is no distinction between a single firm and the entire industry. An "industry" is defined as a group of firms producing similar or identical products.

Step 2: Detailed Explanation:

Let's analyze the different market structures:

- (A) **Perfect competition:** Characterized by a very large number of small firms selling a homogeneous product. Here, a single firm is just a tiny part of the overall industry.
- (B) **Monopolistic competition:** Characterized by a large number of firms selling differentiated products. Each firm is a small part of the industry, but has some market power over its specific version of the product.
- (C) **Oligopoly:** Characterized by a small number of large firms that dominate the market. The industry consists of these few firms.
- (D) **Monopoly:** This is a market structure characterized by a **single seller** (the monopolist) selling a unique product with no close substitutes. Since there is only one firm in the market, that single firm constitutes the entire industry. Therefore, in a monopoly, the firm is the industry, and the industry is the firm.

Step 3: Final Answer:

In a monopoly market, the firm and the industry are one and the same because there is only a single producer.

💡 Quick Tip

The names of the market structures themselves provide clues. "Mono-" means one (monopoly = one seller). "Oligo-" means few (oligopoly = few sellers). "Poly-" means many. Perfect and monopolistic competition both involve many sellers.

91. 'What is History' was written by

- (A) E. H. Carr
- (B) Hegal
- (C) Thomas Carlyle
- (D) A. L. Rowse

Correct Answer: (A) E. H. Carr

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the author of the influential book on historiography, "What Is History?".

Step 2: Detailed Explanation:

"What Is History?" is a 1961 non-fiction book that explores the theory of history. It is based on a series of lectures given by the author at the University of Cambridge.

- The author of this seminal work is **Edward Hallett (E. H.) Carr**, a British historian, diplomat, and journalist.
- In the book, Carr argues against the empirical view of history as just a collection of objective facts. He famously states that history is "a continuous process of interaction between the historian and his facts, an unending dialogue between the present and the past."
- The other individuals listed are also famous historians or philosophers, but they did not write this specific book.

Step 3: Final Answer:

The book 'What is History' was written by E. H. Carr.

💡 Quick Tip

"What Is History?" by E. H. Carr is a foundational text for students of history and historiography. His "dialogue between the present and the past" is one of the most famous quotes about the nature of historical inquiry.

92. Indifference curves are

- (A) convex to the origin
- (B) intersect each other
- (C) slope upwards
- (D) concave to the origin

Correct Answer: (A) convex to the origin

Solution:

Step 1: Understanding the Concept:

The question asks about a key property of indifference curves, which are a fundamental tool in microeconomic theory used to represent consumer preferences.

Step 2: Detailed Explanation:

An indifference curve shows a combination of two goods that give a consumer equal satisfaction and utility. Let's analyze the properties of standard indifference curves:

1. **Indifference curves are downward sloping:** This is because if a consumer wants more of one good, they must give up some of the other good to maintain the same level of satisfaction. This rules out option (C).
2. **Higher indifference curves represent higher levels of utility:** A curve further from the origin represents more of both goods, and thus more satisfaction.
3. **Indifference curves cannot intersect:** If they did, it would violate the assumption of transitivity in consumer preferences (i.e., if A is preferred to B, and B is preferred to C, then A must be preferred to C). This rules out option (B).
4. **Indifference curves are convex to the origin:** This is the most important property. It reflects the principle of a **diminishing marginal rate of substitution (MRS)**. The MRS is the rate at which a consumer is willing to give up good Y to get one more unit of good X. As the consumer has more and more of good X, they are willing to give up less and less of good Y to get an additional unit of X. This diminishing willingness to substitute results in the curve bowing inwards, i.e., being convex to the origin. A concave curve (option D) would imply an increasing MRS, which is not typical.

Step 3: Final Answer:

A standard property of indifference curves is that they are convex to the origin, reflecting a diminishing marginal rate of substitution.

💡 Quick Tip

Remember the four key properties: 1. Downward sloping. 2. Cannot intersect. 3. Higher is better. 4. Convex to the origin (due to diminishing MRS). The convexity is the most tested concept.

93. The highest law officer of the Union Government of India

- (A) Attorney General
- (B) Advocate General
- (C) Chief Justice
- (D) Law Minister

Correct Answer: (A) Attorney General

Solution:

Step 1: Understanding the Concept:

The question asks to identify the highest law officer for the Union (Central) Government of India.

Step 2: Detailed Explanation:

Let's analyze the roles of the officials listed:

(A) **Attorney General for India:** According to **Article 76** of the Constitution, the Attorney General is the highest law officer in the country. He/she is the chief legal advisor to the Government of India and its primary lawyer in the Supreme Court of India. The Attorney General is appointed by the President.

(B) **Advocate General:** The Advocate General is the highest law officer of a **State Government**, not the Union Government. Each state has its own Advocate General (Article 165).

(C) **Chief Justice of India:** The Chief Justice is the head of the Indian **judiciary**. He/she is the head of the judicial branch, not the chief law officer of the executive branch (the government).

(D) **Law Minister:** The Minister of Law and Justice is a cabinet minister and a political head of the Ministry of Law and Justice. The Attorney General is the principal legal advisor, a non-political constitutional post.

Step 3: Final Answer:

The highest law officer of the Union Government of India is the Attorney General for India.

💡 Quick Tip

Remember the parallel structure: For the Union Government, the highest law officer is the **Attorney General**. For a State Government, the highest law officer is the **Advocate General**.

94. The graphical measure of dispersion used to find income inequalities is

- (A) Lorenz curve
- (B) Pie diagram
- (C) Demand curve
- (D) Supply curve

Correct Answer: (A) Lorenz curve

Solution:

Step 1: Understanding the Concept:

The question asks for the specific graphical tool used in economics to represent and measure income or wealth inequality.

Step 2: Detailed Explanation:

Let's analyze the options:

(A) **Lorenz curve:** This is a graphical representation of the distribution of income or wealth. The curve plots the cumulative percentage of total income received against the cumulative percentage of recipients, starting from the poorest individual or household. A perfectly straight diagonal line (the line of perfect equality) represents a situation where everyone has the same income. The further the Lorenz curve bows away from this line, the greater the degree of inequality in the distribution. It is the standard tool for this purpose. The Gini coefficient is a numerical measure derived from the Lorenz curve.

(B) **Pie diagram:** A circular statistical graphic, which is divided into slices to illustrate numerical proportion. It can show the composition of something (like a budget), but it is not specifically designed to measure inequality or dispersion in the same way as a Lorenz curve.

(C) **Demand curve:** A graph showing the relationship between the price of a good and the quantity demanded.

(D) **Supply curve:** A graph showing the relationship between the price of a good and the quantity supplied.

Step 3: Final Answer:

The Lorenz curve is the graphical measure of dispersion specifically used to find income inequalities.

💡 Quick Tip

When you see "income inequality" in an economics question, immediately think of the **Lorenz Curve** (the graph) and the **Gini Coefficient** (the number). They are the two most important tools for measuring it.

95. "Rule of Law" is a unique feature of this constitution

- (A) British constitution
- (B) American constitution
- (C) Russian constitution
- (D) Japan constitution

Correct Answer: (A) British constitution

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the constitution from which the concept of the "Rule of Law" is considered a unique and defining feature.

Step 2: Detailed Explanation:

The concept of the "Rule of Law" means that no one is above the law, everyone is

subject to the law, and the law is applied equally to all. It implies the supremacy of law over the arbitrary exercise of power.

While the principle is a feature of most modern democracies, it is most famously and formally associated with the **British constitution**. The British jurist **A. V. Dicey** is credited with popularizing the concept in the late 19th century and analyzing it as the fundamental principle of the British constitutional system.

Dicey identified three main elements of the Rule of Law in Britain:

1. Supremacy of law (no arbitrary power).
2. Equality before the law.
3. The Constitution is the result of the ordinary law of the land (rights are protected by common law).

The Indian Constitution has also adopted the concept of "Rule of Law" from the British constitutional tradition. While the American constitution has a related concept called "due process of law," the specific doctrine of "Rule of Law" as articulated by Dicey is a hallmark of the British system.

Step 3: Final Answer:

The "Rule of Law" is considered a unique and foundational feature of the British constitution.

💡 Quick Tip

When studying the sources of the Indian Constitution, remember key features borrowed from other nations: Rule of Law and Parliamentary Government (UK), Fundamental Rights and Judicial Review (USA), Directive Principles (Ireland), and Federalism with a strong center (Canada).

96. In which type of goods the income demand curve slopes downwards from left to right.

- (A) Veblen goods
- (B) Superior goods
- (C) Inferior goods
- (D) Luxury goods

Correct Answer: (C) Inferior goods

Solution:

Step 1: Understanding the Concept:

The question asks to identify the type of good for which the income demand curve is downward sloping. An income demand curve (or Engel curve) shows the relationship between a consumer's income and the quantity of a good they demand, holding prices constant.

Step 2: Detailed Explanation:

Let's analyze the relationship between income and demand for different types of goods:

- **Normal Goods:** For these goods, as income increases, the quantity demanded also increases. This means the income demand curve slopes **upwards**. Normal goods can be further divided into necessities and luxuries.
- **(B) Superior goods / (D) Luxury goods:** These are types of normal goods for which the demand increases more than proportionally as income rises. Their income demand curve is upward sloping and often gets steeper.
- **(C) Inferior goods:** These are goods for which the quantity demanded **decreases** as consumer income increases. Consumers buy less of these goods as they become richer because they can now afford better alternatives. Examples might include cheap staple foods or public transportation. Because of this inverse relationship (income up, demand down), the income demand curve for an inferior good slopes **downwards** from left to right.
- **(A) Veblen goods:** These are a type of luxury good for which demand increases as the price increases, due to their exclusive nature and appeal as a status symbol. This relates to the *price* demand curve, not the income demand curve.

Step 3: Final Answer:

The income demand curve slopes downwards from left to right for inferior goods, indicating that as income rises, the quantity demanded falls.

💡 Quick Tip

Remember the income effect: For **Normal** goods, income and demand move in the same direction ($\uparrow\uparrow$ or $\downarrow\downarrow$), so the curve slopes up. For **Inferior** goods, income and demand move in opposite directions ($\uparrow\downarrow$ or $\downarrow\uparrow$), so the curve slopes down.

97. The Marginal productivity of disguised unemployment is

- (A) Zero
- (B) One
- (C) Ten
- (D) Hundred

Correct Answer: (A) Zero

Solution:

Step 1: Understanding the Concept:

The question asks for the value of the marginal productivity of labor in a situation of "disguised unemployment".

Step 2: Detailed Explanation:

Disguised unemployment, also known as hidden unemployment, is a situation where more people are employed in a job than are actually required to perform it. This is common in the agricultural sector of developing countries, where many family members may work on a small farm.

Marginal Productivity of Labor (MPL) is the additional output produced when one more unit of labor (one more worker) is employed, with all other inputs held constant.

In a situation of disguised unemployment, the workforce is already larger than necessary. If one or more workers are withdrawn from the job, the total output does not fall because the remaining workers can easily handle the entire workload. This means that the contribution of the "extra" or marginal workers to the total output was nothing.

Therefore, the marginal productivity of the disguisedly unemployed labor is **zero**.

Step 3: Final Answer:

The Marginal Productivity of disguised unemployment is zero.

💡 Quick Tip

Think of disguised unemployment with a simple example: If 10 people are working on a farm that produces 100 kg of wheat, and removing 2 workers still results in 100 kg of wheat being produced, then those 2 workers had a marginal productivity of zero. They were "disguisedly" unemployed.

98. Goutama Buddha was born at

- (A) Pataliputra
- (B) Gaya
- (C) Lumbini
- (D) Kusinagar

Correct Answer: (C) Lumbini

Solution:

Step 1: Understanding the Concept:

The question asks to identify the birthplace of Gautama Buddha, the founder of Buddhism.

Step 2: Detailed Explanation:

The life of Gautama Buddha is associated with four main places:

1. **Birth:** Siddhartha Gautama (who would become the Buddha) was born in **Lumbini**. Lumbini is now a UNESCO World Heritage Site located in the Rupandehi District of Nepal.
2. **Enlightenment:** He attained enlightenment under the Bodhi tree at **Bodh Gaya** (often referred to as Gaya) in modern-day Bihar, India.
3. **First Sermon:** He delivered his first sermon, known as the Dharma Chakra Pravartana, at the deer park in **Sarnath**, near Varanasi, India.
4. **Death (Mahaparinirvana):** He passed away at the age of 80 in **Kushinagar** (or Kusinagar) in modern-day Uttar Pradesh, India.

Pataliputra (modern Patna) was the capital of the Magadhan and Mauryan empires and was an important center for Buddhism, but not directly one of the four main pilgrimage sites of his life.

Step 3: Final Answer:

Gautama Buddha was born at Lumbini.

💡 Quick Tip

Remember the four key life events and locations for Buddha: Born at Lumbini, Enlightenment at Bodh Gaya, First Sermon at Sarnath, Death at Kushinagar. These four places are the most sacred pilgrimage sites in Buddhism.

99. The words 'Socialist and Secular' were added to the preamble by this constitutional amendment

- (A) 41st
- (B) 42nd
- (C) 43rd
- (D) 44th

Correct Answer: (B) 42nd

Solution:

Step 1: Understanding the Concept:

The question asks to identify the specific constitutional amendment that added the words 'Socialist' and 'Secular' to the Preamble of the Indian Constitution.

Step 2: Detailed Explanation:

The Preamble to the Constitution of India is a brief introductory statement that sets out the guiding purpose and principles of the document. It was amended only once in its history.

- This amendment was the **Constitution (42nd Amendment) Act, 1976**, which was enacted during the Emergency period by the government led by Indira Gandhi.
- The 42nd Amendment made extensive changes to the constitution and is often called the "Mini-Constitution".
- In the Preamble, it changed the description of India from a "sovereign democratic republic" to a "**sovereign, socialist, secular democratic republic**".
- It also changed the phrase "unity of the Nation" to "**unity and integrity of the Nation**".
- Thus, the three words added to the Preamble were **Socialist, Secular, and Integrity**.

The **44th Amendment (1978)** was enacted by the subsequent Janata Party government to reverse many of the controversial changes made by the 42nd Amendment, but it did not alter the changes made to the Preamble.

Step 3: Final Answer:

The words 'Socialist' and 'Secular' were added to the Preamble by the 42nd Constitutional Amendment Act, 1976.

💡 Quick Tip

The 42nd Amendment is arguably the most significant and controversial amendment to the Indian Constitution. Associate it with the addition of 'Socialist', 'Secular', and 'Integrity' to the Preamble, and also with the introduction of the Fundamental Duties (Part IV-A).

100. The first known language of the Mesopotamians was

- (A) Sumerian
- (B) Aramaic
- (C) Akkadian
- (D) Hebrew

Correct Answer: (A) Sumerian

Solution:**Step 1: Understanding the Concept:**

The question asks to identify the earliest known written language used by the inhabitants of Mesopotamia. Mesopotamia is one of the cradles of civilization, located in the region of modern-day Iraq.

Step 2: Detailed Explanation:

The history of languages in Mesopotamia follows a chronological order:

1. **Sumerian:** The civilization of Sumer emerged in southern Mesopotamia around the 4th millennium BCE. The Sumerians are credited with inventing the first writing system, cuneiform, around 3200 BCE. **Sumerian** is the earliest known written language. It is a language isolate, meaning it has no known relatives.
2. **Akkadian:** Around 2300 BCE, the Akkadians, a Semitic-speaking people, rose to power. They adapted the cuneiform script to write their own language, **Akkadian**. For many centuries, Sumerian and Akkadian were used side-by-side, but Akkadian eventually replaced Sumerian as the spoken language. Akkadian later evolved into the Babylonian and Assyrian dialects.
3. **Aramaic:** By the 1st millennium BCE, **Aramaic**, another Semitic language, became the lingua franca of the Neo-Assyrian and Neo-Babylonian empires and the wider Near East, gradually replacing Akkadian.
4. **Hebrew:** Hebrew is another Semitic language from the same broader family, primarily associated with the ancient Israelites.

Step 3: Final Answer:

The first known written language of the Mesopotamians was Sumerian.

💡 Quick Tip

Remember the sequence of major languages in ancient Mesopotamia: Sumerian (the first written language, non-Semitic) was followed and replaced by Akkadian (Semitic), which was later replaced by Aramaic (Semitic).
