

1. Please give me ..... ball.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (c)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u):

2. Please hand me ..... key

- (a) a (b) an  
(c) the (d) some

Correct Choice: (c)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u):

3. Preethi hand me ..... autobiography

- (a) a (b) an  
(c) (d) the  
(e) some

Correct Choice: (b)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u):

4. Mary is ..... honest woman.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (b)

Solution:

The indefinite article is a or an. The form an is used before a word that starts with a vowel sound. The indefinite article is used with singular countable nouns: to refer to a person or a thing that you are mentioning for the first time in a conversation or a piece of writing .

The three articles in English language are a, an, the.

5. Sheeba is ..... United States senator.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (a)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u):

6. Elizabeth will bring ..... small gift to Sophana's party.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (a)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u); Sometimes an article modifies a noun that is also modified by an adjective. The usual word order is article + adjective + noun. If the article is indefinite, choose a or an based on the word that immediately follows it

7. Ibu heard ..... interesting story yesterday.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (b)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u): Sometimes an article modifies a noun that is also modified by an adjective. The usual word order is article + adjective + noun. If the article is indefinite, choose a or an based on the word that immediately follows it

8. Please give me ..... milk.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (d)

Solution:

The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u): Indefinite Articles with Uncountable Nouns. Uncountable nouns are nouns that are either difficult or impossible to count. Uncountable nouns include intangible things (e.g., information, air), liquids (e.g., milk, wine), and things that are too large or numerous to count (e.g., equipment, sand, wood). Because these things can't be counted, you should never use a or an with them—remember, the indefinite article is only for singular nouns. Uncountable nouns can be modified by words like some, however.

9. Purna, give me ..... bottle of water.

- (a) a (b) an  
(c) the (d) some

Correct Choice: (a)

Solution:

However, if you describe the water in terms of countable units (like bottles), you can use the indefinite article. The definite article is the word the. The definite article can be used with singular, plural, or uncountable nouns. It's the word an when it precedes a word that begins with a vowel. a—used before singular count nouns beginning with consonants (other than a, e, i, o, u):

10. Let's go out for ..... lunch afternoon

- (a) a (b) an  
(c) the (d) none of the above

Correct Choice: (d)

11. Imran prefer to read ..... the library.

- (a) in (b) on  
(c) at (d) None of the above

Correct Choice: (a)

Solution:

Basic examples of time prepositions include: at, on, in, before and after. They are used to help indicate when something happened, happens or will happen. It can get a little confusing though, as many different prepositions can be used.

12. In Bihar it's always cold ..... January

- (a) in (b) on  
(c) at (d) none of the above

Correct Choice: (b)

Solution:

For years, months, seasons, centuries and times of day, use the preposition in: For days, dates and specific holiday days, use the preposition on. For times, indicators of exception and festivals, use the preposition at:

13. Buy me a present ..... my anniversary.

- (a) on (b) at  
(c) in (d) none of the above

Correct Choice: (a)

Solution:

For years, months, seasons, centuries and times of day, use the preposition in. For days, dates and specific holiday days, use the preposition on. For times, indicators of exception and festivals, use the preposition at:

14. Families often argue ..... Ramzan time.

- (a) on (b) at  
(c) in (d) none of the above

Correct Choice: (b)

Solution:

For times, indicators of exception and festivals, use the preposition at. For days, dates and specific holiday days, use the preposition on. For years, months, seasons, centuries and times of day, use the preposition in:

15. The program will be staged .....the month of May.

- (a) on (b) throughout  
(c) in (d) at

Correct Choice: (b)

Solution:

Other prepositions of time could include: During, about, around, until and throughout. For times, indicators of exception and festivals, use the preposition at. For days, dates and specific holiday days, use the preposition on. For years, months, seasons, centuries and times of day, use the preposition in:

16. It was ..... six in the morning when we made it to bed.

- (a) around (b) about  
(c) at (d) none of

Correct Choice: (b)

Solution:

For times, indicators of exception and festivals, use the preposition at. Other prepositions of time could include: During, about, around, until and throughout.

17. We will travel .....rough terrain on our way to Grandma's house.

- (a) around (b) over  
(c) through (d) none of the above

Correct Choice: (b)

Solution:

Up, over, down, past and around indicate directions of movement. Through refers to moving directly inside something and out the other end.

18. Jack families are going on vacation \_ August.

- (a) in (b) on  
(c) at (d) none of the above

Correct Choice: (a)

Solution:

For times, indicators of exception and festivals, use the preposition at. For days, dates and specific holiday days, use the preposition on. For years, months, seasons, centuries and times of day, use the preposition in:

19. Mala put the basket \_ the table.

- (a) in (b) on  
(c) over (d) none of the above

Correct Choice: (b)

Solution:

For times, indicators of exception and festivals, use the preposition at: For days, dates and specific holiday days, use the preposition on. For years, months, seasons, centuries and times of day, use the preposition in: Up, over, down, past and around indicate directions of movement:

20. The express train passes ..... the tunnel.

- (a) to
- (b) into
- (c) through
- (d) none of the above

Correct Choice: (c)

Solution:

For times, indicators of exception and festivals, use the preposition at: For days, dates and specific holiday days, use the preposition on. For years, months, seasons, centuries and times of day, use the preposition in: Through refers to moving directly inside something and out the other end.

21. Attach suitable suffix for the word -ism

- (a) Reader
- (b) Creator
- (c) Teacher
- (d) Sceptic

Correct Choice: (d)

Solution:

Scepticism is a correct word.  
Meaning-doctrine, belief .

22. Attach suitable word for the suffix -er

- (a) Judaism
- (b) Scepticism
- (c) escapism
- (d) interpret

Correct Choice: (d)

Solution:

interpreter is a correct word. Meaning-person or object that does a specified action

23. Attach suitable suffix for the word -ment

- (a) enchant
- (b) extre
- (c) valid
- (d) none of the above

Correct Choice: (a)

Solution:

enchantment is a correct word. Meaning-condition

24. Attach suitable suffix for the word -ship

- (a) enchant
- (b) valid
- (c) enmor
- (d) intern

Correct Choice: (d)

Solution:

internship is a correct word. Meaning - position held

25. Attach suitable suffix for the word -ible

- (a) sharpen
- (b) strengthen
- (c) loosen
- (d) fallible

Correct Choice: (d)

Solution:

fallible is a correct word. Meaning-capable of being

26. Attach suitable prefix for the word semi-

- (a) triangle
- (b) tricycle
- (c) tripod
- (d) conscious

Correct Choice: (d)

Solution:

semiconscious is a correct word. Meaning- Half

27. Attach suitable prefix for the word super-

- (a) natal
- (b) determine
- (c) impose
- (d) unite

Correct Choice: (c)

Solution:

superimpose is a correct word. Meaning- above, over

28. Attach suitable prefix for the word re-

- (a) circle
- (b) merge
- (c) consious
- (d) iterate

Correct Choice: (d)

Solution:

reiterate is a correct word. Meaning-again

29. Attach suitable prefix for the word extra-

- (a) terrestrial
- (b) terminate
- (c) centre
- (d) brace
- (e) extra-terrestrial is a correct word. Meaning-beyond, more than

Correct Choice: (a)

30. Attach suitable prefix for the word hyper-

- (a) cast
- (b) head
- (c) see
- (d) ventilate

Correct Choice: (d)

Solution:

Hyperventilate is correct word.

Meaning - be or become overexcited,

breathe or cause to breathe at an abnormally rapid rate.

31. Write the British English word into American English: Takeaway

- (a) Takaway
- (b) Takeout
- (c) Bring
- (d) Bring out

Correct Choice: (b)

Solution:

The British English word Takeaway into American English is Takeout

32. Write the British English word indicator into American English

- (a) Light
- (b) Blinker
- (c) Turn signal
- (d) hood

Correct Choice: (b)

Solution:

British English word indicator into American English is indicator

33. Write the British English word tyre into American English

- (a) Tier
- (b) Tire
- (c) Tyree
- (d) Tair

Correct Choice: (b)

Solution:

British English word tyre into American English is Tire

34. Write the British English word plough into American English

(a) Dig

(b) the big dipper

(c) plougher

(d) Pit

Correct Choice: **(b)**

Solution:

British English word plough into American English is the big dipper

35. Write the British English word into American English: High street

(a) Big street

(b) Main street

(c) Long street

(d) Broad street

Correct Choice: **(b)**

Solution:

High street = Main street

36. Write the British English word into American English: High street

(a) Long street

(b) Broad street

(c) Main street

(d) Populated street

Correct Choice: **(c)**

Solution:

High street = Main street

37. Write the British English word into American English: odour

(a) odor

(b) oddor

(c) odore

(d) oder

Correct Choice: **(a)**

Solution:

odour = odor

38. Write the British English word into American English : pyjamas

(a) pajaamas

(b) pajamas

(c) piejamas

(d) payjamas

Correct Choice: **(b)**

Solution:

pyjamas=pajamas

39. Write the British English word into American English: programme

(a) prograam

(b) program

(c) programe

(d) progreme

Correct Choice: **(b)**

Solution:

programme=program

40. Write the British English word into American English: parlour

(a) parlor

(b) parler

(c) parler

(d) parlere

Correct Choice: **(a)**

Solution:

parlour=parlor

41. Malar ..... (stay) in a hotel.

(a) is stays

(b) stayed

(c) staying

(d) none of the above

Correct Choice: **(b)**

Solution:

This tense is used to refer to something that happened in the past. Sometimes, past tense is also called as 'simple past tense'. Example: Malar stayed in a hotel.

42. We were..... (play) volley ball at the club.

- |             |                       |
|-------------|-----------------------|
| (a) plays   | (b) played            |
| (c) playing | (d) none of the above |

Correct Choice: (a)

Solution:

Past continuous tense: This type of past tense is used to describe an event or occurrence that is ongoing or continuing in the past. Example: We were playing volley ball at the club.

43. We had .....(complete) our game before sheela had come.

- |                |                       |
|----------------|-----------------------|
| (a) completing | (b) completed         |
| (c) completes  | (d) none of the above |

Correct Choice: (b)

Solution:

Past Perfect Tense: This type of tense is used to describe an event in the past that has been completed. Example: We had completed our match before she had come.

44. Iliyaz had been.....(play) the drums since school time.

- |             |                       |
|-------------|-----------------------|
| (a) plays   | (b) played            |
| (c) playing | (d) none of the above |

Correct Choice: (c)

Solution:

Past Perfect Continuous: This type of past tense verb is used to indicate an event, action or occurrence that started before another event, action or occurrence in the past. We can say that one action or event interrupted another. Example: Iliyaz had been playing the drums since school time.

45. The.....(LION)roar.

- |             |              |
|-------------|--------------|
| (a) lions'  | (b) lion     |
| (c) lion is | (d) lion was |

Correct Choice: (a)

Solution:

Present Tense: This tense is used to refer or indicate to something that occurs in the present. The simple present or indefinite present tense is used to describe an action, event, or condition that is occurring in the present while being spoken about or written. Example: The lions' roar.

46. Meenu is .....(prepare) chicken sandwiches for breakfast.

- |               |              |
|---------------|--------------|
| (a) prepares  | (b) prepared |
| (c) preparing | (d) prepped  |

Correct Choice: (c)

Solution:

Present Continuous Tense: This tense indicates the continuous nature of an act or event in the present and has not been completed. The activity has begun in the past and will be completed in the future. Example: Meenu is preparing chicken sandwiches for breakfast.

47. Muthu have just .....(complete) his dinner.

- |                |               |
|----------------|---------------|
| (a) completes  | (b) completed |
| (c) completing | (d) completen |

Correct Choice: (b)

Solution:

Present Perfect Tense: This tense is used to describe an action that had begun in the past, continues into the present and has just been completed. The time of occurrence of the action is generally not mentioned. This tense is also used to describe an action happened in the past before another action took place. Example: Muthu have just completed his dinner.

48. They have been .....(try) to beat her.

- (a) trys (b) tried  
 (c) trying (d) none of the above

Correct Choice: (c)

Solution:

Present Perfect Continuous Tense: This tense is used to describe an action, event or occurrence that has begun in the past and continues into the present. It is also used for an action that began and just finished in the past or in cases where there is no mention of time. Example: They have been trying to beat her.

49. They ..... (shall) there by night.

- (a) shall be (b) should be  
 (c) shall (d) none of the above

Correct Choice: (a)

Solution:

Future Tense: This tense is used to refer to or indicate something that hasn't happened at the time of speaking or writing. 'Simple Future Tense' commonly formed with the use of words 'will' and 'shall'. Example: They shall be there by night.

50. Heena parents will be..... (attend) the convocation.

- (a) attends (b) attended  
 (c) attending (d) none of the above

Correct Choice: (c)

Solution:

Future Continuous Tense: This tense is used to describe actions that are ongoing or continuing in the future. It is commonly used in sentences by using the simple future tense of the verb with the present participle i.e 'ing'. Example: Heena parents will be attending the convocation.

51. Sentence pattern : Iyaz finished his work

- (a) SVIDO (b) SVC  
 (c) SVO (d) SVOC

Correct Choice: (c)

Solution:

Iyaz / finished / his work=SVO(Subject + Verb + Object)

52. Sentence pattern: Mira is teaching French

- (a) SVO (b) SVOA  
 (c) SVC (d) SVOA

Correct Choice: (a)

Solution:

Mira / is teaching / French=SVO(Subject + Verb + Object)

53. SENTENCE PATTERN : I love India

- (a) SVC (b) SVCA  
 (c) SVO (d) SVOC

Correct Choice: (c)

Solution:

I love India = SVO (Subject + Verb + Object)

54. They / came / suddenly

- (a) SVC (b) SVO  
 (c) SVA (d) SV

Correct Choice: (c)

Solution:

Thiru / came / suddenly=SVA(Subject + Verb+Adverbial)

55. Sentence pattern: The flight arrived late



(a) SV

(b) SVA

(c) SVC

(d) SVO

Correct Choice: **(b)**

Solution:

The flight / arrived / late=SVA(Subject + Verb+Adverbial)

56. Sentence pattern:Shelu worked in a second-hand bookshop.

(a) SVO

(b) SVC

(c) SVA

(d) SV

Correct Choice: **(c)**

Solution:

Shelu / worked / in a second-hand bookshop=SVA(Subject + Verb+Adverbial)

57. Sentence pattern: We are players

(a) SVO

(b) SVA

(c) SVC

(d) SV

Correct Choice: **(c)**

Solution:

We / are / players=SVC(Subject + Verb + Complement)

58. Sentence pattern:Hena eyes are beautiful

(a) SVA

(b) SVC

(c) SVO

(d) SV

Correct Choice: **(b)**

Solution:

Hena eyes / are / beautiful= Subject Verb Complement (SVC)

59. Sentence pattern: Boldly she replied

(a) SVA

(b) ASV

(c) SVC

(d) SVO

Correct Choice: **(b)**

Solution:

Boldly/ she/ replied=Adverbial Subject Verb (ASV)

60. Sentence pattern: They named him Ragu

(a) SVOA

(b) SVOC

(c) ASVO

(d) ASVC

Correct Choice: **(b)**

Solution:

They / named / him / Ragu=Subject Verb Object Complement - (SVOC)

61. Write the plural noun for person.

(a) People

(b) Persons

(c) Peoples

(d) None of he above

Correct Choice: **(a)**

Solution:

Person = People

62. Write the plural noun for Goose

(a) Geeses

(b) Geese

(c) Geeses

(d) none of the above

Correct Choice: **(b)**

Solution:

Plural means more than two. Therefore plural of Goose is Geese.

63. Write the plural noun for life

(a) Lifes

(b) Lives

(c) Live

(d) none of the above

Correct Choice: **(b)**

Solution:

Life = Lives

64. Write the plural noun for elf

(a) elfs

(b) elves

(c) elfe

(d) elve

Correct Choice: **(b)**

Solution:

Elf = Elves .

65. Write the plural noun for loaf

(a) loafs

(b) loaves

(c) loafes

(d) none of the above

Correct Choice: **(b)**

Solution:

loaf = loaves

66. Write the plural noun for Cactus

(a) Cactuses

(b) Cactasis

(c) Cacti

(d) Cactii

Correct Choice: **(c)**

Solution:

The plural noun for Cactus is Cacti.

67. Write the plural noun for criterion

(a) criterions

(b) criteria

(c) criterias

(d) none of the above

Correct Choice: **(b)**

Solution:

The plural noun for criterion is criteria.

68. Write the plural noun for sheep

(a) sheeps

(b) sheep

(c) none of the above

(d)

Correct Choice: **(b)**

Solution:

sheep = sheep

69. Write the plural noun for deer

(a) deers

(b) deer

(c) dear

(d) none of the above

Correct Choice: **(b)**

Solution:

The plural form of deer is also deer.

70. Write the plural noun for fish

- (a) fishes (b) fish  
(c) none of the above (d)

Correct Choice: **(b)**

Solution:

fish = fish

71. What is the meaning of IMPOSE

- (a) levy (b) dethrone  
(c) exceed (d) lift

Correct Choice: **(a)**

Solution:

Impose -force (an unwelcome decision or ruling) on someone.levy-impose (a tax, fee, or fine).dethrone-remove (a monarch) from power.exceed-be greater in number or size than (a quantity, number, or other measurable thing).lift-raise to a higher position or level.

72. What is the meaning of LEVY?

- (a) veto (b) duty  
(c) demote (d) displace

Correct Choice: **(b)**

Solution:

levy-impose (a tax, fee, or fine). veto-a constitutional right to reject a decision or proposal made by a lawmaking body. duty-a moral or legal obligation; a responsibility. demote-move (someone) to a lower position or rank, usually as a punishment.displace-take over the place, position, or role of.

73. What is the meaning of veto?

- (a) reject (b) allow  
(c) approve (d) permit

Correct Choice: **(a)**

Solution:

veto-a constitutional right to reject a decision or proposal made by a lawmaking body. reject-dismiss as inadequate, unacceptable, or faulty.allow-let (someone) have or do something.approve-officially agree to or accept as satisfactory.permit-officially allow (someone) to do something.

74. What is the meaning of ENTITLEMENT?

- (a) ban (b) privilege  
(c) veto (d) refusal

Correct Choice: **(a)**

Solution:

entitlement-the fact of having a right to something. privilege -a special right, advantage, or immunity granted or available only to a particular person or group.refusal-an act of refusing to do something.ban-officially or legally prohibit (something).veto-a constitutional right to reject a decision or proposal made by a lawmaking body

75. What is the meaning of interdiction ?

- (a) taboo (b) sanction  
(c) leave (d) support

Correct Choice: **(a)**

Solution:

interdiction-the action of prohibiting or forbidding something. taboo-prohibited or restricted by social custom.sanction-a threatened penalty for disobeying a law or rule.leave-go away from.support-bear all or part of the weight of; hold up.

76. What is the opposite meaning of forbid

- (a) outlaw (b) proscribe  
(c) prevent (d) allow

Correct Choice: **(d)**

Solution:

forbid -refuse to allow (something).outlaw-a person who has broken the law, especially one who remains at large or is a fugitive.proscribe-forbid, especially by law.prevent-keep (something) from happening.allow-let (someone) have or do something.

77. What is the opposite meaning of suffer

- (a) abide (b) brook  
(c) fear (d) bear

Correct Choice: (c)

Solution:

suffer - experience or be subjected to (something bad or unpleasant). abide-accept or act in accordance with (a rule, decision, or recommendation). brook-a small stream.fear-an unpleasant emotion caused by the threat of danger, pain, or harm.bear-(of a person) carry.

78. What is the opposite meaning of brook

- (a) stand (b) endure  
(c) rill (d) abstain

Correct Choice: (d)

Solution:

brook-a small stream.stand-have or maintain an upright position, supported by one's feet.endure-suffer (something painful or difficult) patiently.rill-a small stream.abstain-restrain oneself from doing or enjoying something.

79. What is the opposite meaning of abscond

- (a) remain (b) flee  
(c) fly (d) bolt

Correct Choice: (a)

Solution:

abscond-leave hurriedly and secretly, typically to escape from custody or avoid arrest.flee- run away from a place or situation of danger.fly-move or be hurled quickly through the air.bolt-a bar that slides into a socket to fasten a door or window.remain-continue to exist, especially after other similar people or things have ceased to do so.

80. What is the opposite meaning of skedaddle

- (a) scam (b) vamoose  
(c) dash (d) attack

Correct Choice: (d)

Solution:

skedaddle-depart quickly or hurriedly; run away.scram-leave or go away from a place quickly.vamoose-depart hurriedly.dash-run or travel somewhere in a great hurry.attack-take aggressive military action against (a place or enemy forces) with weapons or armed force.

81. And pour the water of the Nile On every golden scale!

These lines are taken from which poem?

- (a) Crocodile (b) Trees  
(c) The Passionate Pilgrim (d) Dirge

Correct Choice: (a)

Solution:

"How Doth the Little Crocodile" is a poem by Lewis Carroll which appears in his novel, Alice's Adventures in Wonderland. It is recited by Alice in Chapter 2. It describes a crafty crocodile that lures fish into its mouth with a welcoming smile. This poem is performed by Richard Haydn in Alice in Wonderland (1951) and by Fiona Fullerton in the film Alice's Adventures in Wonderland (1972). "How Doth the Little Crocodile" is a parody of the moralistic poem "Against Idleness and Mischief" by Isaac Watts,[1] which is what Alice was originally trying to recite. Watts' poem begins "How doth the little busy bee ..." and uses the bee as a model of hard work. In Carroll's parody, the crocodile's corresponding "virtues" are deception and predation, themes that recur throughout Alice's adventures in both books, and especially in the poems.

82. Who is the author for Full Fathom Five?

- (a) Lewis caroll (b) William Shakespeare  
(c) Oscar wilde (d) William Wordsworth

Correct Choice: (b)

Solution:

Full Fathom Five by William Shakespeare. William Shakespeare (bapt. 26 April 1564 – 23 April 1616)[a] was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist.[2][3][4] He is often called England's national poet and the "Bard of Avon".[5][b] His extant works, including collaborations, consist of approximately 39 plays,[c] 154 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship. His plays have been translated into every major living language and are performed more often than those of any other playwright.[7]

83. HARK! hark! the lark at heaven's gate sings, And Phoebus 'gins arise,  
These lines are taken from which poem?

(a) A Bridal Song

(b) Aubade

(c) A Fairy Song

(d) Dirge

Correct Choice: (b)

Solution:

Aubade by William Shakespeare. William Shakespeare (bapt. 26 April 1564 – 23 April 1616)[a] was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist.[2][3][4] He is often called England's national poet and the "Bard of Avon".[5][b] His extant works, including collaborations, consist of approximately 39 plays,[c] 154 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship. His plays have been translated into every major living language and are performed more often than those of any other playwright.[7]

84. It is engender'd in the eyes, With gazing fed; and Fancy dies In the cradle where it lies.  
These lines are taken from which poem?

(a) Love

(b) Athanasia

(c) The Prelude

(d) Birches

Correct Choice: (a)

Solution:

Love by William Shakespeare. William Shakespeare was the son of John Shakespeare, an alderman and a successful glover (glove-maker) originally from Snitterfield, and Mary Arden, the daughter of an affluent landowning farmer.[14] He was born in Stratford-upon-Avon and baptised there on 26 April 1564. His actual date of birth remains unknown, but is traditionally observed on 23 April, Saint George's Day.[15] This date, which can be traced to a mistake made by an 18th-century scholar, has proved appealing to biographers because Shakespeare died on the same date in 1616.[16][17] He was the third of eight children, and the eldest surviving son.[18]

85. The dew is bright upon the hill, And bright the blossoms overhead, But ah! the grasshoppers have fled,  
These lines are taken from which poem?

(a) BY THE ARNO

(b) Love

(c) We are seven

(d) Home Burial

Correct Choice: (a)

Solution:

BY THE ARNO by: Oscar Wilde. Oscar Fingal O'Flahertie Wills Wilde (16 October 1854 – 30 November 1900) was an Irish poet and playwright. After writing in different forms throughout the 1880s, he became one of London's most popular playwrights in the early 1890s. He is best remembered for his epigrams and plays, his novel *The Picture of Dorian Gray*, and the circumstances of his criminal conviction for homosexuality, imprisonment, and early death at age 46.

86. The longest date do melt like frosty rime, That in the morning whitened hill and plain And is no more; drop like the tower sublime Of yesterday, which royally did wear  
These lines are taken from which poem?

(a) The Grave Of Shelley

(b) Mutability

(c) The runaway

(d) Fire and ice

Correct Choice: (b)

Solution:

Mutability by William Wordsworth. On April 7, 1770, William Wordsworth was born in Cockerham, Cumbria, England. Wordsworth's mother died when he was eight—this experience shapes much of his later work. Wordsworth attended Hawkshead Grammar School, where his love of poetry was firmly established and, it is believed, he made his first attempts at verse. While he was at Hawkshead, Wordsworth's father died leaving him and his four siblings orphans. After Hawkshead, Wordsworth studied at St. John's College in Cambridge and before his final semester, he set out on a walking tour of Europe, an experience that influenced both his poetry and his political sensibilities. While touring Europe, Wordsworth came into contact with the French Revolution. This experience as well as a subsequent period living in France, brought about Wordsworth's interest and sympathy for the life, troubles, and speech of the "common man." These issues proved to be of the utmost importance to Wordsworth's work. Wordsworth's earliest poetry was published in 1793 in the collections *An Evening Walk* and *Descriptive Sketches*. While living in France, Wordsworth conceived a daughter, Caroline, out of wedlock; he left France, however, before she was born. In 1802, he returned to France with his sister on a four-week visit to meet Caroline. Later that year, he married Mary Hutchinson, a childhood friend, and they had five children together. In 1812, while living in Grasmere, two of their children—Catherine and John—died.

87. She could be sure there was no hidden ill Under the formal writing, he was in her sight— Living.— They gave him back to her alive—  
These are taken from which poem?

(a) Perfect Woman

(b) Not to keep

(c) Fear no more

(d) My Heart Leaps Up

Correct Choice: (b)

Solution:

Not to Keep by Robert Frost. Robert Frost was born on March 26, 1874, in San Francisco, where his father, William Prescott Frost Jr., and his mother, Isabelle Moodie, had moved from Pennsylvania shortly after marrying. After the death of his father from tuberculosis when Frost was eleven years old, he moved with his mother and sister, Jeanie, who was two years younger, to Lawrence, Massachusetts. He became interested in reading and writing poetry during his high school years in Lawrence, enrolled at Dartmouth College in Hanover, New Hampshire, in 1892, and later at Harvard University in Boston, though he never earned a formal college degree.

88. From *The Kitten and Falling Leaves* was written by whom?

(a) Oscar Wilde

(b) William Wordsworth

(c) William Shakespeare

(d) Robert Frost

Correct Choice: (b)

Solution:

From *The Kitten and Falling Leaves* was written by William Wordsworth. On April 7, 1770, William Wordsworth was born in Cockerham, Cumbria, England. Wordsworth's mother died when he was eight—this experience shapes much of his later work. Wordsworth attended Hawkshead Grammar School, where his love of poetry was firmly established and, it is believed, he made his first attempts at verse. While he was at Hawkshead, Wordsworth's father died leaving him and his four siblings orphans. After Hawkshead, Wordsworth studied at St. John's College in Cambridge and before his final semester, he set out on a walking tour of Europe, an experience that influenced both his poetry and his political sensibilities. While touring Europe, Wordsworth came into contact with the French Revolution. This experience as well as a subsequent period living in France, brought about Wordsworth's interest and sympathy for the life, troubles, and speech of the "common man." These issues proved to be of the utmost importance to Wordsworth's work. Wordsworth's earliest poetry was published in 1793 in the collections *An Evening Walk* and *Descriptive Sketches*. While living in France, Wordsworth conceived a daughter, Caroline, out of wedlock; he left France, however, before she was born. In 1802, he returned to France with his sister on a four-week visit to meet Caroline. Later that year, he married Mary Hutchinson, a childhood friend, and they had five children together. In 1812, while living in Grasmere, two of their children—Catherine and John—died.

89. Find out William Wordsworth poem?

(a) Love

(b) Birges

(c) She dwelt among the untrodden ways

(d) Her Voice

Correct Choice: (c)

Solution:

In 1800, She dwelt among the untrodden ways poem was written by William Wordsworth. On April 7, 1770, William Wordsworth was born in Cockermouth, Cumbria, England. Wordsworth's mother died when he was eight—this experience shapes much of his later work. Wordsworth attended Hawkshead Grammar School, where his love of poetry was firmly established and, it is believed, he made his first attempts at verse. While he was at Hawkshead, Wordsworth's father died leaving him and his four siblings orphans. After Hawkshead, Wordsworth studied at St. John's College in Cambridge and before his final semester, he set out on a walking tour of Europe, an experience that influenced both his poetry and his political sensibilities. While touring Europe, Wordsworth came into contact with the French Revolution. This experience as well as a subsequent period living in France, brought about Wordsworth's interest and sympathy for the life, troubles, and speech of the "common man." These issues proved to be of the utmost importance to Wordsworth's work. Wordsworth's earliest poetry was published in 1793 in the collections *An Evening Walk* and *Descriptive Sketches*. While living in France, Wordsworth conceived a daughter, Caroline, out of wedlock; he left France, however, before she was born. In 1802, he returned to France with his sister on a four-week visit to meet Caroline. Later that year, he married Mary Hutchinson, a childhood friend, and they had five children together. In 1812, while living in Grasmere, two of their children—Catherine and John—died.

90. Find out which is not William Shakespeare poem?

- (a) Vision (b) Love  
(c) Silvia (d) Under The Greenwood Tree

Correct Choice: (a)

Solution:

Vision was written by Oscar Wilde. other 3 are William Shakespeare poem. William Shakespeare was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist. He is often called England's national poet and the "Bard of Avon". His extant works, including collaborations, consist of approximately 39 plays, 154 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship.

91. When icicles hang by the wall And Dick the shepherd blows his nail And Tom bears logs into the hall, These lines are taken from which poem?

- (a) Love (b) Winter  
(c) Sonnet (d) Birges

Correct Choice: (b)

Solution:

Winter by William Shakespeare. Shakespeare produced most of his known works between 1589 and 1613. His early plays were primarily comedies and histories and are regarded as some of the best work produced in these genres. Until about 1608, he wrote mainly tragedies, among them *Hamlet*, *Othello*, *King Lear*, and *Macbeth*, all considered to be among the finest works in the English language. In the last phase of his life, he wrote tragicomedies (also known as romances) and collaborated with other playwrights.

92. Sweet, I blame you not, for mine the fault was, had I not been made of common clay This line was taken from which poem?

- (a) Vision (b) Flower Of Love  
(c) Apologia (d) Love

Correct Choice: (b)

Solution:

Flower Of Love by Oscar Wilde. Oscar Wilde was born at 21 Westland Row, Dublin (now home of the Oscar Wilde Centre, Trinity College), the second of three children born to Sir William Wilde and Jane Wilde, two years behind William ("Willie"). Wilde's mother had distant Italian ancestry, [1] and under the pseudonym "Speranza" (the Italian word for 'hope'), wrote poetry for the revolutionary Young Irelanders in 1848; she was a lifelong Irish nationalist.[2] She read the Young Irelanders' poetry to Oscar and Willie, inculcating a love of these poets in her sons.[3] Lady Wilde's interest in the neo-classical revival showed in the paintings and busts of ancient Greece and Rome in her home.[3]

93. Who is the author for A Dream Pang poem?

- (a) Robert Frost (b) William Shakespeare  
(c) William Wordsworth (d) Oscar Wilde

Correct Choice: (a)

Solution:

A Dream Pang by Robert Frost. Robert Frost was born on March 26, 1874, in San Francisco, where his father, William Prescott Frost Jr., and his mother, Isabelle Moodie, had moved from Pennsylvania shortly after marrying. After the death of his father from tuberculosis when Frost was eleven years old, he moved with his mother and sister, Jeanie, who was two years younger, to Lawrence, Massachusetts. He became interested in reading and writing poetry during his high school years in Lawrence, enrolled at Dartmouth College in Hanover, New Hampshire, in 1892, and later at Harvard University in Boston, though he never earned a formal college degree.

94. Who is the author for A Slumber Did My Spirit Seal poem?

(a) William Shakespeare

(b) William Wordsworth

(c) Robert Frost

(d) Oscar Wilde

Correct Choice: (b)

Solution:

On April 7, 1770, William Wordsworth was born in Cockermouth, Cumbria, England.

95. Rose Pogonias was written by whom?

(a) William Shakespeare

(b) William Wordsworth

(c) Robert Frost

(d) Oscar Wilde

Correct Choice: (c)

Solution:

Rose Pogonias by Robert Frost. Robert Frost was born on March 26, 1874, in San Francisco, where his father, William Prescott Frost Jr., and his mother, Isabelle Moodie, had moved from Pennsylvania shortly after marrying. After the death of his father from tuberculosis when Frost was eleven years old, he moved with his mother and sister, Jeanie, who was two years younger, to Lawrence, Massachusetts. He became interested in reading and writing poetry during his high school years in Lawrence, enrolled at Dartmouth College in Hanover, New Hampshire, in 1892, and later at Harvard University in Boston, though he never earned a formal college degree.

96. Which one is not William Wordsworth poem?

(a) Travelling

(b) She dwelt among the untrodden ways

(c) We Are Seven

(d) A Madrigal

Correct Choice: (d)

Solution:

A Madrigal is a William Shakespeare poem. Except 3 are William Wordsworth poems. On April 7, 1770, William Wordsworth was born in Cockermouth, Cumbria, England.

97. Who is the author for this poem "It is a Beauteous Evening, Calm and Free"

(a) William Shakespeare

(b) Robert Frost

(c) William Wordsworth

(d) Oscar Wilde

Correct Choice: (c)

Solution:

It is a Beauteous Evening, Calm and Free by William Wordsworth. On April 7, 1770, William Wordsworth was born in Cockermouth, Cumbria, England. Wordsworth's mother died when he was eight—this experience shapes much of his later work. Wordsworth attended Hawkshead Grammar School, where his love of poetry was firmly established and, it is believed, he made his first attempts at verse. While he was at Hawkshead, Wordsworth's father died leaving him and his four siblings orphans. After Hawkshead, Wordsworth studied at St. John's College in Cambridge and before his final semester, he set out on a walking tour of Europe, an experience that influenced both his poetry and his political sensibilities. While touring Europe, Wordsworth came into contact with the French Revolution. This experience as well as a subsequent period living in France, brought about Wordsworth's interest and sympathy for the life, troubles, and speech of the "common man." These issues proved to be of the utmost importance to Wordsworth's work. Wordsworth's earliest poetry was published in 1793 in the collections An Evening Walk and Descriptive Sketches. While living in France, Wordsworth conceived a daughter, Caroline, out of wedlock; he left France, however, before she was born. In 1802, he returned to France with his sister on a four week visit to meet Caroline. Later that year, he married Mary Hutchinson, a childhood friend, and they had five children together. In 1812, while living in Grasmere, two of their children Catherine and John died.

98. "The World's A Stage" Who is the author for this poem?

(a) William Wordsworth

(b) William Shakespeare

(c) Robert Frost

(d) Oscar Wilde

Correct Choice: (b)



Solution:

"The World's A Stage" author is William Shakespeare. He (bapt. 26 April 1564 – 23 April 1616)[a] was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist.[2][3][4] He is often called England's national poet and the "Bard of Avon".[5][b] His extant works, including collaborations, consist of approximately 39 plays,[c] 154 sonnets, two long narrative poems, and a few other verses, some of uncertain authorship. His plays have been translated into every major living language and are performed more often than those of any other playwright.[7]

99. Who is the author for this poem " Storm Fear"?

- (a) William Shakespeare
- (b) William Wordsworth
- (c) Robert Frost
- (d) Oscar Wilde

Correct Choice: (c)

Solution:

Storm Fear by Robert Frost.

100. So was it when my life began;

So is it now I am a man;

So be it when I shall grow old,

Or let me die!

These lines are taken from which poem?

- (a) My Heart Leaps Up.
- (b) The road not taken.
- (c) Her Voice.
- (d) The White Man's Burden.

Correct Choice: (a)

Solution:

"My Heart Leaps Up", also known as "The Rainbow", is a poem by the British Romantic poet William Wordsworth. Noted for its simplicity of structure and language, it describes the joy that he feels when he sees a rainbow and notes that he has felt this way since his childhood.

101. The internal energy of the molecules when flows out, is called .....energy

- (a) Potential
- (b) Thermal
- (c) Kinetic
- (d) Heat

Correct Choice: (d)

Solution:

In thermodynamics, heat is energy in transfer to or from a thermodynamic system, by mechanisms other than thermodynamic work or transfer of matter. The mechanisms include conduction, through direct contact of immobile bodies, or through a wall or barrier that is impermeable to matter; or radiation between separated bodies; or isochoric mechanical work done by the surroundings on the system of interest; or Joule heating by an electric current driven through the system of interest by an external system; or a combination of these. When there is a suitable path between two systems with different temperatures, heat transfer occurs necessarily, immediately, and spontaneously from the hotter to the colder system. Thermal conduction occurs by the stochastic (random) motion of microscopic particles (such as atoms or molecules). In contrast, thermodynamic work is defined by mechanisms that act macroscopically and directly on the system's whole-body state variables; for example, change of the system's volume through a piston's motion with externally measurable force; or change of the system's internal electric polarization through an externally measurable change in electric field. The definition of heat transfer does not require that the process be in any sense smooth. For example, a bolt of lightning may transfer heat to a body.

102. The sum of the kinetic and potential energy is called the.....energy of the molecules.

- (a) Light
- (b) Internal
- (c) Mechanical
- (d) Chemical

Correct Choice: (b)

Solution:

In thermodynamics, the internal energy of a system is the total energy contained within the system. It is the energy necessary to create or prepare the system in any given state, but does not include the kinetic energy of motion of the system as a whole, nor the potential energy of the system as a whole due to external force fields which includes the energy of displacement of the system's surroundings. It keeps account of the gains and losses of energy of the system that are due to changes in its internal state. The internal energy of a system can be increased by introduction of matter, by heat, or by doing thermodynamic work on the system. When matter transfer is prevented by impermeable containing walls, the system is said to be closed and the first law of thermodynamics may be regarded as defining the internal energy as the sum of heat added and work done on the system by its surroundings. If the containing walls pass neither matter nor energy, the system is said to be isolated and its internal energy cannot change. The internal energy of a given state of a system cannot be directly measured and knowledge of all components is rarely interesting. Thermodynamics is chiefly concerned only with changes in the internal energy, not with its absolute value. Changes, relative to a reference state, are determined from convenient chains of thermodynamic operations and thermodynamic processes by which a given state can be prepared. Such a process can be described by certain extensive state variables of the system, for example, entropy, mole numbers, or electric dipole moment. For practical considerations in thermodynamics and engineering it is rarely necessary or convenient to consider all energies belonging to the total intrinsic energy of a system, such as the energy given by the equivalence of mass. Customarily, thermodynamic descriptions include only items relevant to the processes under study.

103. When heat energy is added to a substance, the kinetic energy of its particles .....and so the particles move at higher speed

- (a) Decreases
- (b) Increases
- (c) Slightly Low
- (d) None of the above

Correct Choice: (a)

Solution:

In thermodynamics, heat is energy in transfer to or from a thermodynamic system, by mechanisms other than thermodynamic work or transfer of matter. The mechanisms include conduction, through direct contact of immobile bodies, or through a wall or barrier that is impermeable to matter; or radiation between separated bodies; or isochoric mechanical work done by the surroundings on the system of interest; or Joule heating by an electric current driven through the system of interest by an external system; or a combination of these. When there is a suitable path between two systems with different temperatures, heat transfer occurs necessarily, immediately, and spontaneously from the hotter to the colder system. Thermal conduction occurs by the stochastic (random) motion of microscopic particles (such as atoms or molecules). In contrast, thermodynamic work is defined by mechanisms that act macroscopically and directly on the system's whole-body state variables; for example, change of the system's volume through a piston's motion with externally measurable force; or change of the system's internal electric polarization through an externally measurable change in electric field. The definition of heat transfer does not require that the process be in any sense smooth. For example, a bolt of lightning may transfer heat to a body. Change in temperature: When heat energy is added to a substance, the kinetic energy of its particles increases and so the particles move at higher speed. This causes rise in temperature. When a substance is cooled, that is, when heat is removed, the molecules lose heat and its temperature falls.

104. Which form of energy plays a major role in chemical changes?

- (a) Potential
- (b) Kinetic
- (c) Heat
- (d) Internal

Correct Choice: (c)

Solution:

All the substances in our surrounding are made up of molecules. These molecules are generally at motion and possess kinetic energy. At the same time each molecule exerts a force of attraction on other molecules and so they possess potential energy. The sum of the kinetic and potential energy is called the internal energy of the molecules. This internal energy, when flows out, is called heat energy. This energy is more in hot substances and less in cold substances and flows from hot substances to cold substances. Chemical changes: Since heat is a form of energy it plays a major role in chemical changes. In some cases, chemical reactions need heat to begin and also heat determines the speed at which reactions occur. When we cook food, we light the wood and it catches fire and the food particles become soft because of the heat energy. These are all the chemical changes taking place due to heat

105. Which scale is called absolute scale?

- (a) Fahrenheit scale
- (b) Celsius scale
- (c) Kelvin Scale
- (d) Centigrade Scale

Correct Choice: (c)

Solution:

The Kelvin scale is an absolute thermodynamic temperature scale using as its null point absolute zero, the temperature at which all thermal motion ceases in the classical description of thermodynamics. The kelvin (symbol: K) is the base unit of temperature in the International System of Units (SI). Until 2018, the kelvin was defined as the fraction  $1/273.16$  of the thermodynamic temperature of the triple point of water (exactly  $0.01\text{ }^{\circ}\text{C}$  or  $32.018\text{ }^{\circ}\text{F}$ ). [1] In other words, it was defined such that the triple point of water is exactly  $273.16\text{ K}$ . On 16 November 2018, a new definition was adopted, in terms of a fixed value of the Boltzmann constant. For legal metrology purposes, the new definition will officially come into force on 20 May 2019 (the 130th anniversary of the Metre Convention). The Kelvin scale is named after the Belfast-born, Glasgow University engineer and physicist William Thomson, 1st Baron Kelvin (1824–1907), who wrote of the need for an "absolute thermometric scale". Unlike the degree Fahrenheit and degree Celsius, the kelvin is not referred to or written as a degree. The kelvin is the primary unit of temperature measurement in the physical sciences, but is often used in conjunction with the degree Celsius, which has the same magnitude. The definition implies that absolute zero ( $0\text{ K}$ ) is equivalent to  $-273.15\text{ }^{\circ}\text{C}$  ( $-459.67\text{ }^{\circ}\text{F}$ ).

106. The net force in a particular direction is called.....

- (a) Thrust
- (b) Pressure
- (c) Inertia of mass
- (d) None of the above

Correct Choice: (a)

Solution:

Thrust is a reaction force described quantitatively by Newton's third law. When a system expels or accelerates mass in one direction, the accelerated mass will cause a force of equal magnitude but opposite direction on that system. [1] The force applied on a surface in a direction perpendicular or normal to the surface is also called thrust. Force, and thus thrust, is measured using the International System of Units (SI) in newtons (symbol: N), and represents the amount needed to accelerate 1 kilogram of mass at the rate of 1 meter per second per second. In mechanical engineering, force orthogonal to the main load (such as in parallel helical gears) is referred to as thrust.

107. The force per unit area acting on an object which concerned is called .....

- (a) Thrust
- (b) Pressure
- (c) Inertia
- (d) Angle

Correct Choice: (b)

Solution:

Pressure (symbol:  $p$  or  $P$ ) is the force applied perpendicular to the surface of an object per unit area over which that force is distributed. Gauge pressure (also spelled gage pressure) [a] is the pressure relative to the ambient pressure. Various units are used to express pressure. Some of these derive from a unit of force divided by a unit of area; the SI unit of pressure, the pascal (Pa), for example, is one newton per square metre; similarly, the pound-force per square inch (psi) is the traditional unit of pressure in the imperial and US customary systems. Pressure may also be expressed in terms of standard atmospheric pressure; the atmosphere (atm) is equal to this pressure, and the torr is defined as  $1/760$  of this. Manometric units such as the centimetre of water, millimetre of mercury, and inch of mercury are used to express pressures in terms of the height of column of a particular fluid in a manometer.

108. In SI units, the unit of thrust is ?

- (a) Hertz
- (b) Newton
- (c) Joule
- (d) Pound

Correct Choice: (b)

Solution:

Thrust is a reaction force described quantitatively by Newton's third law. When a system expels or accelerates mass in one direction, the accelerated mass will cause a force of equal magnitude but opposite direction on that system. The force applied on a surface in a direction perpendicular or normal to the surface is also called thrust. Force, and thus thrust, is measured using the International System of Units (SI) in newtons (symbol: N), and represents the amount needed to accelerate 1 kilogram of mass at the rate of 1 meter per second per second.

109. In CGS system force is measured in.....

- (a) Pound  $\text{cm}^{-2}$
- (b) Newton  $\text{cm}^{-2}$
- (c) Dyne  $\text{cm}^{-2}$
- (d) Angle  $\text{cm}^{-2}$

Correct Choice: (c)

Solution:

The SI unit for pressure is the pascal (Pa), equal to one newton per square metre (N/m<sup>2</sup>, or kg·m<sup>-1</sup>·s<sup>-2</sup>). This name for the unit was added in 1971;<sup>[4]</sup> before that, pressure in SI was expressed simply in newtons per square metre. Other units of pressure, such as pounds per square inch and bar, are also in common use. The CGS unit of pressure is the barye (Ba), equal to 1 dyn·cm<sup>-2</sup>, or 0.1 Pa. Pressure is sometimes expressed in grams-force or kilograms-force per square centimetre (g/cm<sup>2</sup> or kg/cm<sup>2</sup>) and the like without properly identifying the force units. But using the names kilogram, gram, kilogram-force, or gram-force (or their symbols) as units of force is expressly forbidden in SI. The technical atmosphere (symbol: at) is 1 kgf/cm<sup>2</sup> (98.0665 kPa, or 14.223 psi). Since a system under pressure has the potential to perform work on its surroundings, pressure is a measure of potential energy stored per unit volume. It is therefore related to energy density and may be expressed in units such as joules per cubic metre (J/m<sup>3</sup>, which is equal to Pa). Mathematically:

110. Human lung is well adapted to breathe at which pressure of sea level?

- (a) 99.08 k Pa (b) 100.29 k Pa  
(c) 100.53 k Pa (d) 101.3 k Pa

Correct Choice: (d)

Solution:

There are two major kinds of environmental stresses at high altitude for humans. First, there are the alternating daily extremes of climate that often range from hot, sunburning days to freezing nights. In addition, winds are often strong and humidity low, resulting in rapid dehydration. Second, the air pressure is lower. This is usually the most significant limiting factor in high mountain regions. Air pressure decreases as altitude increases. The percentage of oxygen in the air at two miles (3.2 km.) is essentially the same as at sea level (21%). However, the air pressure is 30% lower at the higher altitude due to the fact that the atmosphere is less dense—that is, the air molecules are farther apart. When we breathe in air at sea level, the atmospheric pressure of about 14.7 pounds per square inch (1.04 kg. per cm.<sup>2</sup>) causes oxygen to easily pass through selectively permeable lung membranes into the blood. At high altitudes, the lower air pressure makes it more difficult for oxygen to enter our vascular systems. The result is hypoxia click this icon to hear the preceding term pronounced, or oxygen deprivation. Hypoxia usually begins with the inability to do normal physical activities, such as climbing a short flight of stairs without fatigue. Other early symptoms of "high altitude sickness" include a lack of appetite, vomiting, headache, distorted vision, fatigue, and difficulty with memorizing and thinking clearly. In serious cases, pneumonia-like symptoms (pulmonary edema click this icon to hear the preceding term pronounced) due to hemorrhaging in the lungs and an abnormal accumulation of fluid around the brain (cerebral edema click this icon to hear the preceding term pronounced) develop. Pulmonary and cerebral edema usually results in death within a few days if there is not a return to normal air pressure levels. There is also an increased risk of heart failure due to the added stress placed on the lungs, heart, and arteries at high altitudes. When we travel to high mountain areas, our bodies initially develop inefficient physiological responses. There is an increase in breathing and heart rate to as much as double, even while resting. Pulse rate and blood pressure go up sharply as our hearts pump harder to get more oxygen to the cells. These are stressful changes, especially for people with weak hearts.

111. Who was the founder of Islam?

- (a) Prophet Muhammad (b) Muhammad-bin-Qasim  
(c) Sulaiman (d) Feroz Khan

Correct Choice: (a)

Solution:

Muhammad<sup>[n 1]</sup> (Arabic: مُحَمَّد, pronounced [muhammad];<sup>[n 2]</sup> c. 570 CE – 8 June 632 CE)<sup>[1]</sup> was the founder of Islam.<sup>[2]</sup> According to Islamic doctrine, he was a prophet, sent to present and confirm the monotheistic teachings preached previously by Adam, Abraham, Moses, Jesus, and other prophets.<sup>[2][3][4][5]</sup> He is viewed as the final prophet of God in all the main branches of Islam, though some modern denominations diverge from this belief.<sup>[n 3]</sup> Muhammad united Arabia into a single Muslim polity, with the Quran as well as his teachings and practices forming the basis of Islamic religious belief. Born approximately 570 CE (Year of the Elephant) in the Arabian city of Mecca, Muhammad was orphaned at the age of six.<sup>[6]</sup> He was raised under the care of his paternal grandfather Abd al-Muttalib then by his uncle Abu Talib.<sup>[7]</sup> In later years he would periodically seclude himself in a mountain cave named Hira for several nights of prayer. When he was 40, Muhammad reported being visited by Gabriel in the cave,<sup>[8][9]</sup> and receiving his first revelation from God. Three years later, in 610,<sup>[10]</sup> Muhammad started preaching these revelations publicly,<sup>[11]</sup> proclaiming that "God is One", that complete "submission" (islām) to God<sup>[12]</sup> is the right way of life (dīn),<sup>[13]</sup> and that he was a prophet and messenger of God, similar to the other prophets in Islam.

112. In which period Prophet Muhammad was lived between?

- (a) 540 CE – 338 CE (b) 550 CE – 392 CE  
(c) 570 CE – 632 CE (d) 570 CE – 697 CE

Correct Choice: (c)

Solution:

Muhammad[n 1] (Arabic: مُحَمَّد, pronounced [muhammad];[n 2] c. 570 CE – 8 June 632 CE)[1] was the founder of Islam.[2] According to Islamic doctrine, he was a prophet, sent to present and confirm the monotheistic teachings preached previously by Adam, Abraham, Moses, Jesus, and other prophets.[2][3][4][5] He is viewed as the final prophet of God in all the main branches of Islam, though some modern denominations diverge from this belief.[n 3] Muhammad united Arabia into a single Muslim polity, with the Quran as well as his teachings and practices forming the basis of Islamic religious belief. The name Muhammad (/mʊˈhæməd, -ˈhɑːməd/)[19] means "praiseworthy" and appears four times in the Quran.[20] The Quran addresses Muhammad in the second person by various appellations; prophet, messenger, servant of God ('abd), announcer (bashir),[Quran 2:119] witness (shahid),[Quran 33:45] bearer of good tidings (mubashshir), warner (nathir),[Quran 11:2] reminder (mudhakkir),[Quran 88:21] one who calls [unto God] (dāʾī),[Quran 12:108] light personified (noor),[Quran 05:15] and the light-giving lamp (siraj munir),[Quran 33:46] Muhammad is sometimes addressed by designations deriving from his state at the time of the address: thus he is referred to as the enwrapped (Al-Muzzammil) in Quran 73:1 and the shrouded (al-muddaththir) in Quran 74:1.[21] In Sura Al-Ahzab 33:40 God singles out Muhammad as the "Seal of the prophets", or the last of the prophets.[22] The Quran also refers to Muhammad as Ahmad "more praiseworthy" (Arabic: أَحْمَد, Sura As-Saff 61:6).

113. Who was called "The city of Gold"?

- (a) Farid (b) Fazal  
(c) Sultan (d) Multan

Correct Choice: (d)

Solution:

Multan, in the Punjab province of Pakistan, is one of the oldest cities in South Asia, the exact age has yet to be determined. Its modern name comes from its old Sanskrit name Mūlasthān. It has seen a lot of warfare because of its location on a major invasion route between South Asia and Central Asia. It is famous for its Sufi shrines. Multan was ruled by various Hindu empires for over 1000 years. It was the capital of ancient Trigarta Kingdom at the time of Mahabharata and ruled by Katoch Clan Kshatriya Rajputs. It is believed to have been visited by Alexander the Great. It is said that when Alexander was fighting for the city, a poisoned arrow struck him, making him ill and eventually leading to his death. The exact place where Alexander was hit by the arrow can be seen in the old city premises. It is believed to be the same city as "Maii-usthan", where Alexander's forces stormed the citadel after seeing their king injured and unconscious on the field of battle. Multan was part of the Mauryan and the Gupta empires that ruled much of northern India. In the mid-5th century, the city was attacked by a group of nomads led by Toraman. These nomads were successful in taking the city, but did not stay, and the long-standing Hindu/Zoroastrian rule over the city was re-established. The noted Chinese traveller Huen Tsang visited Multan in 641. During the Pre-Islamic period, Multan was known as the city of gold for its large and wealthy temples. The Sun temple, Suraj Mandir, was considered one of the largest and wealthiest temples in the entire sub-continent. Numerous historians have written about this extremely large Hindu temple that housed over 6,000 people within it. Other famous sites included the Suraj Kund ("pool of the Sun") and Temple of Prahlapuri. Story of Prahlada from whom the temple took its name is interesting. Prahlada was the son of King Hiranyakashipu. Hiranyakashipu held sway over this country and condemned the gods and forbade the paying of homage in their name. Prahlada was recognized as being a very devoted follower of Vishnu, much to his father's disappointment. As Prahlada grows in age, his father Hiranyakashipu becomes upset at his devotion to Vishnu, who he sees as his mortal enemy. Eventually his anger leads him to attempt to kill the boy Prahlada in many ways, but each time Prahlada is protected by Vishnu's mystical power. Finally in disgust Hiranyakashipu points to a particular pillar and asks if his Vishnu is in it? Prahlada answers "He is". Hiranyakashipu, unable to control his anger, smashes the pillar with his mace, it burst in two and out sprang the god Vishnu in the form of a man-lion form called Narasimha Avatar who laid the King across his knees and ripped his stomach open with his claws. A temple devoted to Narasimha Avatar of Vishnu is built. The temple is situated close to the shrine of Bahawal Huk. Currently its roof and surrounding building have been damaged but the pillar is no more. The Idol was shifted from temple to a new place near old fruit market. Now it is at Haridwar, where it was brought in 1947 by Narayan Das Baba. . Veer Jashraj, who is revered as Veer Dada Jashraj, was born in the city of Lohar (today's Lahore in Pakistan), which was the capital of Lohargadh. His domain extended from Lahore to Multan (also in Pakistan today).[citation needed] As the folklore goes, Mongol invader Chingiz Khan, attacked Multan and was killed by Dada Jashraj, Rana of Lohargadh. This finds mention in Mongol folklore, which say, "King of Mongols was killed by Mirana, the tiger of Multan fort". His descendants who proudly carry the surname of 'Mirana' preserve the memory of this great warrior king. Dada Jashraj was also treacherously killed when only 28 - a life so short but full of heroic deeds.

114. Who was the wife of Dahir ?

- (a) Rani Bai (b) Raja Bhima Devi  
(c) Lakshmi Kalyani (d) None of the above

Correct Choice: (a)

Solution:

Raja Dahar was the last Hindu ruler of the Brahmin Dynasty of Sindh (present-day Pakistan) in .... Raja Dahir's Wife Rani Bai fled to the fort of Rawar with 15,000 troops from where she challenged Muhammad Bin Qasim for the battle.

115. Who was one of the greatest Muslim rulers in Asia?

(a) Muhammad Bin Qasim

(b) Qasim bin Yusuf

(c) Sulayman ibn Abd al-Malik.

(d) Mahmud of Ghazni

Correct Choice: (d)

Solution:

Mahmud of Ghazni (Persian: محمود غزنوی; 2 November 971 – 30 April 1030) was the first independent ruler of the Ghaznavid dynasty, ruling from 998 to 1030. At the time of his death, his kingdom had been transformed into an extensive military empire, which extended from northwestern Iran proper to the Punjab in the Indian subcontinent, Khwarazm in Transoxiana, and Makran. Highly Persianized,[1] Mahmud continued the bureaucratic, political, and cultural customs of his predecessors, the Samanids, which proved to establish the groundwork for a Persianate state in northern India.[2] His capital of Ghazni evolved into a significant cultural, commercial, and intellectual center in the Islamic world, almost rivaling the important city of Baghdad. The capital appealed to many prominent figures, such as al-Biruni and Ferdowsi.[2] He was the first ruler to hold the title Sultan ("authority"), signifying the extent of his power while at the same time preserving an ideological link to the suzerainty of the Abbasid Caliphate. During his rule, he invaded and plundered parts of the Indian subcontinent (east of the Indus River) seventeen times. The last four years of Mahmud's life were spent contending with the influx of Oghuz and Seljuk Turks from Central Asia and the Buyid dynasty. Initially, after being repulsed by Mahmud, the Seljuks retired to Khwarezm, but Toghrül and Çağrı led them to capture Merv and Nishapur (1028–1029). Later, they repeatedly raided and traded territory with his successors across Khorasan and Balkh and even sacked Ghazni in 1037. In 1040, at the Battle of Dandanaqan, they decisively defeated Mahmud's son, Mas'ud I, resulting in Mas'ud abandoning most of his western territories to the Seljuks. Sultan Mahmud died on 30 April 1030. His mausoleum is located in Ghazni, Afghanistan.

116. From which period was came to known as Sultanate Period?

(a) 1321 A.D- 1413 A.D

(b) 1290 A.D – 1320 A.D

(c) 1206 A.D- 1290 A.D

(d) 1414 A.D – 1450 A.D

Correct Choice: (c)

Solution:

The Delhi Sultanate (Persian: دهلی سلطنت, Urdu: دہلی سلطنت) was a sultanate based mostly in Delhi that stretched over large parts of the Indian subcontinent for 320 years (1206–1526).[5][6] Five dynasties ruled over the Delhi Sultanate sequentially: the Mamluk dynasty (1206–90), the Khalji dynasty (1290–1320), the Tughlaq dynasty (1320–1414),[7] the Sayyid dynasty (1414–51), and the Lodi dynasty (1451–1526). The sultanate is noted for being one of the few states to repel an attack by the Mongols (from the Chagatai Khanate),[8] and enthroned one of the few female rulers in Islamic history, Razia Sultana, who reigned from 1236 to 1240. Qutb al-Din Aibak, a former Turkic Mamluk slave of Muhammad Ghori, was the first sultan of Delhi, and his Mamluk dynasty conquered large areas of northern India. Afterwards, the Khalji dynasty was also able to conquer most of central India, but both failed to conquer the whole of the Indian subcontinent. The sultanate reached the peak of its geographical reach during the Tughlaq dynasty, occupying most of the Indian subcontinent.[10] This was followed by decline due to Hindu reconquests, states such as the Vijayanagara Empire and Mewar asserting independence, and new Muslim sultanates such as the Bengal Sultanate breaking off. During and in the Delhi Sultanate, there was a synthesis of Indian civilization with that of Islamic civilization, and the further integration of the Indian subcontinent with a growing world system and wider international networks spanning large parts of Afro-Eurasia, which had a significant impact on Indian culture and society, as well as the wider world.[13] The time of their rule included the earliest forms of Indo-Islamic architecture,[14][15] increased growth rates in India's population and economy,[16] and the emergence of the Hindi-Urdu language.[17] The Delhi Sultanate was also responsible for repelling the Mongol Empire's potentially devastating invasions of India in the 13th and 14th centuries.[18] However, the Delhi Sultanate also caused large scale destruction and desecration of temples in the Indian subcontinent.[19] In 1526, the Sultanate was conquered and succeeded by the Mughal Empire.

117. Who was was the founder of the Mamluk dynasty and the first sultan of the Delhi Sultanate?

(a) Aram Shah

(b) Iltutmish

(c) Rukn-ud-din Firuz

(d) Qutb al-Din Aibak

Correct Choice: (d)

Solution:

Qutb al-Din Aibak was born to Turkic parents in Turkistan. In his childhood, Aibak was sold as a slave and raised at Nishapur, Persia, where he was purchased by the local Qazi.[1] After the death of his master, he was sold by his master's son and eventually became a slave of Muhammad of Ghor who made him the Amir-i-Akhur, the Master of Slave. Eventually, Aibak was appointed to military command and became an able general of Muhammad of Ghor. In 1193 and after conquering Delhi,[1] his master returned to Khorāsān and left the consolidation of the Ghūrid conquests in northwest India to him. With his headquarters at Delhi, Aibak subjugated areas between the Ganges (Ganga) and Yamuna (Jamuna) rivers. He then turned his attention to the Rajputs who were still resisting Ghūrid domination. In 1195–1203, he mounted campaigns against their strongholds, while Ghuri's other lieutenant Muhammad bin Bakhtiyar Khalji conquered Bihar and Bengal. When Muhammad of Ghor was assassinated in 1206, Aibak was his logical successor. He was still technically a slave, but he quickly obtained manumission. He married the daughter of Taj al-Din Yildiz of Ghazna, one of the other principal claimants to succeed Muhammad of Ghor, and, by other judiciously arranged marriages, consolidated his rule.[citation needed]He could only rule for 4 years.Qutb Minar: He rebuilt the Quwwat-ul-Islam Mosque in Delhi and the Adhai Din Ka Jhonpra in Ajmer. He started the construction of Qutb Minar [3] in memory of sufi saint Qutbuddin Bakhtiar Kaki,[1] which was completed by his successor, Iltutmish after Aibak's death. Surviving inscriptions describe Aibak as Malik ("King"), and the Qutb Minār in Delhi still stands to commemorate his victories. Qutb-ud-din Aibak defeated the Gahadavala king Jayachandra in 1194.Death and successor: Aibak died of injuries received during an accidental fall from a horse while playing polo in 1210 AD. He was buried in Lahore near Anarkali Bazaar. His successor, Shams ud-Din Iltutmish (r. 1211–36),[1] basing his power on the conquests of Aibak, was able to establish the independence of the Delhi Sultanate under the Mamluk dynasty.

118. What is the term Mamluk means?

- (a) Slave
- (b) King
- (c) Soldier
- (d) Army

Correct Choice: (a)

Solution:

Mamluk (Arabic: مملوك mamlūk (singular), مماليك mamālik (plural), meaning "property", also transliterated as Mameluke, mamluq, mamluke, mameluk, mameluke, mamaluke or marmeluke) is an Arabic designation for slaves. The term is most commonly used to refer to slave soldiers and Muslim rulers of slave origin. The most enduring Mamluk realm was the knightly military caste in Egypt in the Middle Ages, which developed from the ranks of slave soldiers. These were mostly enslaved Turkic peoples.[1] Egyptian Copts,[2] Circassians,[3] Abkhazians,[4][5][6] and Georgians.[7][8][9] Many Mamluks were also of Balkan origin (Albanians, Greeks, and South Slavs).[10][11] The "mamluk phenomenon", as David Ayalon dubbed the creation of the specific warrior class,[12] was of great political importance; for one thing, it endured for nearly 1000 years, from the ninth to the nineteenth centuries. Over time, Mamluks became a powerful military knightly caste in various societies that were controlled by Muslim rulers. Particularly in Egypt, but also in the Levant, Mesopotamia, and India, mamluks held political and military power. In some cases, they attained the rank of sultan, while in others they held regional power as emirs or beys. Most notably, mamluk factions seized the sultanate centered on Egypt and Syria, and controlled it as the Mamluk Sultanate (1250–1517). The Mamluk Sultanate famously defeated the Ilkhanate at the Battle of Ain Jalut. They had earlier fought the western European Christian Crusaders in 1154–1169 and 1213–1221, effectively driving them out of Egypt and the Levant. In 1302 the mamluks formally expelled the last Crusaders from the Levant, ending the era of the Crusades. While mamluks were purchased as property, their status was above ordinary slaves but they were not allowed to carry weapons or perform certain tasks. In places such as Egypt, from the Ayyubid dynasty to the time of Muhammad Ali of Egypt, mamluks were considered to be "true lords" and "true warriors", with social status above the general population in Egypt and the Levant. In a sense they were like enslaved mercenaries.

119. Who was called Lakh Baksh?

- (a) Qutb ud-Din Aibak
- (b) Iltutmish
- (c) Raziya
- (d) Babar

Correct Choice: (a)

Solution:

Qutb al-Din Aibak [2] also spelled Qutb ud-Din Aibak or Qutub ud-Din Aybak, (1150–1210), was the founder of the Mamluk Dynasty in Delhi and the first sultan of the Delhi Sultanate. He was born a Turk of the Aybak tribe and was the sultan for only four years, 1206-1210. Qutb-ud-din Aibak was born to a Turkish family in Central Asia. He was sold as a slave in his childhood. But this went well because he was brought up by the chief Qazi of Nishapur, a town in northeastern Iran. He was treated like one of the sons of this Qazi and was given a good education, including training in archery and horsemanship. However when the master died, his jealous sons sold Qutb-ud-din Aibak to a slave master. Qutb-ud-din Aibak was finally purchased by the ruler of Ghor in central Afghanistan, Sultan Muhammad Ghori. Qutb-ud-din Aibak gradually rose to the rank of a Commander and became a trusted slave of Sultan Ghori. The conquests of northern India were executed mainly by Qutb-ud-din Aibak, which helped Ghori to consolidate his position there. Gradually, as Sultan Ghori concentrated on Central Asia after 1192, he was given the independent charge of the conquests in India. Qutb-ud-din Aibak gave large sums of money in charity, thus earning the name LAKH BAKSH or giver of lakhs.

120. Qutb-ud-din Aibak was died in which A.D?

(a) 1206

(b) 1210

(c) 1220

(d) 1230

Correct Choice: (b)

Solution:

Qutb al-Dīn Aibak [2] also spelled Qutb ud-Dīn Aibak or Qutub ud-Din Aybak, (1150–1210), was the founder of the Mamluk Dynasty in Delhi and the first sultan of the Delhi Sultanate. He was born a Turk of the Aybak tribe and was the sultan for only four years, 1206-1210. Qutb-ud-din Aibak was finally purchased by the ruler of Ghor in central Afghanistan, Sultan Muhammad Ghori. Qutb-ud-din Aibak gradually rose to the rank of a Commander and became a trusted slave of Sultan Ghori. The conquests of northern India were executed mainly by Qutb-ud-din Aibak, which helped Ghori to consolidate his position there. Gradually, as Sultan Ghori concentrated on Central Asia after 1192, he was given the independent charge of the conquests in India. Qutb-ud-din Aibak gave large sums of money in charity, thus earning the name LAKH BAKSH or giver of lakhs. In 1210, Qutb-ud-din Aibak died in an accident while he was playing polo. He fell from a horse and was severely injured. He was buried in Lahore near the Anarkali Bazaar. He was succeeded by Shamsuddin Iltutmish, another slave who rose to the level of a Sultan, thus extending the Slave/Mamluk Dynasty. He wasn't interested in expanding his territory instead wanted to settle problems in his present empire.

121. In tropical region which was cultivated as a major crop?

(a) Amaranth

(b) Paddy

(c) Wheat

(d) Maize

Correct Choice: (b)

Solution:

Rice is a crop of tropical climate. However, it is also grown successfully in humid to sub-humid regions under subtropical and temperate climate. Rice is cultivated in almost all types of soils with varying productivity. Under high temperature, high humidity with sufficient rainfall and irrigation facilities, rice can be grown in any type of soil. The major soil groups where rice is grown are riverine alluvium, red-yellow, red loamy, hill and sub-montane, Terai, laterite, coastal alluvium, red sandy, mixed red and black and medium and shallow black soils. Depending upon the climate and water availability rice is grown in all the three seasons, i.e. Kharif, Rabi and summer. Depending upon the variety crop duration vary from 100 to 150 days. In northern and western India (J and K, Himachal Pradesh, Punjab, Haryana, Uttaranchal, Uttar Pradesh, Gujarat, Rajasthan, Maharashtra) rice is grown mainly in Kharif, while in southern and eastern India it is grown round the year in three seasons with varying sowing time and periods. Rice originated at least 130 million years ago as wild grass. Cultivated rice, as we know it today, was first grown about 10,000 years ago in south-east Asia, probably in India. Rice is the world's most adaptable crop. It can be grown in desert, slash and burn forests, 3000-meter high mountains, 3 meters below sea level and 8 feet of flood water. Rice is not a tropical plant, but is still associated with a wet, humid climate. It is generally believed that the domestication of rice began somewhere in the Asian arc.

122. In temperate region which was cultivated as a major crop?

(a) Amaranth

(b) Paddy

(c) Wheat

(d) Pulses

Correct Choice: (c)

Solution:

Temperate agriculture usually refers to large scale industrial agriculture systems, in temperate areas which are prolific in terms of production outputs. A significant proportion of global agricultural production originates from temperate countries and this proportion is likely to increase with climate change. Temperate agriculture is characterised by sophisticated agronomic practices, intense mechanisation and use of inputs like groundwater irrigation, chemical fertilisers, pesticides and (in some instances) Genetically Modified Organisms (GMOs). A number of characteristics distinguish temperate from tropical agricultural systems: seasonality, leading to well-defined operations and growing periods and seasonally-dependent pest and disease incidence (although some tropical areas may also share some such seasonal characteristics); less weathered soils, with different fertility characteristics and slower soil organic matter dynamics; substantial inputs of fertilisers, agrochemicals or mechanisation in different combinations; substantial investment by the private sector favouring investment in "high-value" crops such as wheat, soya, oil seed rape (canola), maize (corn) and potato, and in improved grasslands, and globally, the highest yields.

123. Which refers to the physical state of the atmosphere within 24 hours?

(a) Humidity

(b) Rainfall

(c) Weather

(d) Pressure

Correct Choice: (c)



Solution:

Weather is the state of the atmosphere, describing for example the degree to which it is hot or cold, wet or dry, calm or stormy, clear or cloudy.[1] Most weather phenomena occur in the lowest level of the atmosphere, the troposphere,[2][3] just below the stratosphere. Weather refers to day-to-day temperature and precipitation activity, whereas climate is the term for the averaging of atmospheric conditions over longer periods of time.[4] When used without qualification, "weather" is generally understood to mean the weather of Earth. Weather is driven by air pressure, temperature and moisture differences between one place and another. These differences can occur due to the sun's angle at any particular spot, which varies with latitude. The strong temperature contrast between polar and tropical air gives rise to the largest scale atmospheric circulations: the Hadley Cell, the Ferrel Cell, the Polar Cell, and the jet stream. Weather systems in the mid-latitudes, such as extratropical cyclones, are caused by instabilities of the jet stream flow. Because the Earth's axis is tilted relative to its orbital plane, sunlight is incident at different angles at different times of the year. On Earth's surface, temperatures usually range  $\pm 40$  °C (-40 °F to 100 °F) annually. Over thousands of years, changes in Earth's orbit can affect the amount and distribution of solar energy received by the Earth, thus influencing long-term climate and global climate change. Surface temperature differences in turn cause pressure differences. Higher altitudes are cooler than lower altitudes, as most atmospheric heating is due to contact with the Earth's surface while radiative losses to space are mostly constant. Weather forecasting is the application of science and technology to predict the state of the atmosphere for a future time and a given location. The Earth's weather system is a chaotic system; as a result, small changes to one part of the system can grow to have large effects on the system as a whole. Human attempts to control the weather have occurred throughout history, and there is evidence that human activities such as agriculture and industry have modified weather patterns.

124. The word climate was derived from Greek word .....

- (a) Klima
- (b) Kalima
- (c) Kalik
- (d) Kultak

Correct Choice: (a)

Solution:

Climate (from Ancient Greek klima, meaning inclination) is commonly defined as the weather averaged over a long period.[7] The standard averaging period is 30 years,[8] but other periods may be used depending on the purpose. Climate also includes statistics other than the average, such as the magnitudes of day-to-day or year-to-year variations. The Intergovernmental Panel on Climate Change (IPCC) 2001 glossary definition is as follows: Climate in a narrow sense is usually defined as the "average weather," or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period ranging from months to thousands or millions of years. The classical period is 30 years, as defined by the World Meteorological Organization (WMO). These quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system

125. Climate was from Ancient Greek word "klima" what is the meaning for that word?

- (a) Arid
- (b) Humid
- (c) Inclination
- (d) Cold

Correct Choice: (c)

Solution:

Climate (from Ancient Greek klima, meaning inclination) is commonly defined as the weather averaged over a long period.[7] The standard averaging period is 30 years,[8] but other periods may be used depending on the purpose. Climate also includes statistics other than the average, such as the magnitudes of day-to-day or year-to-year variations. Climate is the statistics of weather over long periods of time.[1][2] It is measured by assessing the patterns of variation in temperature, humidity, atmospheric pressure, wind, precipitation, atmospheric particle count and other meteorological variables in a given region over long periods of time. Climate differs from weather, in that weather only describes the short-term conditions of these variables in a given region. A region's climate is generated by the climate system, which has five components: atmosphere, hydrosphere, cryosphere, lithosphere, and biosphere.

126. What is El Nino stands for?

- (a) "The Crowned Child"
- (b) "The God Child"
- (c) "The Christ Child"
- (d) None of the Above

Correct Choice: (c)

Solution:

El Niño (/el 'ni.n.jou/; Spanish: [el 'niño]) is the warm phase of the El Niño–Southern Oscillation (ENSO) and is associated with a band of warm ocean water that develops in the central and east-central equatorial Pacific (between approximately the International Date Line and 120°W), including the area off the Pacific coast of South America. The ENSO is the cycle of warm and cold sea surface temperature (SST) of the tropical central and eastern Pacific Ocean. El Niño is accompanied by high air pressure in the western Pacific and low air pressure in the eastern Pacific. El Niño phases are known to be close to four years, however, records demonstrate the cycles have lasted between two and seven years. During the development of El Niño, rainfalls develop between September–November.[1] The cool phase of ENSO is la Niña with SST in the eastern Pacific below average and air pressure high in the eastern and low in western Pacific. The ENSO cycle, both el Niño and la Niña, causes global changes in temperature and rainfall. Developing countries that depend on their own agriculture and fishing, particularly those bordering the Pacific Ocean, are usually most affected. In American Spanish, the capitalized term El Niño means "the boy". In this phase of the Oscillation, the pool of warm water in the Pacific near South America is often at its warmest about Christmas.[4] The original name of the phase, El Niño de Navidad, arose centuries ago, when Peruvian fishermen named the weather phenomenon after the newborn Christ.[5][6] La Niña, chosen as the "opposite" of El Niño, is American Spanish for "the girl".

127. The difference between the maximum and minimum temperatures of the day is called which range of temperature?

- (a) Balanced
- (b) Rapid
- (c) Moderate
- (d) Diurnal

Correct Choice: (d)

Solution:

The diurnal temperature range (DTR) is the difference between the daily maximum and minimum temperature. Changes in DTR have multiple possible causes (cloud cover, urban heat, land use change, aerosols, water vapor and greenhouse gases). Different regions are affected by different factors. Some researchers say decrease of DTR is evidence of "climate change". Others say the decrease in DTR leveled off in the 1990s. In 1997 Easterling et al ("Maximum and Minimum Temperature Trends for the Globe", Science, reported: "Analysis of the global mean surface air temperature has shown that its increase is due, at least in part, to differential changes in daily maximum and minimum temperatures, resulting in a narrowing of the diurnal temperature range (DTR).""Analysis has shown that this rise [i.e. global mean surface air temperature] has resulted, in part, from the daily minimum temperature increasing at a faster rate or decreasing at a slower rate than the daily maximum, resulting in a decrease in the DTR for many parts of the world. Decreases in the DTR were first identified in the United States, where large-area trends show that maximum temperatures have remained constant or have increased only slightly, whereas minimum temperatures have increased at a faster rate.""Local effects such as urban growth, irrigation, desertification, and variations in local land use can all affect the DTR; in particular, urbanized areas often show a narrower DTR than nearby rural areas. Large-scale climatic effects on the DTR include increases in cloud cover, surface evaporative cooling from precipitation, greenhouse gases, and tropospheric aerosols. Recent studies have demonstrated a strong relation between trends of the DTR and decreases in pan evaporation over the former Soviet Union and the United States, suggesting that the DTR decrease in these areas is influenced by increases of cloud amount and reduced insolation."The following figure from the above paper shows "Trends (in degrees Celsius per 100 years) for each 5° by 5° latitude-longitude grid box using only nonurban stations for annual maximum temperature, annual minimum temperature, and diurnal temperature range" for the period 1950 to 1993.

128. Which is the scientific study of atmosphere, focusing on weather process for short term?

- (a) Meteorology
- (b) oceanography
- (c) climatology
- (d) None of the above

Correct Choice: (a)

Solution:

Meteorological phenomena are observable weather events which illuminate and are explained by the science of meteorology. Those events are bound by the variables that exist in Earth's atmosphere. They are temperature, pressure, water vapor, and the gradients and interactions of each variable, and how they change in time. The majority of Earth's observed weather is located in the troposphere. Although meteorologists now rely heavily on computer models (numerical weather prediction), it is still relatively common to use techniques and conceptual models that were developed before computers were powerful enough to make predictions accurately or efficiently.

129. Ozone is important for all living beings on earth is called .....

- (a) Stratosphere
- (b) Ionosphere
- (c) Lithosphere
- (d) Ozonosphere

Correct Choice: (d)

Solution:

The ozone layer or ozone shield is a region of Earth's stratosphere that absorbs most of the Sun's ultraviolet radiation. It contains high concentration of ozone (O<sub>3</sub>) in relation to other parts of the atmosphere, although still small in relation to other gases in the stratosphere. The ozone layer contains less than 10 parts per million of ozone, while the average ozone concentration in Earth's atmosphere as a whole is about 0.3 parts per million. The ozone layer is mainly found in the lower portion of the stratosphere, from approximately 15 to 35 kilometers (9.3 to 21.7 mi) above Earth, although its thickness varies seasonally and geographically. The ozone layer was discovered in 1913 by the French physicists Charles Fabry and Henri Buisson. Measurements of the sun showed that the radiation sent out from its surface and reaching the ground on Earth is usually consistent with the spectrum of a black body with a temperature in the range of 5,500–6,000 K (5,227 to 5,727 °C), except that there was no radiation below a wavelength of about 310 nm at the ultraviolet end of the spectrum. It was deduced that the missing radiation was being absorbed by something in the atmosphere. Eventually the spectrum of the missing radiation was matched to only one known chemical, ozone.[2] Its properties were explored in detail by the British meteorologist G. M. B. Dobson, who developed a simple spectrophotometer (the Dobsonmeter) that could be used to measure stratospheric ozone from the ground. Between 1928 and 1958, Dobson established a worldwide network of ozone monitoring stations, which continue to operate to this day. The "Dobson unit", a convenient measure of the amount of ozone overhead, is named in his honor.

130. Which zone is defined by 23.5 degrees north latitude and 23.5 degrees south latitude?

- (a) Temperate (b) Torrid  
(c) Frigid (d) None of the above

Correct Choice: (b)

Solution:

The torrid zone refers to the area of the earth near the equator. As its name suggests, the torrid zone is generally warm. It has a wet and dry season but does not experience the four seasons familiar to residents of the temperate zones further from the equator. The warmth of the torrid zone influences its weather, ecosystems and geographic features. The torrid zone refers to the area of the earth between the Tropic of Cancer and the Tropic of Capricorn. Geographically, the torrid zone is defined by 23.5 degrees north latitude and 23.5 degrees south latitude. When thinking of the tropics, it's quite typical to think of abundant rainfall, lush plants and trees and varied animal life. The torrid zone contains all of these features and one important event that doesn't occur in the other climate zones: The sun is directly overhead at least once during the year in the torrid zone. The temperature in these tropical zones is warm and humid and generally moist year-round.

131. In 1800 how many chemical elements are listed?

- (a) 26 (b) 31  
(c) 38 (d) 42

Correct Choice: (b)

Solution:

In 1789, Antoine Lavoisier published a list of 33 chemical elements, grouping them into gases, metals, nonmetals, and earths; Chemists spent the next one hundred years searching for a more accurate classification scheme. In 1829, Johann Wolfgang Dobereiner observed that many of the elements could be grouped into "triads" based on their chemical properties. (Eg. Lithium, sodium, and potassium, were grouped together in a triad as soft, reactive metals). Russian chemistry professor Dmitri Mendeleev and German chemist Julius Lothar Meyer independently published their periodic tables in 1869 and 1870, respectively. Mendeleev's table was his first published version; that of Meyer was an expanded version of his (Meyer's) table of 1864.] They both constructed their tables by listing the elements in rows or columns in order of atomic weight and starting a new row or column when the characteristics of the elements began to repeat. The recognition given to Mendeleev's table came from two decisions he made. 1. He left gaps in the table when it seemed that the corresponding element had not yet been discovered. (Mendeleev was not the first chemist to do this, but he was the first to be recognized as using the trends in his periodic table to predict the properties of missing elements),

1. He ignored the order suggested by the atomic weights and switch adjacent elements, such as tellurium and iodine, to better classify them into chemical families.

132. How many periodic elements are listed in 1865?

- (a) 52 (b) 63  
(c) 68 (d) 75

Correct Choice: (b)

Solution:

In 1789, Antoine Lavoisier published a list of 33 chemical elements, grouping them into gases, metals, nonmetals, and earths; Chemists spent the next one hundred years searching for a more accurate classification scheme. Mendeleev's table was his first published version; that of Meyer was an expanded version of his (Meyer's) table of 1864.] They both constructed their tables by listing the elements in rows or columns in order of atomic weight and starting a new row or column when the characteristics of the elements began to repeat. There were 60 known elements in 1860 when Mendeleev published his Periodic Table. The Periodic Table of Elements: SCIENTISTS HAD IDENTIFIED over 60 elements by Mendeleev's time. (Today over 110 elements are known.) In Mendeleev's day the atom was considered the most basic particle of matter. The building blocks of atoms (electrons, protons, and neutrons) were discovered only later. What Mendeleev and chemists of his time could determine, however, was the atomic weight of each element: how heavy its atoms were in comparison to an atom of hydrogen, the lightest element.

133. How many periodic elements are listed in 2018?

- (a) 113 (b) 118  
(c) 120 (d) 129

Correct Choice: (b)

Solution:

The periodic table, also known as the periodic table of elements, is a tabular display of the chemical elements, which are arranged by atomic number, electron configuration, and recurring chemical properties. The structure of the table shows periodic trends. The seven rows of the table, called periods, generally have metals on the left and non-metals on the right. The columns, called groups, contain elements with similar chemical behaviours. Six groups have accepted names as well as assigned numbers: for example, group 17 elements are the halogens; and group 18 are the noble gases. Also displayed are four simple rectangular areas or blocks associated with the filling of different atomic orbitals. The elements from atomic numbers 1 (hydrogen) through 118 (oganesson) have been discovered or synthesized, completing seven full rows of the periodic table.[1][2] The first 94 elements all occur naturally, though some are found only in trace amounts and a few were discovered in nature only after having first been synthesized.[n 1] Elements 95 to 118 have only been synthesized in laboratories or nuclear reactors.[3] The synthesis of elements having higher atomic numbers is currently being pursued: these elements would begin an eighth row, and theoretical work has been done to suggest possible candidates for this extension. Numerous synthetic radionuclides of naturally occurring elements have also been produced in laboratories. Since 2016, the periodic table has 118 confirmed elements, from element 1 (hydrogen) to 118 (oganesson). Elements 113, 115, 117 and 118, the most recent discoveries, were officially confirmed by the International Union of Pure and Applied Chemistry (IUPAC) in December 2015. Their proposed names, nihonium (Nh), moscovium (Mc), tennessine (Ts) and oganesson (Og) respectively, were announced by the IUPAC in June 2016 and made official in November 2016.

134. In 1817 who suggested a relationship between the properties of elements and their atomic weights?

- (a) August Kekulé (b) Jean-Baptiste Dumas  
(c) Antoine Lavoisier (d) Dobereiner

Correct Choice: (d)

Solution:

In the history of the periodic table, Döbereiner's triads were an early attempt to sort the elements into some logical order by their physical properties. In 1817, a letter reported Johann Wolfgang Döbereiner's observations of the alkaline earths; namely, that strontium had properties that were intermediate to those of calcium and barium.[1] By 1829, Döbereiner had found other groups of three elements (hence "triads") whose physical properties were similarly related.[2] He also noted that some quantifiable properties of elements (e.g. atomic weight and density) in a triad followed a trend whereby the value of the middle element in the triad would be exactly or nearly predicted by taking the arithmetic mean of values for that property of the other two elements.

135. In Döbereiner's lamp which was used as a catalyst?

- (a) Gold (b) Bronze  
(c) Silver (d) Platinum

Correct Choice: (d)

Solution:

Johann Wolfgang Döbereiner (13 December 1780 – 24 March 1849) was a German chemist who is best known for work that foreshadowed the periodic law for the chemical elements and inventing the first lighter, which was known as the Döbereiner's lamp.[1] He became a professor of chemistry and pharmacy at the University of Jena. Döbereiner's lamp, also called a "tinderbox" ("Feuerzeug"), is a lighter invented in 1823 by the German chemist Johann Wolfgang Döbereiner; the lighter is based on the Fürstenberger lighter and was in production until ca. 1880. In the jar, similar to the Kipp's apparatus, zinc metal reacts with dilute sulfuric acid to produce hydrogen gas. When a valve is opened, a jet of hydrogen is released onto a platinum sponge. The sponge catalyzes a reaction with atmospheric oxygen, which heats the catalyst and ignites the hydrogen, producing a gentle flame.

136. From the zygote which organisms are usually develop?

- (a) Single cellular (b) Multicellular  
(c) Prokaryotes (d) Eukaryotes

Correct Choice: (b)

Solution:

A zygote (from Greek ζυγωτός zygōtós "joined" or "yoked", from ζυγοῦν zygoun "to join" or "to yoke") [1] is a eukaryotic cell formed by a fertilization event between two gametes. The zygote's genome is a combination of the DNA in each gamete, and contains all of the genetic information necessary to form a new individual. In multicellular organisms, the zygote is the earliest developmental stage. In single-celled organisms, the zygote can divide asexually by mitosis to produce identical offspring. The zygote represents the first stage in the development of a genetically unique organism. The joining of haploid gametes to produce a diploid zygote is a common feature in the sexual reproduction of all organisms except bacteria.

137. The term Meristem is derived from which Greek word?

- (a) Merizein (b) Meristas  
(c) Merist (d) Meristom

Correct Choice: (a)

Solution:

Meristem is a region of plant tissue consisting of undifferentiated or incompletely differentiated cells (meristematic cells) that are capable of cell division and growth and from which new cells are formed. Differentiated plant cells generally cannot divide or produce cells of a different type. Therefore, cell division in the meristem is required to provide new cells for expansion and differentiation of tissues and initiation of new organs, providing the basic structure of the plant body. These meristematic cells are analogous in function to stem cells in animals. Maintenance of the cells requires a balance between two antagonistic processes: organ initiation and stem cell population renewal. They have both the ability to renew themselves through mitotic cell division and the ability to differentiate into a diverse range of specialized cell types. The term "meristem" was first used by Karl Wilhelm von Nägeli (1817-1891) from his book "Beiträge zur Wissenschaftlichen Botanik" in 1858. It is derived from the Greek word "merizein," meaning to divide in recognition of its inherent function.

138. The term meristem was coined by Nageli in which year?

- (a) 1842 (b) 1858  
(c) 1867 (d) 1874

Correct Choice: (b)

Solution:

The term "meristem" was first used by Karl Wilhelm von Nägeli (1817-1891) from his book "Beiträge zur Wissenschaftlichen Botanik" in 1858. It is derived from the Greek word "merizein," meaning to divide in recognition of its inherent function. Meristem is a region of plant tissue consisting of undifferentiated or incompletely differentiated cells (meristematic cells) that are capable of cell division and growth and from which new cells are formed. Differentiated plant cells generally cannot divide or produce cells of a different type. Therefore, cell division in the meristem is required to provide new cells for expansion and differentiation of tissues and initiation of new organs, providing the basic structure of the plant body. These meristematic cells are analogous in function to stem cells in animals. Cellular differentiation is the process by which a less specialized cell becomes a more specialized cell type. Differentiation occurs numerous times during the development of a multicellular organism as the organism changes from a single zygote to a complex system of tissues and cell types. A cell that is able to differentiate into many cell types is known as pluripotent. These cells are called stem cells in animals and meristematic cells in higher plants.

139. Which meristem is present below the promeristem at shoot and root apices?

- (a) Primary Meristem (b) Secondary Meristem  
(c) Apical Meristem (d) Intercalary Meristem

Correct Choice: (a)

Solution:

Meristems are classified by their location in the plant as apical (located at root and shoot tips), lateral (in the vascular and cork cambia), and intercalary (at internodes, or stem regions between the places at which leaves attach, and leaf bases, especially of certain monocotyledons—e.g., grasses). Plant primary meristems: shared functions and regulatory mechanisms. Primary plant meristems are the shoot and root meristems that are initiated at opposite poles of the plant embryo. They contain stem cells, which remain undifferentiated, and supply new cells for growth and the formation of tissues. The apical meristem produces the three primary meristems, protoderm, procambium, and ground meristem, which develop into dermal tissues, vascular tissues, and ground tissues respectively.

140. Which Meristem is the outer layer of the young growing region which develops to form epidermal tissues?

- (a) Secondary Meristem (b) Primary Meristem

(c) Apical Meristem

(d) Protoderm Meristem

Correct Choice: (d)

Solution:

Meristematic tissues are a group of young cells that are in a continuous state of division. These tissues are mostly found at the apices of root and shoot. The formation of dermal tissue system in plant is attributable to protoderm. Dermal tissue system consists of epidermis/multiple epidermises and all other structures that occur on epidermis, e.g. stomata, hairs, glandular hairs etc.

141. Which is one of the most important non-metallic element?

(a) Sulfur

(b) Nitrogen

(c) Carbon

(d) Oxygen

Correct Choice: (c)

Solution:

In chemistry, a nonmetal (or non-metal) is a chemical element that mostly lacks metallic attributes. Physically, nonmetals tend to have relatively low melting and boiling points, and densities, are mostly brittle if solid, and are usually poor conductors of heat and electricity; chemically, they tend to have relatively high ionization energy, electron affinity, and electronegativity values, and gain or share electrons when they react with other elements or compounds. Seventeen elements are generally classified as nonmetals; most are gases (hydrogen, helium, nitrogen, oxygen, fluorine, neon, chlorine, argon, krypton, xenon and radon); one is a liquid (bromine), and a few are solids (carbon, phosphorus, sulfur, selenium, and iodine). Metalloids such as boron, silicon and germanium are sometimes counted as nonmetals. Carbon is a solid non-metal element. Pure carbon can exist in two very different forms - diamond and graphite. The table shows some differences between them. Diamond is the hardest natural substance on Earth, but it is also very brittle and will shatter if hit with a hammer. Carbon is not considered as a metalloid because its conductivity doesn't lie between conductivities of metal and non-metal. Conductivity of metalloids lies between that metal and non-metal. However there is an exception of graphite. Graphite is the most electrically conductive nonmetal, better than some metals.

142. Antoine Lavoisier named the carbon from the Latin word "Carbo" which means?

(a) Coal

(b) Oxides

(c) Graphite

(d) None of the above

Correct Choice: (a)

Solution:

Carbon (from Latin: carbo "coal") is a chemical element with symbol C and atomic number 6. It is nonmetallic and tetravalent—making four electrons available to form covalent chemical bonds. It belongs to group 14 of the periodic table.[13] Three isotopes occur naturally, <sup>12</sup>C and <sup>13</sup>C being stable, while <sup>14</sup>C is a radionuclide, decaying with a half-life of about 5,730 years.[14] Carbon is one of the few elements known since antiquity. Carbon is the 15th most abundant element in the Earth's crust, and the fourth most abundant element in the universe by mass after hydrogen, helium, and oxygen. Carbon's abundance, its unique diversity of organic compounds, and its unusual ability to form polymers at the temperatures commonly encountered on Earth enables this element to serve as a common element of all known life. It is the second most abundant element in the human body by mass (about 18.5%) after oxygen. The atoms of carbon can bond together in different ways, termed allotropes of carbon. The best known are graphite, diamond, and amorphous carbon.[17] The physical properties of carbon vary widely with the allotropic form. For example, graphite is opaque and black while diamond is highly transparent. Graphite is soft enough to form a streak on paper (hence its name, from the Greek verb "γράφειν" which means "to write"), while diamond is the hardest naturally occurring material known. Graphite is a good electrical conductor while diamond has a low electrical conductivity. Under normal conditions, diamond, carbon nanotubes, and graphene have the highest thermal conductivities of all known materials. All carbon allotropes are solids under normal conditions, with graphite being the most thermodynamically stable form at standard temperature and pressure. They are chemically resistant and require high temperature to react even with oxygen.

143. How many percentage of weight of the human body is carbon?

(a) 10%

(b) 12%

(c) 16%

(d) 18%

Correct Choice: (d)

Solution:

Carbon is a chemical element with symbol C and atomic number 6. Carbon is the 15th most abundant element in the Earth's crust, and the fourth most abundant element in the universe by mass after hydrogen, helium, and oxygen. Carbon's abundance, its unique diversity of organic compounds, and its unusual ability to form polymers at the temperatures commonly encountered on Earth enables this element to serve as a common element of all known life. It is the second most abundant element in the human body by mass (about 18.5%) after oxygen.

144. Which chemistry is also called as Living chemistry?

(a) Nitrogen

(b) Sulphur

(c) Oxygen

(d) Carbon

Correct Choice: (d)

Solution:

Carbon occurs extensively in all living organisms as proteins, fats, carbohydrates (sugars and starches), and nucleic acids. Carbon is such an important element that an entirely separate field of chemistry is devoted to this element and its compounds. Organic chemistry is the study of carbon compounds. Organic chemistry is the study of chemical compounds that contain carbon. Carbon can form chemical bonds with many chemical elements and other carbon atoms. This allows a nearly infinite number of organic compounds. The subject of carbon compounds is called organic chemistry because all known organisms, or living things, are made up of water and carbon compounds. Organic chemistry largely involves the synthesis, or formation, of organic products by chemical reaction using different reactants and reagents, the substances used up during a reaction. Several different areas of chemistry expand on the concepts and principles of organic chemistry, including biochemistry, microbiology, and medicine. The term organic originates from Jons Jacob Berzelius, a 19th century Swedish scientist, who used the term to refer to substances present in living things. During Berzelius' time, the vital force theory was popular. This theory stated that a life force was needed to produce the organic compounds found only in living things. The vital force theory began losing support after an 1828 experiment conducted by Friedrich Wöhler. His work showed that urea, an organic compound, could be created from ammonium cyanate, an inorganic compound.

145. Who is the Father of Modern Organic Chemistry?

(a) Friedrich Wöhler

(b) Antoine-Laurent de Lavoisier

(c) Justus Von Liebig

(d) Izaak Maurits Kolthoff

Correct Choice: (a)

Solution:

Friedrich Wöhler (German: [ˈvøːlɐ]; 31 July 1800 – 23 September 1882) was a German chemist, best known for his synthesis of urea, but also the first to isolate several chemical elements. Friedrich Wöhler is considered the father of Organic chemistry. He was able to synthesize an organic compound (Urea) from inorganic compounds in the laboratory. He ditched the idea that organic compounds can only be found in living things and cannot be synthesized in the laboratory. It was a student of Berzelius' who made the discovery that would result in the abandonment of Vitalism as a scientific theory. In 1828, Friedrich Wöhler discovered that urea - an organic compound - could be made by heating ammonium cyanate (an inorganic compound).

146. Which of the following was used as a Reducing agent?

(a) Carbon dioxide

(b) Carbon monoxide

(c) Calcium Carbide

(d) Carbon disulphide

Correct Choice: (b)

Solution:

Carbon monoxide (CO) is a colorless, odorless, and tasteless gas that is slightly less dense than air. It is toxic to animals that use hemoglobin as an oxygen carrier (both invertebrate and vertebrate) when encountered in concentrations above about 35 ppm, although it is also produced in normal animal metabolism in low quantities, and is thought to have some normal biological functions. In the atmosphere, it is spatially variable and short lived, having a role in the formation of ground-level ozone. Carbon monoxide consists of one carbon atom and one oxygen atom, connected by a triple bond that consists of two covalent bonds as well as one dative covalent bond. [5] It is the simplest oxocarbon and is isoelectronic with other triply-bonded diatomic molecules having ten valence electrons, including the cyanide anion, the nitrosonium cation and molecular nitrogen. In coordination complexes the carbon monoxide ligand is called carbonyl. Carbon monoxide is a strong reductive agent, and whilst not known, it has been used in pyrometallurgy to reduce metals from ores since ancient times. Carbon monoxide strips oxygen off metal oxides, reducing them to pure metal in high temperatures, forming carbon dioxide in the process. Carbon monoxide is not usually supplied as is, in gaseous phase, in the reactor, but rather it is formed in high temperature in presence of oxygen-carrying ore, carboniferous agent such as coke and high temperature. The blast furnace process is a typical example of a process of reduction of metal from ore with carbon monoxide.

147. What is the major class of catenated organic carbon compounds?

(a) Plastics

(b) Carbon filter

(c) Carbon steel

(d) Metal

Correct Choice: (a)

Solution:

Plastic is material consisting of any of a wide range of synthetic or semi-synthetic organic compounds that are malleable and so can be molded into solid objects. Plasticity is the general property of all materials which can deform irreversibly without breaking but, in the class of moldable polymers, this occurs to such a degree that their actual name derives from this specific ability. Plastics are typically organic polymers of high molecular mass and often contain other substances. They are usually synthetic, most commonly derived from petrochemicals, however, an array of variants are made from renewable materials such as polylactic acid from corn or cellulose from cotton linters. Due to their low cost, ease of manufacture, versatility, and imperviousness to water, plastics are used in a multitude of products of different scale, including paper clips and spacecraft. They have prevailed over traditional materials, such as wood, stone, horn and bone, leather, metal, glass, and ceramic, in some products previously left to natural materials. In developed economies, about a third of plastic is used in packaging and roughly the same in buildings in applications such as piping, plumbing or vinyl siding.[3] Other uses include automobiles (up to 20% plastic[3]), furniture, and toys.[3] In the developing world, the applications of plastic may differ — 42% of India's consumption is used in packaging

148. Which code represents the type of polymer used to make the plastic?

- (a) Vigenère Cipher code (b) Polyalphabetic code  
(c) Caesar Cipher code (d) Resin code

Correct Choice: (d)

Solution:

The ASTM International Resin Identification Coding System, often abbreviated as the RIC, is a set of symbols appearing on plastic products that identify the plastic resin out of which the product is made.[1] It was developed in 1988 by the Society of the Plastics Industry (now the Plastics Industry Association) in the United States, but since 2008 it has been administered by ASTM International, an international standards organization. The US Society of the Plastics Industry introduced the Resin Identification Code (RIC) system in 1988, when the organisation was called Society of the Plastics Industry, Inc. (SPI). The SPI stated that one purpose of the original SPI code was to "Provide a consistent national system to facilitate recycling of post-consumer plastics." [2] The system has been adopted by a growing number of communities implementing recycling programs, as a tool to assist in sorting plastics. In order to deal with the concerns of recyclers across the U.S., the RIC system was designed to make it easier for workers in materials recovery and recycling facilities to sort and separate items according to their resin type.[citation needed] Plastics must be recycled separately, with other like materials, in order to preserve the value of the recycled material, and enable its reuse in other products after being recycled.

149. The Resin Identification Code "1" signifies which plastic?

- (a) HDPE (b) PVC  
(c) PET (d) LDPE

Correct Choice: (c)

Solution:

Polyethylene terephthalate (sometimes written poly(ethylene terephthalate)), commonly abbreviated PET, PETE, or the obsolete PETP or PET-P, is the most common thermoplastic polymer resin of the polyester family and is used in fibres for clothing, containers for liquids and foods, thermoforming for manufacturing, and in combination with glass fibre for engineering resins. It may also be referred to by the brand names Terylene in the UK,[5] Lavsan in Russia and the former Soviet Union, and Dacron in the US. The majority of the world's PET production is for synthetic fibres (in excess of 60%), with bottle production accounting for about 30% of global demand.[6] In the context of textile applications, PET is referred to by its common name, polyester, whereas the acronym PET is generally used in relation to packaging. Polyester makes up about 18% of world polymer production and is the fourth-most-produced polymer after polyethylene (PE), polypropylene (PP) and polyvinyl chloride (PVC). PET consists of polymerized units of the monomer ethylene terephthalate, with repeating (C<sub>10</sub>H<sub>8</sub>O<sub>4</sub>) units. PET is commonly recycled, and has the number "1" as its resin identification code (RIC). Depending on its processing and thermal history, polyethylene terephthalate may exist both as an amorphous (transparent) and as a semi-crystalline polymer. The semicrystalline material might appear transparent (particle size less than 500 nm) or opaque and white (particle size up to a few micrometers) depending on its crystal structure and particle size. The monomer bis(2-hydroxyethyl) terephthalate can be synthesized by the esterification reaction between terephthalic acid and ethylene glycol with water as a byproduct, or by transesterification reaction between ethylene glycol and dimethyl terephthalate (DMT) with methanol as a byproduct. Polymerization is through an apolycondensation reaction of the monomers (done immediately after esterification/transesterification) with water as the byproduct. Plastic bottles made from PET are widely used for soft drinks (see carbonation). For certain specialty bottles, such as those designated for beer containment, PET sandwiches an additional polyvinyl alcohol (PVOH) layer to further reduce its oxygen permeability.

150. Resin Identification Code "2" signifies which plastic?

- (a) PET (b) HDPE  
(c) PP (d) PS

Correct Choice: (b)



Solution:

High-density polyethylene (HDPE) or polyethylene high-density (PEHD) is a thermoplastic polymer produced from the monomer ethylene. It is sometimes called "alkathene" or "polythene" when used for HDPE pipes.[1] With a high strength-to-density ratio, HDPE is used in the production of plastic bottles, corrosion-resistant piping, geomembranes and plastic lumber. HDPE is commonly recycled, and has the number "2" as its resin identification code. In 2007, the global HDPE market reached a volume of more than 30 million tons. HDPE is known for its large strength-to-density ratio.[3] The density of HDPE can range from 930 to 970 kg/m<sup>3</sup>. [4] Although the density of HDPE is only marginally higher than that of low-density polyethylene, [5] HDPE has little branching, giving it stronger intermolecular forces and tensile strength than LDPE. The difference in strength exceeds the difference in density, giving HDPE a higher specific strength. [6] It is also harder and more opaque and can withstand somewhat higher temperatures (120 °C/248 °F for short periods). High-density polyethylene, unlike polypropylene, cannot withstand normally required autoclaving conditions. The lack of branching is ensured by an appropriate choice of catalyst (e.g., Ziegler–Natta catalysts) and reaction conditions.

151. Resin Identification Code "3" signifies which type of plastic?

- |         |          |
|---------|----------|
| (a) PET | (b) HDPE |
| (c) PVC | (d) PS   |

Correct Choice: (c)

Solution:

Polyvinyl chloride (/ˌpɒlɪvaɪnəl ˈkloʊrɪd/; [5] colloquial: polyvinyl vinyl [6]; abbreviated: PVC) is the world's third-most widely produced synthetic plastic polymer, after polyethylene and polypropylene. [7] About 40 million tonnes are produced per year. PVC comes in two basic forms: rigid (sometimes abbreviated as RPVC) and flexible. The rigid form of PVC is used in construction for pipe and in profile applications such as doors and windows. It is also used in making bottles, non-food packaging, and cards (such as bank or membership cards). It can be made softer and more flexible by the addition of plasticizers, the most widely used being phthalates. In this form, it is also used in plumbing, electrical cable insulation, imitation leather, flooring, signage, phonograph records, [8] inflatable products, and many applications where it replaces rubber. [9] With cotton or linen, it is used to make canvas. Pure polyvinyl chloride is a white, brittle solid. It is insoluble in alcohol but slightly soluble in tetrahydrofuran.

152. Resin Identification Code "4" signifies which kind of plastic?

- |         |          |
|---------|----------|
| (a) PET | (b) HDPE |
| (c) PVC | (d) LDPE |

Correct Choice: (d)

Solution:

Low-density polyethylene (LDPE) is a thermoplastic made from the monomer ethylene. It was the first grade of polyethylene, produced in 1933 by Imperial Chemical Industries (ICI) using a high pressure process via free radical polymerization. [1] Its manufacture employs the same method today. The EPA estimates 5.7% of LDPE (recycling number 4) is recycled. [2] Despite competition from more modern polymers, LDPE continues to be an important plastic grade. In 2013 the worldwide LDPE market reached a volume of about US\$33 billion. LDPE is defined by a density range of 0.917–0.930 g/cm<sup>3</sup>. [4] It is not reactive at room temperatures, except by strong oxidizing agents, and some solvents cause swelling. It can withstand temperatures of 80 °C continuously and 90 °C (194 °F) for a short time. Made in translucent or opaque variations, it is quite flexible and tough. LDPE has more branching (on about 2% of the carbon atoms) than HDPE, so its intermolecular forces (instantaneous-dipole induced-dipole attraction) are weaker, its tensile strength is lower, and its resilience is higher. Also, because its molecules are less tightly packed and less crystalline due to the side branches, its density is lower. When exposed to ambient solar radiation the plastic produces two greenhouse gases, methane and ethylene. Due to its low density properties (branching) it breaks down more easily over time, leading to higher surface areas. The production of these trace gases from virgin LDPE increase with surface area/time, with rates at the end of a 212-day incubation of 5.8 nmol g<sup>-1</sup> d<sup>-1</sup> of methane, 14.5 nmol g<sup>-1</sup> d<sup>-1</sup> of ethylene, 3.9 nmol g<sup>-1</sup> d<sup>-1</sup> of ethane and 9.7 nmol g<sup>-1</sup> d<sup>-1</sup> of propylene. When incubated in air, LDPE emits gases at rates ~2 times and ~76 times higher in comparison to water for methane and ethylene, respectively.

153. Resin Identification Code "5" signifies which kind of plastic?

- |         |          |
|---------|----------|
| (a) PET | (b) HDPE |
| (c) PVC | (d) PP   |

Correct Choice: (d)

Solution:

Polypropylene (PP), also known as polypropene, is a thermoplastic polymer used in a wide variety of applications. It is produced via chain-growth polymerization from the monomer propylene. Polypropylene belongs to the group of polyolefins and is partially crystalline and non-polar. Its properties are similar to polyethylene, but it is slightly harder and more heat resistant. It is a white, mechanically rugged material and has a high chemical resistance.[1] Polypropylene is the second-most widely produced commodity plastic (after polyethylene) and it is often used in packaging and labeling. In 2013, the global market for polypropylene was about 55 million tonnes. Phillips Petroleum chemists J. Paul Hogan and Robert Banks first polymerized propylene in 1951.[3] Propylene was first polymerized to a crystalline isotactic polymer by Giulio Natta as well as by the German chemist Karl Rehn in March 1954.[4] This pioneering discovery led to large-scale commercial production of isotactic polypropylene by the Italian firm Montecatini from 1957 onwards.[5] Syndiotactic polypropylene was also first synthesized by Natta and his coworkers. After polyethylene, polypropylene is the most important plastic with revenues expected to exceed US\$145 billion by 2019. The sales of this material are forecast to grow at a rate of 5.8% per year until 2021

154. Resin Identification Code "6" signifies which kind of plastic?

- (a) PET (b) PVC  
(c) PP (d) PS

Correct Choice: (d)

Solution:

Polystyrene (PS) / ˈpɒlɪˈstaɪrɪn/ is a synthetic aromatic hydrocarbon polymer made from the monomer styrene.[5] Polystyrene can be solid or foamed. General-purpose polystyrene is clear, hard, and rather brittle. It is an inexpensive resin per unit weight. It is a rather poor barrier to oxygen and water vapour and has a relatively low melting point.[6] Polystyrene is one of the most widely used plastics, the scale of its production being several million tonnes per year.[7] Polystyrene can be naturally transparent, but can be coloured with colourants. Uses include protective packaging (such as packing peanuts and CD and DVD cases), containers, lids, bottles, trays, tumblers, disposable cutlery [6] and in the making of models. As a thermoplastic polymer, polystyrene is in a solid (glassy) state at room temperature but flows if heated above about 100 °C, its glass transition temperature. It becomes rigid again when cooled. This temperature behaviour is exploited for extrusion (as in Styrofoam) and also for molding and vacuum forming, since it can be cast into molds with fine detail. Polystyrene is slow to biodegrade and is therefore a focus of controversy among environmentalists. It is increasingly abundant as a form of litter in the outdoor environment, particularly along shores and waterways, especially in its foam form, and also in increasing quantities in the Pacific Ocean. Polystyrene was discovered in 1839 by Eduard Simon, an apothecary from Berlin.[9] From storax, the resin of the American sweetgum tree *Liquidambar styraciflua*, he distilled an oily substance, a monomer that he named styrol. Several days later, Simon found that the styrol had thickened into a jelly he dubbed styrol oxide ("Styroloxyd") because he presumed an oxidation. By 1845 Jamaican-born chemist John Buddle Blyth and German chemist August Wilhelm von Hofmann showed that the same transformation of styrol took place in the absence of oxygen.[10] They called the product "metastyrol"; analysis showed that it was chemically identical to Simon's Styroloxyd.[11] In 1866 Marcellin Berthelot correctly identified the formation of metastyrol/Styroloxyd from styrol as a polymerisation process.[12] About 80 years later it was realized that heating of styrol starts a chain reaction that produces macromolecules, following the thesis of German organic chemist Hermann Staudinger (1881–1965). This eventually led to the substance receiving its present name, polystyrene.

155. Resin Identification Code "7" signifies which kind of plastic?

- (a) PET (b) PVC  
(c) PP (d) PLA

Correct Choice: (d)

Solution:

Poly(lactic acid) or polylactic acid or polylactide (PLA) is a biodegradable and bioactive thermoplastic aliphatic polyester derived from renewable biomass, typically from fermented plant starch such as from corn, cassava, sugarcane or sugar beet pulp. In 2010, PLA had the second highest consumption volume of any bioplastic of the world. The name "polylactic acid" does not comply with IUPAC standard nomenclature, and is potentially ambiguous or confusing, because PLA is not a polyacid (polyelectrolyte), but rather a polyester. PLA is used as a feedstock material in desktop fused filament fabrication 3D printers (e.g. RepRap).[28][29] PLA printed solids can be encased in plaster-like moulding materials, then burned out in a furnace, so that the resulting void can be filled with molten metal. This is known as "lost PLA casting", a type of investment casting. Being able to degrade into innocuous lactic acid, PLA is used as medical implants in the form of anchors, screws, plates, pins, rods, and as a mesh.[31] Depending on the exact type used, it breaks down inside the body within 6 months to 2 years. This gradual degradation is desirable for a support structure, because it gradually transfers the load to the body (e.g. the bone) as that area heals. The strength characteristics of PLA and PLLA implants are well documented. PLA can also be used as a decomposable packaging material, either cast, injection-molded, or spun.[31] Cups and bags have been made from this material. In the form of a film, it shrinks upon heating, allowing it to be used in shrink tunnels. It is useful for producing loose-fill packaging, compost bags, food packaging, and disposable tableware. In the form of fibers and nonwoven fabrics, PLA also has many potential uses, for example as upholstery, disposable garments, awnings, feminine hygiene products, and diapers. Thanks to its biocompatibility and biodegradability, PLA has also found ample interest as a polymeric scaffold for drug delivery purposes. Racemic and regular PLLA has a low glass transition temperature, which is undesirable. A stereocomplex of PDLA and PLLA has a higher glass transition temperatures, lending it more mechanical strength. It has a wide range of applications, such as woven shirts (ironability), microwavable trays, hot-fill applications and even engineering plastics (in this case, the stereocomplex is blended with a rubber-like polymer such as ABS). Such blends also have good form stability and visual transparency, making them useful for low-end packaging applications. Pure poly-L-lactic acid (PLLA), on the other hand, is the main ingredient in Sculptra, a long-lasting facial volume enhancer, primarily used for lipotrophy of cheeks. Progress in biotechnology has resulted in the development of commercial production of the D enantiomer form, something that was not possible until recently. PLA is also used in the e-tobacco industry. Philip Morris's iQOS heats include PLA to slow the vapour down without absorbing it, giving it time to cool to a more pleasant temperature before inhaling it.

156. Which branch of agriculture deals with cultivation of fruits, vegetables, and ornamental plants?

- (a) Kitchen gardening
- (b) Commercial gardening
- (c) Horticulture
- (d) Olericulture

Correct Choice: (c)

Solution:

Horticulture has a very long history.[6] The study and science of horticulture dates all the way back to the times of Cyrus the Great of ancient Persia, and has been going on ever since, with present-day horticulturists such as Freeman S. Howlett and Luther Burbank. The practice of horticulture can be retraced for many thousands of years. The cultivation of taro and yam in Papua New Guinea dates back to at least 6950–6440 cal BP.[7] The origins of horticulture lie in the transition of human communities from nomadic hunter-gatherers to sedentary or semi-sedentary horticultural communities, cultivating a variety of crops on a small scale around their dwellings or in specialized plots visited occasionally during migrations from one area to the next (such as the "milpa" or maize field of Mesoamerican cultures).[8] In the Pre-Columbian Amazon Rainforest, natives are believed to have used biochar to enhance soil productivity by smoldering plant waste.[9] European settlers called it Terra Preta de Indio.[10] In forest areas such horticulture is often carried out in swiddens ("slash and burn" areas).[11] A characteristic of horticultural communities is that useful trees are often to be found planted around communities or specially retained from the natural ecosystem. Horticulture has been defined as the culture of plants for food, comfort and beauty.[1] A more precise definition can be given as "The cultivation, processing, and sale of fruits, nuts, vegetables, ornamental plants, and flowers as well as many additional services".[2] It also includes plant conservation, landscape restoration, soil management, landscape and garden design, construction, and maintenance, and arboriculture. In contrast to agriculture, horticulture does not include large-scale crop production or animal husbandry. Horticulturists apply their knowledge, skills, and technologies used to grow intensively produced plants for human food and non-food uses and for personal or social needs. Their work involves plant propagation and cultivation with the aim of improving plant growth, yields, quality, nutritional value, and resistance to insects, diseases, and environmental stresses. They work as gardeners, growers, therapists, designers, and technical advisors in the food and non-food sectors of horticulture. Horticulture even refers to the growing of plants in a field or garden.

157. Fruit farming is also called as.....

- (a) Olericulture
- (b) Pomology
- (c) Floriculture
- (d) Landscape gardening

Correct Choice: (b)

Solution:

Pomology (from latin pomum (fruit) + -logy) is a branch of botany that studies and cultivates fruit. The denomination fruticulture—introduced from Romance languages (from Latin fructus and cultura)—is also used. Pomological research is mainly focused on the development, enhancement, cultivation and physiological studies of fruit trees. The goals of fruit tree improvement include enhancement of fruit quality, regulation of production periods, and reduction of production cost. One involved in the science of pomology is called a pomologist. During the mid-19th century in the United States, farmers were expanding fruit orchard programs in response to growing markets. At the same time, horticulturists from the USDA and agricultural colleges were bringing new varieties to the United States from foreign expeditions, and developing experimental lots for these fruits. In response to this increased interest and activity, USDA established the Division of Pomology in 1886 and named Henry E. Van Deman as chief pomologist. An important focus of the division was to publish illustrated accounts of new varieties and to disseminate research findings to fruit growers and breeders through special publications and annual reports. During this period Andrew Jackson Downing and his brother Charles were prominent in Pomology and Horticulture, producing *The Fruits and Fruit Trees of America* (1845). The introduction of new varieties required exact depiction of the fruit so that plant breeders could accurately document and disseminate their research results. Since the use of scientific photography was not widespread in the late 19th Century, USDA commissioned artists to create watercolor illustrations of newly introduced cultivars. Many of the watercolors were used for lithographic reproductions in USDA publications, such as the *Report of the Pomologist* and the *Yearbook of Agriculture*. Today, the collection of approximately 7,700 watercolors is preserved in the National Agricultural Library's Special Collections,[2] where it serves as a major historic and botanic resource to a variety of researchers, including horticulturists, historians, artists, and publishers. The study of pomology has somewhat dwindled over the past century.

158. Vegetable farming is otherwise called as.....

- (a) Pomology
- (b) Olericulture
- (c) Floriculture
- (d) Landscape gardening

Correct Choice: (b)

Solution:

Olericulture is the science of vegetable growing, dealing with the culture of non-woody (herbaceous) plants for food. Olericulture is the production of plants for use of the edible parts. Vegetable crops can be classified into 9 major categories: Potherbs and greens – spinach and collards Salad crops – lettuce, celery Cole crops – cabbage and cauliflower Root crops (tubers) – potatoes, beets, carrots, radishes Bulb crops – onions, leeks Legumes – beans, peas Cucurbits – melons, squash, cucumber Solanaceous crops – tomatoes, peppers potatoes Sweet corn Olericulture deals with the production, storage, processing and marketing of vegetables. It encompasses crop establishment, including cultivar selection, seedbed preparation and establishment of vegetable crops by seed and transplants. It also includes maintenance and care of vegetable crops as well commercial and non-traditional vegetable crop production including organic gardening and organic farming; sustainable agriculture and horticulture; hydroponics; and biotechnology.

159. Give one example for Vegetable forcing

- (a) Brinjal
- (b) Tomato
- (c) Cabbage
- (d) All the above

Correct Choice: (d)

Solution:

It is the method of growing of vegetables out of their normal in sellers, heated buildings, greenhouses, cold farms and under other artificial growing conditions. It is the most intensive type of vegetable growing. Vegetable produced through these, give a very high return, vegetable forcing is not possible because the consumers cannot afford the prices of such vegetables. According to Choudhury (1997) growing of the summer vegetables, on the river beds during the winter months with the help of organic manure, with breaks of dry grass is also type of forcing. Some times for early product seedlings of crops like tomato or brinjal are forced to germinate in small protected structures. This may also be a type of vegetable forcing. Low cost with high quality and convenience in storage and use, have given rise to vegetable processing in India. But this industry is still not well-developed People also in general, have not yet developed liking for the canned and processed vegetables in India. Still we need vegetables of good quality for canning, dehydration and freezing in our existing factories. Pickling and fermentation also require vegetables. For these also we must grow good vegetables. Vegetables for processing are generally grown around vegetables processing factories, for the regular supply of vegetables to the factories

160. India stands first in the world in the production of which vegetables ?

- (a) Peas and Onion
- (b) Potato and Lady's finger
- (c) Brinjal and Cabbage
- (d) cauliflower and tomato

Correct Choice: (b)

Solution:

The production of Potato is maximum among all the vegetables produced in the country. In Potato production, India is on second place in the world after China. Potato is also grown in largest area of the country. India ranks first in the world with 5,784.0 thousand tonnes (72% of the total world production) of ladyfinger/okra.

161. where is the birth place of democracy ?

- (a) America (b) France  
(c) Greece (d) AUSTRALIA

Correct Choice: (c)

Solution:

ATHENS – BIRTHPLACE OF DEMOCRACY. Ancient Athens was called Athenai, which is plural, since the city was actually a collection of villages that would eventually be called Athens. The Greeks believed that the city was named for the goddess Athena. Athens began as a hilltop fort on the Acropolis. This was a perfect defensive location, surrounded by a ring of mountains and fertile land. One of the most important religious sites in the city was the Temple of Athena, known as the Parthenon. The most important religious site was the Erechtheion. Named for an Athenian king, it housed sacred shrines. The site is also home to a legendary olive tree, a symbol of peace and prosperity that the ancients believed Athena planted herself. The Acropolis contains the ruins of temples and monuments, which collectively are a masterpiece of classical Greek architecture. The classic Greek orders of architecture are Doric, Ionic and Corinthian. The Doric style is featured at the New York City Custom House, built in 1834. At its peak during the 5th and 4th centuries BC, Athens had more than 300,000 residents, most of whom were slaves or foreigners who had no political rights. Only about 20 percent of the citizens were eligible to vote. Many people left the city after the conquests of Alexander the Great in the 4th century. It was also during this period that the philosophers Socrates, Plato and Aristotle were expanding the realms of knowledge and reason. Sophocles, Euripides and Aeschylus were writing literary works that would become classics. Athens was ruled by an aristocracy called the Eupatridae, or well-born. This group had exclusive rights and privileges. During this time, it was the wealthiest state on the Greek mainland, but the majority of its residents were excluded. Civil unrest broke out. The statesman and lawmaker Solon was appointed to create a new constitution. He would go on to lay the groundwork for Athenian democracy. The reforms that Solon implemented were both political and economic. Slavery was no longer used as a punishment for debt. Large estates were broken up. Trade and commerce were increased.

162. Which country has had a long history of a successful direct democracy?

- (a) USA (b) Switzerland  
(c) UK (d) France

Correct Choice: (b)

Solution:

The Swiss Parliament consists of two houses: the Council of States which has 46 representatives (two from each canton and one from each half-canton) who are elected under a system determined by each canton, and the National Council, which consists of 200 members who are elected under a system of proportional representation, depending on the population of each canton. Members of both houses serve for 4 years and only serve as members of parliament part-time (so-called Milizsystem or citizen legislature). [56] When both houses are in joint session, they are known collectively as the Federal Assembly. Through referendums, citizens may challenge any law passed by parliament and through initiatives, introduce amendments to the federal constitution, thus making Switzerland a direct democracy. Direct democracy and federalism are hallmarks of the Swiss political system. [58] Swiss citizens are subject to three legal jurisdictions: the municipality, canton and federal levels. The 1848 and 1999 Swiss Constitutions define a system of direct democracy (sometimes called half-direct or representative direct democracy because it is aided by the more commonplace institutions of a representative democracy). The instruments of this system at the federal level, known as popular rights (German: Volksrechte, French: droits populaires, Italian: diritti popolari), [59] include the right to submit a federal initiative and a referendum, both of which may overturn parliamentary decisions. By calling a federal referendum, a group of citizens may challenge a law passed by parliament, if they gather 50,000 signatures against the law within 100 days. If so, a national vote is scheduled where voters decide by a simple majority whether to accept or reject the law. Any 8 cantons together can also call a constitutional referendum on a federal law. Similarly, the federal constitutional initiative allows citizens to put a constitutional amendment to a national vote, if 100,000 voters sign the proposed amendment within 18 months. [note 8] The Federal Council and the Federal Assembly can supplement the proposed amendment with a counter-proposal, and then voters must indicate a preference on the ballot in case both proposals are accepted. Constitutional amendments, whether introduced by initiative or in parliament, must be accepted by a double majority of the national popular vote and the cantonal popular votes.

163. Which country was under Parliamentary Democracy?

- (a) USA (b) Canada  
(c) England (d) France

Correct Choice: (c)

Solution:

The United Kingdom is a unitary state with devolution that is governed within the framework of a parliamentary democracy under a constitutional monarchy in which the monarch, currently Queen Elizabeth II, is the head of state while the Prime Minister of the United Kingdom, currently Theresa May, is the head of government. Executive power is exercised by the British government, on behalf of and by the consent of the monarch, as well as by the devolved governments of Scotland and Wales and the Northern Ireland Executive. Legislative power is vested in the two chambers of the Parliament of the United Kingdom, the House of Commons and the House of Lords, as well as in the Scottish Parliament and Welsh and Northern Ireland assemblies. The judiciary is independent of the executive and the legislature. The highest court is the Supreme Court of the United Kingdom. The UK political system is a multi-party system. Since the 1920s, the two dominant parties have been the Conservative Party and the Labour Party. Before the Labour Party rose in British politics, the Liberal Party was the other major political party, along with the Conservatives. While coalition and minority governments have been an occasional feature of parliamentary politics, the first-past-the-post electoral system used for general elections tends to maintain the dominance of these two parties, though each has in the past century relied upon a third party, such as the Liberal Democrats, to deliver a working majority in Parliament. A Conservative–Liberal Democrat coalition government held office from 2010 until 2015, the first coalition since 1945.[1] The coalition ended following parliamentary elections on 7 May 2015, in which the Conservative Party won an outright majority of 330 seats in the House of Commons, while their coalition partners lost all but eight seats. The constitution of the United Kingdom is uncodified, being made up of constitutional conventions, statutes and other elements such as EU law. This system of government, known as the Westminster system, has been adopted by other countries, especially those that were formerly parts of the British Empire. The United Kingdom is also responsible for several dependencies, which fall into two categories: the Crown dependencies, in the immediate vicinity of the UK, and British Overseas Territories, which originated as colonies of the British Empire.

164. Which country was under Presidential Democracy?

- (a) India
- (b) England
- (c) France
- (d) USA

Correct Choice: (d)

Solution:

The United States uses a presidential system of government and is a stable democracy; therefore, it is advisable for new democracies to also choose presidential systems of government. The United States is arguably the most powerful and prosperous nation in the world and has had a successful stable democracy under presidential government for over 200 years. So surely therefore new democracies in the modern day should adopt the presidential system of government used by the United States? In this essay I will discuss this issue. Even though the United States uses presidentialism, the majority of the world's stable democracies actually use a form of parliamentary government including. The other main feature being no overlap in membership between the executive and the legislature therefore the president cannot buy congressional votes with the promise of jobs in the government. In terms of a parliamentary government system, unlike the presidential system the executive is organically linked to the legislature. The three main features would include that the governing parties emerge from the assembly. Government ministers are usually drawn from, and remain members of the legislature. Also the head of the government (Prime Minister, premier or chancellor) and the council of ministers (cabinet) can be dismissed from office through a vote of no confidence by parliament. The third feature would be the executive is collegial, taking the form of a cabinet in which the prime minister is traditionally just first among equals. This plural executive differs greatly from the focus on a single chief executive in presidentialism. It should be noted that the post of the prime minister is separate from that of a ceremonial head of state while presidents are the head of government as well as the head of state.

165. When was the International Day of Democracy celebrated?

- (a) 12th september
- (b) 15th september
- (c) 18th september
- (d) 20th september

Correct Choice: (b)

Solution:

In 2007 the United Nations General Assembly resolved to observe 15 September as the International Day of Democracy—with the purpose of promoting and upholding the principles of democracy—and invited all member states and organizations to commemorate the day in an appropriate manner that contributes to raising public awareness. In September 1997 the Inter-Parliamentary Union (IPU) adopted a Universal Declaration on Democracy.[2] That Declaration affirms the principles of democracy, the elements and exercise of democratic government, and the international scope of democracy. The international conferences on new and restored democracies[3] (ICNRD process) began in 1988 under the initiative of President Corazon C. Aquino of the Philippines after the so-called peaceful "People Power Revolution" overthrew the 20-year dictatorship of Ferdinand Marcos. Initially an inter-governmental forum, the ICNRD process developed into a tripartite structure with participation of governments, parliaments and civil society. The sixth conference (ICNRD-6) that took place in Doha, Qatar, in 2006 reinforced the tripartite nature of the process and concluded with a declaration and Plan of Action which reaffirmed the fundamental principles and values of democracy. Following up on the outcome of ICNRD-6, an advisory board set up by the chair of the process – Qatar – decided to promote an International Day of Democracy. Qatar took the lead in drafting the text of a United Nations General Assembly resolution and convened consultations with UN member states. At the suggestion of the IPU, 15 September (date of the Universal Declaration on Democracy) was chosen as the day when the international community would celebrate each year the International Day of Democracy. The resolution entitled "Support by the United Nations system of efforts of Governments to promote and consolidate new or restored democracies", [4] was adopted by consensus on 8 November 2007.

166. Which is the oldest local body in India?

- (a) Madurai (b) Bangalore  
(c) Neyveli (d) Chennai

Correct Choice: (d)

Solution:

The Greater Chennai Corporation (previously Madras) is the Oldest Municipal Institution in India established on the 29th September 1688. A charter was issued on the 30th December, 1607 by East Indian Company constituting the "Town of Fort St. George" and all the territories thereunto belonging, not exceeding the distance of ten miles from the Fort, into a Corporation. The Parliamentary Act of 1792 gave the Corporation power to levy Municipal Taxes in the City. The Municipal administration properly commenced from the Parliamentary Act, 1792 making provision for the good order and administration of the city. The Municipal Act has been amended introducing from time to time major changes in the constitution and powers of the Corporation. The Madras Municipal Corporation Act, 1919 (as amended) provides the basic Statutory authority for the administration now. Sir Josiah Child, one of the directors of the East India Company was responsible for the formation of the Greater Chennai Corporation, on the model of Dutch Government in the East Indies. On 29th September 1688, the corporation was inaugurated with power to decide petty cases, levy rates upon the inhabitants for building of schools, a town hall and a jail. Mr. Nathaniel Higginson was nominated as First mayor with 12 aldermen and 60 burgesses. The Council of 200 councilors is headed by the Honorable Mayor and Council meets ordinarily once in a month. The executive wing is headed by the Commissioner. There are Deputy Commissioners and various Heads of Departments and 15 Zonal Officers at present.

167. Which is the first Municipality in Tamil Nadu?

- (a) Kanchipuram (b) Chennai  
(c) Madurai (d) Walajapet

Correct Choice: (d)

Solution:

Walajapet is a town or municipality and a part of Vellore district in the state of Tamil Nadu. The streets in the town form a square shape which is a unique feature of the town. It will be easy for you to reach any part of the town with this kind of infrastructure. The streets are wide and nicely structured. As of 2011, the town had a population of 32,397. This town, located in the Vellore district, and Suburban of Vellore city is considered to be the first municipality and taluk of Tamil Nadu, believed to have been formed in 1866. According to 2011 census, Walajapet had a population of 32,397 with a sex-ratio of 1,031 females for every 1,000 males, much above the national average of 929.[1] A total of 3,249 were under the age of six, constituting 1,675 males and 1,574 females. Scheduled Castes and Scheduled Tribes accounted for 12.19% and .16% of the population respectively. The average literacy of the town was 77.25%, compared to the national average of 72.99%.[1] The town had a total of 7,598 households. There were a total of 12,223 workers, comprising 50 cultivators, 66 main agricultural labourers, 1,270 in house hold industries, 10,204 other workers, 633 marginal workers, 8 marginal cultivators, 18 marginal agricultural labourers, 182 marginal workers in household industries and 425 other marginal workers.[2] As per the religious census of 2011, Walajapet had 86.2% Hindus, 12.26% Muslims, 1.21% Christians, 0.03% Sikhs, 0.02% Buddhists, 0.11% Jains, 0.14% following other religions and 0.02% following no religion or did not indicate any religious preference.[3]

168. Which district has the most number of municipalities?

- (a) Dindigul (b) Walajapet  
(c) Kanchipuram (d) Virudhunagar

Correct Choice: (c)

Solution:

Kanchipuram district has the most number of municipalities. Kanchipuram district is one of the districts in Chennai in the northeast of the state of Tamil Nadu in India. The area comprising the present day Kanchipuram district was earlier a part of Chengalpattu district. The original Chengalpattu district was split in the year 1997 to form the present day Kanchipuram and Tiruvallur districts.

169. Which was the first state to introduce a town Panchayat in the whole of India?

(a) Andhra Pradesh

(b) Tamil Nadu

(c) Rajasthan

(d) Gujarat

Correct Choice: (b)

Solution:

A town panchayat or panchayat is a small town of approximately 20,000 to 25,000 inhabitants. It is formed under the panchayati raj administrative system.[1] In census data, the abbreviation T.P. is used to indicate a "town panchayat".[2] Tamil Nadu was the first state to introduce the panchayat town as an intermediate step between rural villages and urban local bodies (ULB). Tamil Nadu, the 11th largest state in India. As of 2014, the state had 33 districts, 12 municipal corporations and 146 municipalities. On 10 April 2013, the state government announced in the Assembly that Thanjavur and Dindigul municipalities will be upgraded to a municipal corporation.

170. Which District has the highest number of Panchayat Unions ?

(a) Kanchipuram

(b) Vellore

(c) Nilgiris

(d) Villupuram

Correct Choice: (d)

Solution:

Viluppuram (also Villupuram or Vizhupuram) is one of the 33 districts which make up the state of Tamil Nadu, situated on the southern tip of India. The district headquarters is located at Viluppuram. The district was founded on September 30, 1993, when it was created out of the South Arcot district. Viluppuram is the largest district in the state. It lies between the Tiruchirapalli and Chennai national highways. It is well-connected by rail and road, and is a major rail junction. This district has several tourist spots which are more than 500 years old, such as the Gingee Fort. Viluppuram is named after a class of people known as "Vizhupparaiyar" (விழுப்பரையர்). One of the famous Tamil poets Jayamkondar wrote a book titled "Karanai Vizhupparaiyan Madal" (also known as Aadhinatha Valamadal) in praise of Aadhinathan Vizhupparaiyan who served as a commander in the army of Kulottunga Chola I. The town came to be known as the "Vizhupparaiyan" sect named after him. They are also known as "Vizhupaadharaiyar".[2][3] Viluppuram is also affectionately called as "Vizhima Nagaram" (விழிமா நகரம்) in Tamil, meaning "town with wide-eyed people."

171. How many numbers of Panchayat Unions in Villupuram District?

(a) 14

(b) 20

(c) 22

(d) 28

Correct Choice: (c)

Solution:

Viluppuram (also Villupuram or Vizhupuram) is one of the 33 districts which make up the state of Tamil Nadu, situated on the southern tip of India. The district headquarters is located at Viluppuram. The district was founded on September 30, 1993, when it was created out of the South Arcot district. Viluppuram is the largest district in the state. It lies between the Tiruchirapalli and Chennai national highways. It is well-connected by rail and road, and is a major rail junction. This district has several tourist spots which are more than 500 years old, such as the Gingee Fort. At present Viluppuram district comprises 1490 revenue villages, 4 revenue divisions, 13 administrative taluks, 22 blocks, 15 town panchayat unions, 1099 village panchayats, and 3 municipalities. The general geological formation of the district appears to be simple. The more significant part of it is covered by the metamorphic rocks belonging to the genesis family. There are also three great groups of sedimentary rocks belonging to different geological periods. The Kalrayan Hills in the north represents a continuous range of hills covered with some thorny forests and vegetation. Among the hills, the most beautiful part of the district lies around the Gingee hills.

172. Which Districts have the lowest number of Panchayat Unions?

(a) Kanchipuram

(b) Vellore

(c) Viluppuram

(d) Nilgiris

Correct Choice: (d)



Solution:

At the intermediate level, there are 385 Panchayat Unions (Blocks) in the State. The average number of Panchayat Unions per district is 13. The Nilgiris (4) has the lowest number of Panchayat Unions while Villupuram (22) has the highest. The Nilgiris District has been headed by a government-appointed Collector since 1868. The first was James W. Breeks, who was called Commissioner. Since then there have been more than 100 men who have held the post. They were responsible for overseeing the various Departments active within the District. The district comprises six taluks: Udhamandalam (Ooty/Ootacamund), Kundah, Coonoor, Kotagiri, Gudalur and Pandalur. These are divided among four panchayat unions: Udhamandalam, Coonoor, Kotagiri and Gudalur. Besides four Municipalities of Ooty, Coonoor, Gudalur and Nelliyalam, there is a Wellington Cantonment and Aruvankadu Township. The district consists of 56 revenue villages and 15 revenue firkas. There are two revenue divisions here, Coonoor and Gudalur. For local concerns, the Nilgiris also has 35 village panchayats and 13 town panchayats

173. In which year the Panchayat Raj Act was enacted ?

- (a) 1990 (b) 1991  
(c) 1992 (d) 1996

Correct Choice: (c)

Solution:

In India, April 24th is celebrated as National Panchayati Raj Diwas every year. The day marks the passing of the Constitution Act (73rd Amendment), 1992, that came into existence with effect from April 24, 1993. The enactment of the 73rd amendment is applauded as a defining moment in history as it permits states to take steps to organize village panchayats and provide them with necessary powers and authority necessary to help them to function as units of self-government. Every year on this day Union Ministry of Panchayati Raj organises National Conference and awards best performing Gram Panchayats with 'The Panchayat Shashaktikaran Puraskar/Rashtriya Gaurav Gram Sabha Puraskar'.

174. Who visited Nalanda and wrote his useful travel accounts, which help us understand the condition of India during Harsha's reign?

- (a) Chandragupta II (b) Chandragupta I  
(c) Hiuen Tsang (d) Vishnugupta

Correct Choice: (c)

Solution:

Hsuan Tsang was born in AD 602 at present day's Henan province, China. Since childhood Hsuan Tsang used to read Chinese religious books and traveled all across China in search of good books on Buddhism. After finding some contradictions in the text books on Buddhism, he decided to travel to India in search of true explanations, as India was the birthplace of Buddha. After reaching India, he spent 17 years of his life here. During his entire stay Hsuan Tsang was traveling, exploring, imbibing and learning. Hsuan Tsang recorded his travel details in the Chinese text the Great Tang Records on the Western Regions. Hsuan Tsang left Ssu-ch'uan without a travel permit in 627. He left this place very secretly as it was against law to travel abroad in China. Though he was on the main route but after his experience at first outpost where Hsuan Tsang was stopped he made a detour. Now he was into a place where there were no signs of life. All along his way, Hsuan Tsang faced many challenges and crossed deserts and mountains, passed through the central Asiatic regions of Turfan, Karashahr, Tashkent, Samarkand, and Bactria. But this didn't stop him from visiting India. After traveling about 34 kingdoms he finally entered India in 631 through Hindu Kush. He spent near about two years in northwest India and then went to Ganges region for visiting sacred Buddhist place. His travel included Kapilavastu (birthplace of Buddha), Benares; Sarnath (places where Buddha delivered lectures), Bodhgaya (Buddha accomplished Nirvana at this place) and then to Nalanda (Buddhist learning center in India). For 15 months Hsuan Tsang studied at Nalanda to learn Sanskrit. He even studied Indian philosophy, grammar and logic. He was a great scholar and King Harsha of Northern India came to know about him while he was going back to his country. The king made his travel back to China much easier. Hsuan Tsang left India in 643 and reached Ch'ang-an in 645. Back home he was offered a ministerial position but he refused it, as he wanted to complete his religious work. He started translating Sanskrit texts that he brought from India and successfully completed the translation of more than 600 Buddhist texts. Hsuan Tsang's translations contained some of the most important Mahayana writings. All through his journey, he kept a journal of his exceptional travel, observations and experiences that later known as the Hsi-yü Chi or Great Tang Records on the Western Regions. At present, this is a single written record of conditions of India and other Western countries at that time. Hsuan Tsang was indeed a great traveler and scholar whose travel to India is still helping historians to find out many answers about Indian civilization then.

175. Who were the first to construct temples which evolved from the earlier tradition of rock-cut shrines?

- (a) Ashoka (b) Guptas  
(c) Aryabhatta (d) Varahamihira

Correct Choice: (b)

Solution:

Indian rock-cut architecture is more various and found in greater abundance in that country than any other form of rock-cut architecture around the world.[1] Rock-cut architecture is the practice of creating a structure by carving it out of solid natural rock. Rock that is not part of the structure is removed until the only rock left makes up the architectural elements of the excavated interior. Indian rock-cut architecture is mostly religious in nature. In India, caves have long been regarded as sacred places. Caves that were enlarged or entirely man-made were believed to be as sacred as natural caves. The sanctuary in all Indian religious structures, even free-standing ones, was designed to have the same cave-like feeling, as it is generally small and dark, without natural light.[5] The oldest rock-cut architecture is found in the Barabar caves, Bihar, which were built around the 3rd century BC. Other early cave temples are found in the western Deccan; these are mostly Buddhist shrines and monasteries, dating between 100 BC and 170 AD. Originally, there were probably wooden structures associated with them, which would have deteriorated over time. The Guptas were the first to construct temples which evolved from the earlier tradition of rock-cut shrines.

176. Father is four times the age of his daughter. If after 5 years, he would be three times of daughter's age, then further after 5 years, how many times he would be of his daughter's age?

- (a) 1.5 times (b) 2 times  
(c) 2.5 times (d) 3 times

Correct Choice: (c)

Solution:

Let the daughter's age be  $x$  and father's age be  $4x$ .

So as per question,  $4x + 5 = 3(x + 5)$ . Solving equation, we get,  $x = 10$ .

Hence present age of daughter is 10 years and present age of father is 40 years.

So after  $5 + 5 = 10$  years, daughter age would be 20 years and father's age would be 50 years.

Hence father would be  $\frac{50}{20} = 2.5$  times of daughter's age.

177. What is Anwar's present age, if after 22 years his age will be 12 times his age 10 years back?

- (a) 7 years (b) 9 years  
(c) 11.5 years (d) 12.9 years

Correct Choice: (d)

Solution:

Let's Anwar's present age be  $x$

Anwar's age after 22 years =  $(x + 22)$

are given that, Anwar's age after 22 years  $(x + 22)$  is 12 times his age 10 years back,  $12(x - 10)$

Therefore,  $(x + 22) = 12(x - 10)$

Solving the equation, we get  $x + 22 = 12x - 120$

$11x = 142$ ,  $x = 12.9$  years

178. In the first 10 overs of a cricket game, the run rate was only 4.2. What should be the run rate in the remaining 60 overs to reach the target of 282 runs?

- (a) 4 (b) 6  
(c) 12 (d)

Correct Choice: (a)

Solution:

Required run rate =  $(282 - 4.2 \times 10) / 60 = 4$

179. The average of 25 numbers is zero. Of them, at the most, how many may be greater than zero?

- (a) 20 (b) 22  
(c) 24 (d) 26

Correct Choice: (c)

Solution:

Average of 25 numbers = 0.

Sum of 25 numbers  $(0 \times 25) = 0$ .

It is quite possible that 24 of these numbers may be positive and if their sum is  $a$  then 25th number is  $(-a)$ .

180. Look at this series: 17, 20, 18, 21, 19, 22, ... What number should come next?

- (a) 18 (b) 20  
(c) 22 (d) 24

Correct Choice: (b)

Solution:

This is a simple alternating addition and subtraction series. In the first pattern, 3 is added; in the second, 2 is subtracted.

181. Look at this series: 46, 44, 40, 38, 34, ... What number should come next?

- (a) 36 (b) 34  
(c) 32 (d) 30

Correct Choice: (c)

Solution:

This is an alternating number subtraction series. First, 2 is subtracted, then 4, then 2, and so on.

182. Two students appeared at an examination. One of them secured 12 marks more than the other and his marks was 58% of the sum of their marks. The marks obtained by them are:

- (a) 50,41 (b) 51,42  
(c) 54,42 (d) 56,44

Correct Choice: (d)

Solution:

Let their marks be  $(x + 11)$  and  $x$ .

$$\text{Then, } x + 11 = \frac{58}{100}(x + 11 + x) \Rightarrow 25(x + 12) = 14(2x + 12) \Rightarrow 3x = 132 \Rightarrow x = \frac{132}{3} = 44$$

So, their marks are 56 and 44.

183. A fruit seller had some apples. He sells 60% apples and still has 440 apples. Originally, he had:

- (a) 800 apples (b) 900 apples  
(c) 1100 apples (d) 1150 apples

Correct Choice: (c)

Solution:

Suppose originally he had  $x$  apples.

Then,  $(100 - 60)\%$  of  $x = 440$ .

$$\frac{40}{100} \times x = 440$$

$$x = 440 \times \frac{100}{40} =$$

1100 apples

184. The sum of ages of 4 children born at the intervals of 3 years each is 50 years. What is the age of the youngest child?

- (a) 4 years (b) 8 years  
(c) 10 years (d) 12 years

Correct Choice: (b)

Solution:

Let the ages of children be  $x$ ,  $(x + 3)$ ,  $(x + 6)$  and  $(x + 9)$  years.

$$\text{Then, } x + (x + 3) + (x + 6) + (x + 9) = 50$$

$$4x = 32$$

$$x = 8$$

Age of the youngest child =  $x = 8$  years.

185. A father said to his son, "I was as old as you are at the present at the time of your birth". If the father's age is 48 years now, the son's age five years back was:

- (a) 13 years (b) 15 years  
(c) 17 years (d) 19 years

Correct Choice: (d)

Solution:

Let the son's present age be  $x$  years. Then,  $(38 - x) = x$

$$2x = 48.$$

$$x = 24.$$

Son's age 5 years back  $(24 - 5) =$

19 years.

186. Arjun and Babu can together finish a work 40 days. They worked together for 30 days and then Babu left. After another 30 days, Arjun finished the remaining work. In how many days Arjun alone can finish the work?

- (a) 90 days (b) 100 days  
(c) 110 days (d) 120 days

Correct Choice: (d)

Solution:

$$(\text{Arjun} + \text{Babu})\text{'s } 30\text{day's work} = \frac{1}{40} \times 30 = \frac{3}{4}$$

$$\text{Remaining work} = 1 - \frac{3}{4} = \frac{1}{4}$$

Now  $\frac{1}{4}$  work is done by Arjun in 30days.

Therefore, the whole work will be done by Arjun in  $30 \times 4 = 120$ days.

187. 20 women can complete a work in 7 days and 20 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?

(a) 8

(b) 12

(c) 14

(d) 16

Correct Choice: (c)

Solution:

$$1 \text{ woman's } 1 \text{ day's work} = \frac{1}{140}$$

$$1 \text{ child's } 1 \text{ day's work} = \frac{1}{280}$$

$$(5 \text{ women} + 10 \text{ children})\text{'s day's work} = \frac{5}{140} + \frac{10}{280} =$$

$$\frac{1}{28} + \frac{1}{28} = \frac{2}{28} = \frac{1}{14}$$

5 women and 10 children will complete the work in 14 days.

188. There are 9 green 11 red balls. Two balls are selected one by one without replacement. Find the probability that first is green and second is red.

(a)  $\frac{7}{12}$

(b)  $\frac{8}{12}$

(c)  $\frac{9}{12}$

(d)  $\frac{10}{12}$

Correct Choice: (c)

Solution:

$$P(G) \times P(R) = \frac{9}{12} \times \frac{11}{11} = \frac{9}{12}$$

189. Three dice are rolled together. What is the probability as getting at least one '5'?

(a) 200/216

(b) 204/216

(c) 208/216

(d) 210/216

Correct Choice: (c)

Solution:

Total number of ways =  $6 \times 6 \times 6 = 216$ . Probability of getting number '3' at least one time =  $1 - (\text{Probability of getting no number } 4) = 1 - (4/6) \times (4/6) \times (4/6) = 208/216$

190. Anil, Balu and Chaun jointly thought of engaging themselves in a business venture. It was agreed that Anil would invest Rs. 6500 for 5 months, Babu, Rs. 8400 for 5 months and Chaun, Rs. 10,000 for 2 months. Anil wants to be the working member for which, he was to receive 5% of the profits. The profit earned was Rs. 7400. Calculate the share of Balu in the profit.

(a) Rs.15289

(b) Rs.15380

(c) Rs.15960

(d) Rs.16660

Correct Choice: (c)

Solution:

For managing, Anil received = 5% of Rs. 7400 = Rs. 370.

Balance = Rs. (7400 - 370) = Rs. 7030.

Ratio of their investments = (6500 x 5) : (8400 x 5) : (10000 x 2)

= 32500 : 42000 : 20000

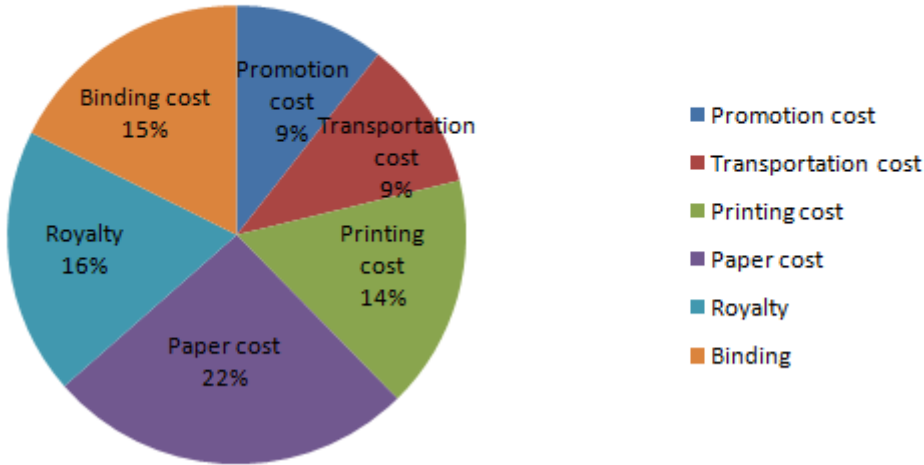
65 : 84 : 40

Balu's share = Rs.  $7030 \times \frac{84}{37} = \text{Rs. } 15960$

191. (Direction. Q.No.16-24) The following pie-chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie-chart and the answer the questions based on it.

Various Expenditures (in percentage) Incurred in Publishing a Book

# Sales



If for a certain quantity of books, the publisher has to pay Rs. 30,600 as printing cost, then what will be amount of royalty to be paid for these books?

- (a) Rs.26500 (b) Rs.26505  
 (c) Rs.26675 (d) Rs.26775

Correct Choice: (d)  
 Solution:

Let the amount of Royalty to be paid for these books be Rs. r.  
 Then, 16 : 14 = 30600 : r => r = Rs.(30600x14/16)=Rs.26775

192. What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

- (a) 53° (b) 55°  
 (c) 56° (d) 57°

Correct Choice: (d)  
 Solution:

Central angle corresponding to Royalty = (15% of 360)°  
 $\frac{16}{100} \times 360$ °  
 =57.6(approximately)=57°

193. The price of the book is marked 20% above the C.P. If the marked price of the book is Rs. 180, then what is the cost of the paper used in a single copy of the book?

- (a) Rs.30 (b) Rs.33  
 (c) Rs.35 (d) Rs.37

Correct Choice: (b)  
 Solution:

Clearly, marked price of the book = 120% of C.P.  
 Clearly, marked price of the book = 120% of C.P.  
 Also, cost of paper = 22% of C.P.  
 Let the cost of paper for a single book be Rs. n.  
 Then, 120 : 22 = 180 : n => n = Rs.(22x180/120)=  
 Rs.33

194. If 5500 copies are published and the transportation cost on them amounts to Rs. 82500, then what should be the selling price of the book so that the publisher can earn a profit of 25%?

- (a) Rs.203.90 (b) Rs.205.13  
 (c) Rs.207.30 (d) Rs.208.33

Correct Choice: (d)  
 Solution:

For the publisher to earn a profit of 25%, S.P. = 125% of C.P.  
 Also Transportation Cost = 9% of C.P.  
 Let the S.P. of 5500 books be Rs. x.  
 Then, 9 : 125 = 82500 : x => x = Rs. (125 x 82500/9)=Rs.1145833.33  
 Therefore S.P. of one book = Rs.(1145833.33/5500)=Rs.208.33

195. Royalty on the book is less than the printing cost by:

- (a) 12% (b) 14%  
 (c) 16% (d) 18%

Correct Choice: (b)

Solution:

Printing Cost of book = 14% of C.P.

Royalty on book = 16% of C.P.

Difference = (14% of C.P.) - (16% of C.P.) = 2% of C.P.

Therefore Percentage difference = (Difference/Printing Cost x 100) = (2% of C.P./Printing Cost x 100)% =

14.28%(approximately)

196. If the difference between the two expenditures are represented by  $30^\circ$  in the pie-chart, then these expenditures possibly are

- (a) Binding Cost and Promotion Cost (b) Paper Cost and Royalty  
 (c) Binding Cost and Printing Cost (d) Paper Cost and Printing Cost

Correct Choice: (d)

Solution:

Central angle of  $30^\circ = (30/360 \times 100)\%$  of the total expenditure

= 8% of the total expenditure.

From the given chart it is clear that:

Out of the given combinations, only in combination (d) the difference is 5% i.e.

Paper Cost - Printing Cost = (22% - 14%) of the total expenditure = 8% of the total expenditure.

197. For an edition of 12,500 copies, the amount of Royalty paid by the publisher is Rs. 2,81,250. What should be the selling price of the book if the publisher desires a profit of 5%?

- (a) Rs. 147.65 (b) Rs. 157.50  
 (c) Rs. 152.50 (d) Rs. 167.50

Correct Choice: (d)

Solution:

Clearly, S.P. of the book = 105% of C.P.

Let the selling price of this edition (of 12500 books) be Rs. x.

Then,  $16 : 105 = 281250 : x \Rightarrow x = \text{Rs.}(105 \times 281250/16) =$

Rs.1845703.12

Therefore S.P. of one book = Rs.(1845703.12/12500)=Rs.147.65

198. If for an edition of the book, the cost of paper is Rs. 56250, then find the promotion cost for this edition.

- (a) Rs. 20,000 (b) Rs. 22,500  
 (c) Rs. 23,011 (d) Rs. 25,500

Correct Choice: (c)

Solution:

Let the Promotion Cost for this edition be Rs. p.

Then,  $22 : 9 = 56250 : p \Rightarrow p = \text{Rs.}(56250 \times 9/22) = \text{Rs.}23011.36(\text{approximately})$

199. Which two expenditures together have central angle of  $89^\circ$ ?

- (a) Biding Cost and Transportation Cost (b) Printing Cost and Paper Cost  
 (c) Royalty and Promotion Cost (d) Binding Cost and Paper Cost

Correct Choice: (a)

Solution:

Central angle of  $89^\circ = (89/360 \times 100)\%$  of the total expenditure

= 24% of the total expenditure.

From the pie chart it is clear that:

Binding Cost + Transportation Cost = (15% + 9%) of the total expenditure = 24% of the total expenditure.

Therefore Binding Cost and Transportation Cost together have a central angle of  $89^\circ$ .

200. Look at this series: 57, 57,44,44,31,31 ... What number should come next?

- (a) 20 (b) 18  
 (c) 16 (d) 14

Correct Choice: (b)

Solution:

In this series, each number is repeated, then 13 is subtracted to arrive at the next number.