SSC CHSL Previous Paper 32 (Held On: 21 Oct 2020 Shift 2) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2020 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. Select the INCORRECTLY spelt word.

(a) Pnemonia
(b) Deviation
(c) Miscellaneous
(d) Preamble

Q2. Select the word that means the same as the given group of words.

A person weak and disabled by illness

(a) Athlete
(b) Invalid
(c) Activist
(d) Petitioner

Q3. Select the most appropriate word to fill in the blank.

The police used tear gas to _____ the crowd.

(a) attack
(b) disburse
(c) collect
(d) disperse

Q4. Select the most appropriate meaning of the given idiom.

Take something with a pinch of salt

(a) To think of oneself as always right
(b) To consider everyone a liar
(c) To believe only part of something
(d) To take long to understand what is being said

Directions

In the following passage, some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

All her life Ms Foster had a great fear of missing a train, a plane, a boat, or ___(1)__ a theatre curtain. In other respects, she was not a _(2)__ nervous woman. But the mere thought of _(3)__ on occasions like these would throw her _(4)__ such a nervous state that a tiny muscle in the corner of her left eye would _(5)___ twitch. This would disappear once she had boarded the plane etc.

Q5. Select the most appropriate option for blank No. 5.

(a) begun over
(b) begun to
(c) begin to

(d) began to

Q6. Select the most appropriate option for blank No. 4.

(a) away
(b) into
(c) up
(d) in

Q7. Select the most appropriate option for blank No. 3.

(a) being late
(b) be later
(c) be late
(d) being later

Q8. Select the most appropriate option for blank No. 2.

(a) particularly
(b) usual
(c) general
(d) particular

Q9. Select the most appropriate option for blank No. 1.

(a) hardly
(b) even
(c) extremely
(d) quite

Q10. Select the most appropriate word to fill in the blank.

Ritu is an _____ reader. I always find her with a book.

(a) irritated
(b) avid
(c) inattentive
(d) erratic

Q11. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement'.

For the last two years Shweta has being diligently working with Rohingya refugees to create colourful table mats using their local weaving techniques.

(a) have been
(b) have being
(c) No improvement
(d) has been

Q12. Given below are four jumbled sentences. Pick the option that gives their correct order.

A. Finally, she takes the decision to go searching for livelihood in the nearby town.

B. They are: Lakua and his wife, Nathuni.

C. The latter, burdened with a paralytic husband and two children, battles to survive.

D. The film 'Wayfarers' narrates the journey of a poor couple in Jharkhand.

(a) DBCA
(b) DBAC
(c) CDAB
(d) BACD

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Q13. In the sentence identify the segment which contains the grammatical error.

You must make a choice immediately because there is few time left.

(a) a choice immediately
(b) because there is
(c) few time left
(d) You must make

Q14. Select the word that means the same as the given group of words.

Happening every two years

(a) Biannual
(b) Biennial
(c) Centennial
(d) Triennial

Q15. Select the most appropriate ANTONYM of the given word.

PROLIFIC

(a) Unproductive
(b) Abundant
(c) Several
(d) Rich

Q16. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No improvement'.

The Delhi Birla International School alumnus occupy leading positions in different areas of profession and service.

(a) alumni occupy
(b) alumnus occupying
(c) alumnus occupies
(d) No improvement

Q17. Select the most appropriate meaning of the given idiom.

Full of sound and fury

(a) An angry and unruly mob
(b) Someone who gets angry very quickly
(c) Merely loud and angry words but ineffective
(d) A fiery and effective speaker

Q18. Given below are four jumbled sentences. Pick the option that gives their correct order.

A. The Emperor would view the comic acts from the jharokha, a special window of his palace.
B. On the festival of Holi, the Emperor was entertained with mimicry, impersonation and play - acting.
C. Bahadur Shah Jafar's life and times are described in a book called 'City of my heart.'
D. Finally, the most talented of the performers would be generously awarded by the king.

(a) ADBC
(b) CBAD
(c) DACB
(d) CDBA

Q19. Select the correct passive form of the given sentence.

Chhattisgarh organised the first-ever 'All India Folk Dance Festival' in January 2020.

(a) The first-ever 'All India Folk Dance Festival' was organised by Chhattisgarh in January 2020.
(b) The first-ever 'All India Folk Dance Festival' was being organised by Chhattisgarh in January 2020.
(c) The first-ever 'All India Folk Dance Festival' had been organised by Chhattisgarh in January 2020.
(d) The first-ever 'All India Folk Dance Festival' will be organised by Chhattisgarh in January 2020.

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Q20. Select the most appropriate synonym of the given word.

PEDIGREE

(a) Forbidden
(b) Illegitimate
(c) Lineage
(d) Pediment

Q21. In the sentence identify the segment which contains the grammatical error.

Subhash Gidwani is selling dolls, which are type of Madhya Pradesh's village culture, at the Annual Dastakar Bazaar, held in January every year in Delhi.

(a) which are type of Madhya Pradesh's village culture
(b) held in January every year in Delhi
(c) Subhash Gidwani is selling dolls
(d) at the annual Dastakar Bazaar

Q22. Select the most appropriate synonym of the given word.

CONGENIAL

(a) Compatible
(b) Bombastic
(c) Aloof
(d) Servile

Q23. Select the correct indirect form of given sentence.

The foreigner said to the farmer, "Can you tell me the way to the nearest hotel?"

(a) The foreigner exclaimed with the farmer if he could tell him the way to the nearest hotel.
(b) The foreigner suggested the farmer if he could tell him the way to the nearest hotel.
(c) The foreigner asked the farmer if he could tell him the way to the nearest hotel.
(d) The foreigner told the farmer if he could tell him the way to the nearest hotel.

Q24. Select the most appropriate ANTONYM of the given word.

PACIFIST

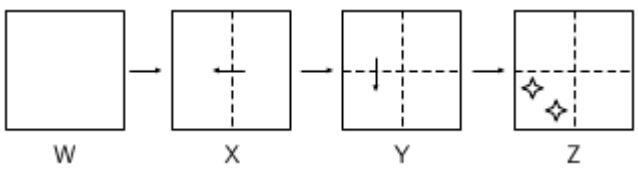
(a) Orator
(b) Peacemaker
(c) Warmonger
(d) Nihilist

Q25. Select the INCORRECTLY spelt word.

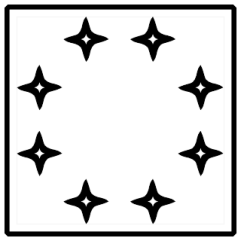
(a) Expanse
(b) Resultant
(c) Constraint
(d) Conscentious

GENERAL INTELLIGENCE

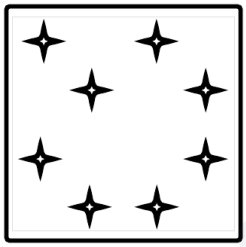
Q26. The sequence of folding a paper and the manner in which the folded paper has been cut is shown in the following figures. How would this paper look when unfolded ?



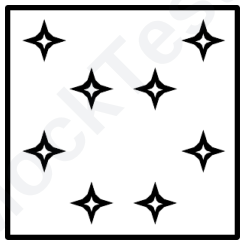
(a)



(b)



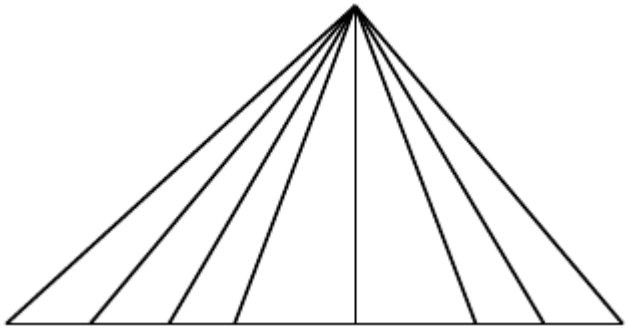
(c)



(d)



Q27. How many triangles are there in the following figure ?



(a) 14
(b) 20
(c) 24
(d) 28

Q28. Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

dabx_dab_ _d_b_xdab_x

(a) axdaxx
(b) xxxaxx

(c) xxcbxa
(d) dxadad

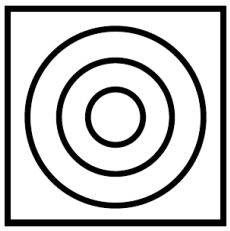
Q29. Select the correct combination of mathematical signs to replace 'A' sequentially and balance the following equation.
40 A 2 A 3 A 4 A 15
(a) ÷, ×, =, -
(b) ÷, ×, =, ×
(c) ×, ÷, +, =
(d) ×, =, -, ÷

Q30. In a certain language, 'TRAFFIC' is written as 'VTCHHKE'. How will 'POLICE' be written as in that language ?
(a) RQNKEG
(b) RMNGEC
(c) ONKHBD
(d) RMJGEC

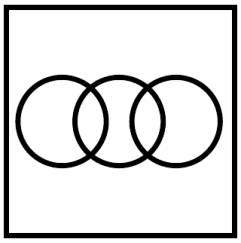
Q31. In a certain language, 'TELEVISION' is written as 'OPJTJWFMFU'. How will 'REMOTE' be written as in that language ?
(a) SFNPUF
(b) PUPFNS
(c) FUPNFS
(d) ETOMER

Q32. The rate of onion increased from Rs. 70 per kilogram to Rs. 120 per kilogram within a month. By what percentage (approximate) did the rate of onion increase?
(a) 75.2%
(b) 65%
(c) 80%
(d) 71.5%

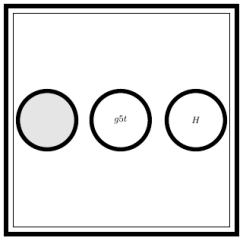
Q33. Select the Venn diagram that best represents the relationship between the following classes
Dirham, USD, Currency
(a)



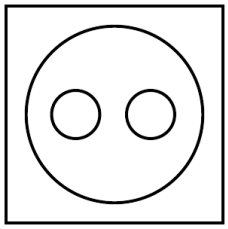
(b)



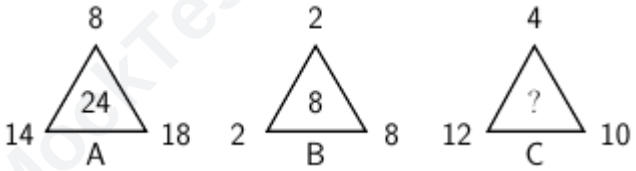
(c)



(d)



Q34. Select the number that can replace the question mark (?) in the following figure series.



(a) 6
(b) 22
(c) 2
(d) 18

Q35. Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

COAT : APZV :: ROAD : ?

(a) PQZF
(b) PPZF
(c) TNCC
(d) SPBE

Q36. Introducing a boy, I said, "His mother is the only daughter of my mother in law". How am I related to the boy ?

(a) Brother
(b) Father
(c) Nephew
(d) Brother-in-law

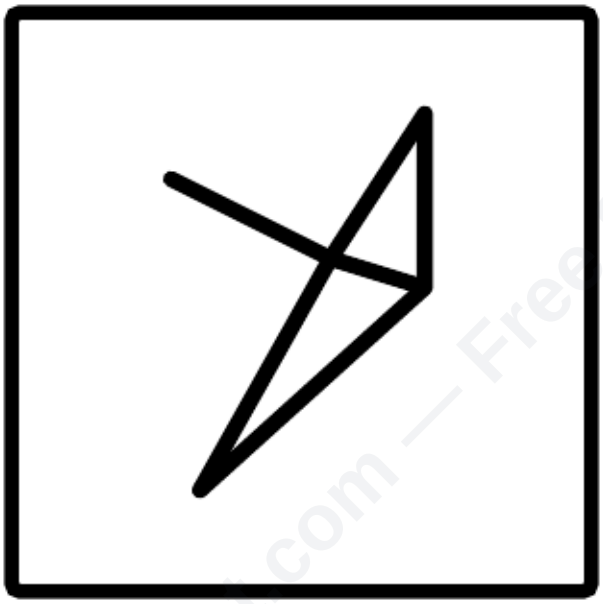
Q37. Select the number that can replace the question mark (?) in the following series.

6, 7, 16, 51, 208, ?

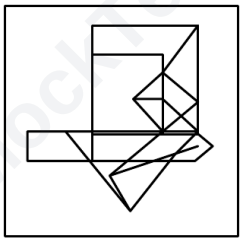
(a) 2000
(b) 1250
(c) 1045
(d) 2570

Q38. Select the option in which the given figure is embedded. (Rotation is not allowed)

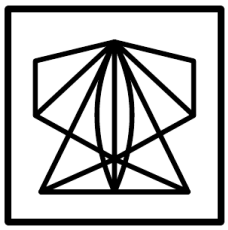
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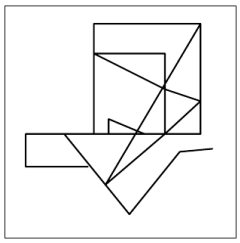
(a)



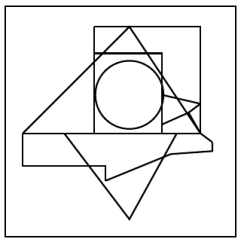
(b)



(c)



(d)



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Q39. Four numbers have been given, out of which three are alike in some manner and one is different. Select the one that is different.

(a) 676
(b) 216
(c) 125
(d) 729

Q40. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follows from the statements.

Statements:

1. All malls are kings.

2. No king is a heartz.

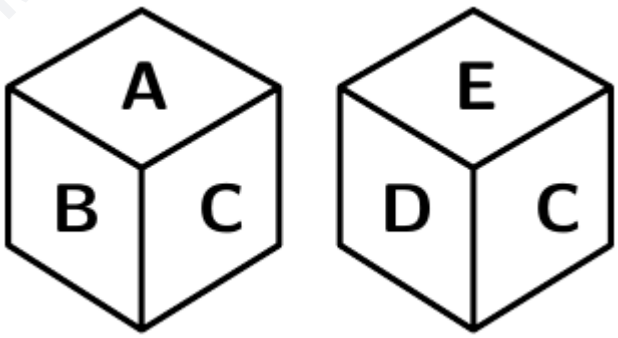
Conclusions:

I. No mall is a heartz.

II. All kings are malls.

(a) Either conclusion I or II follows
(b) Only conclusion II follows.
(c) Only conclusion I follows
(d) Neither conclusion I nor II follows

Q41. Two different positions of the same dice shown here. Select the letter that will be on the face opposite to the one showing the letter 'C'.



(a) E
(b) F
(c) B
(d) A

Q42. Select the option that is related to the third word in the same way as the second word is related to the first word.

Time : Second :: Length : ?

(a) Long
(b) Distance
(c) Meter
(d) Measuring Rule

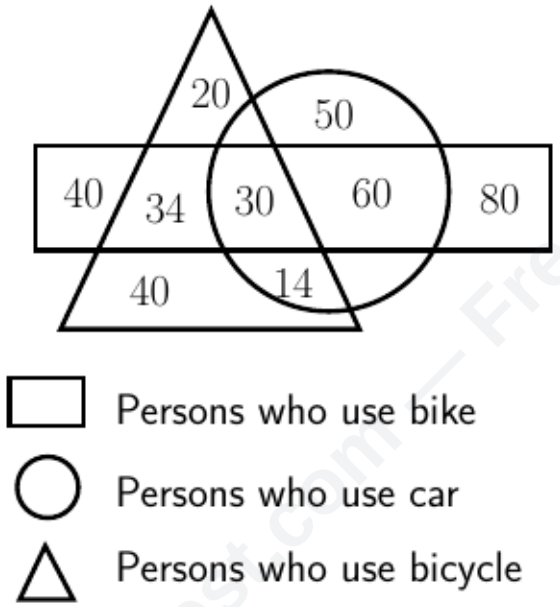
Q43. Select the option in which the numbers share the same relationship as that shared by the given number-pair.

4 : 25

(a) 12 : 120
(b) 11 : 170
(c) 6 : 36
(d) 6 : 49

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Q44. Study the given Venn diagram carefully and answer the following question.



How many persons use both a bicycle and a bike but not a car?

(a) 30
(b) 14
(c) 34
(d) 40

Q45. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the odd letter-cluster.

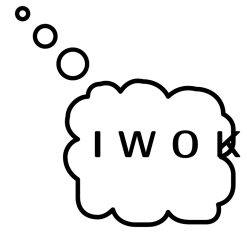
(a) HJSQ
(b) BEYV
(c) NOPE
(d) MONL

Q46. Select the correct mirror image of the given figure.

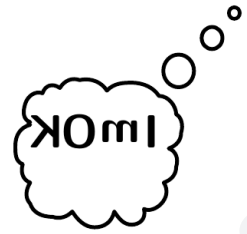


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(a)



(b)



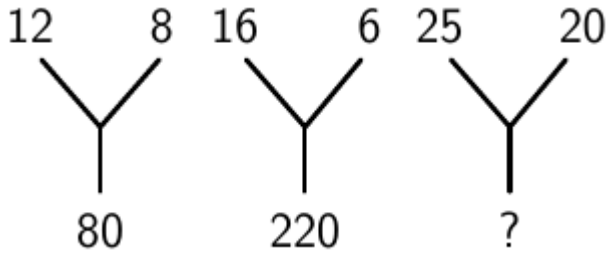
(c)



(d)



Q47. Select the number that can replace the question mark (?) in the following figure series.



(a) 425
(b) 210
(c) 225
(d) 241

Q48. Arrange the given words in a logical and meaningful sequence.

1. Earth
2. Saturn
3. Jupiter
4. Mercury
5. Venus

6. Mars

(a) 5, 4, 3, 2, 1, 6
(b) 4, 5, 1, 6, 3, 2
(c) 6, 3, 4, 1, 2, 5
(d) 3, 1, 4, 2, 5, 6

Q49. Four words have been given, out of which three are alike in some manner and one is different. Select the odd one.

(a) Istanbul
(b) Maputo
(c) London
(d) Paris

Q50. 'TQUS' is related to 'UPVR' in the same ways as 'FIRE' is related to _____.

(a) GHSD
(b) GIRG
(c) GIRF
(d) GHRD

QUANTITATIVE APTITUDE

Q51. In a group of 150 people, 2/5 are men, 1/3 are women and the rest are children. The average age of the women is 4/5 of the average age of the men. The average age of the children is 1/5 of the average age of the men. If the average age of the men is 50 years, then the average age of all the people in the group is?

(a) 35 years
(b) 32 years
(c) 28 years
(d) 36 years

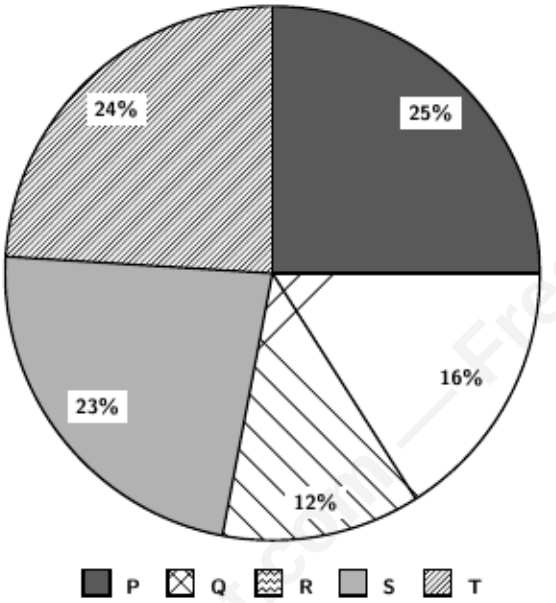
Q52. A sum at simple interest becomes two times in 8 years at a certain rate of interest p.a. The time in which the same sum will be 4 times at the same rate of interest at simple interest is:

(a) 25 years
(b) 20 years
(c) 30 years
(d) 24 years

Q53. The pie-chart shows the percentage-wise distribution of the number of students in five different schools P, Q, R. S and T. The total number of students in all five schools together is 10,500.

Study the pie-chart and answer the question.

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The difference between the central angles corresponding to schools T and R is:

(a) 42.8°
(b) 44°
(c) 43.2°
(d) 34.5°

Q54. If sin (A - B) = 1/2 and cos (A + B) = 1/2, where A > B > 0° and A + B is an acute angle, then the value of A is:

(a) 30°
(b) 60°
(c) 45°
(d) 15°

Q55. If $a^3 + b^3 = 62$ and a + b = 2, then the value of ab is:

(a) -6
(b) 9
(c) 6
(d) -9

Q56. The areas of three adjacent faces of a cuboid are 30 cm^2, 20 cm^2 and 24 cm^2. The volume of the cuboid is:

(a) 200 cm^3
(b) 120cm3
(c) 180 cm3
(d) 150 cm3

Q57. When a number is divided by 14, the remainder is 9. If the square of the same number is divided by 14, then the remainder will be:

(a) 11
(b) 9
(c) 8
(d) 10

Q58. In a ΔABC, angle BAC = 90° and AD is perpendicular to BC where D is a point on BC. If BD = 4 cm and CD = 5 cm, then the length of AD is equal to:

(a) 5√2 cm
(b) 2√5 cm
(c) 6 cm
(d) 4.5 cm

Q59. On selling 26 balls for Rs. 1,350, there is a loss equal to the cost price of eight balls. The cost price of a ball is:

(a) Rs. 60
(b) Rs. 65
(c) Rs. 75
(d) Rs. 70

Q60. The speed of a train is 220% of the speed of a car. The car covers a distance of 950 km in 19 hours. How much distance will the train cover in 3.5 hours?

(a) 380 km
(b) 385 km
(c) 375 km
(d) 285 km

Q61. Two circles of same radius 13 cm intersect each other at A and B. If AB = 10 cm, then the distance between their centre is:

(a) 18 cm
(b) 12 cm
(c) 24 cm
(d) 26 cm

Q62. The value of $33/40 + 1/5[4/5 - 1/5 \times (7/8 - 5/4)]$ is:

(a) 10
(b) 0
(c) 1
(d) 5

Q63. The marked price of an article is 25% more than its cost price. If 10% discount is given on the marked price. then what is the profit percentage ?

(a) 12.5%
(b) 11.5%
(c) 12%
(d) 10%

Q64. If $(\sec\theta + \tan\theta)/(\sec\theta - \tan\theta) = 5$ and θ is an acute angle, then the value of $(3\cos^2\theta + 1)/(3\cos^2\theta - 1)$ is:

(a) 4
(b) 3
(c) 1
(d) 2

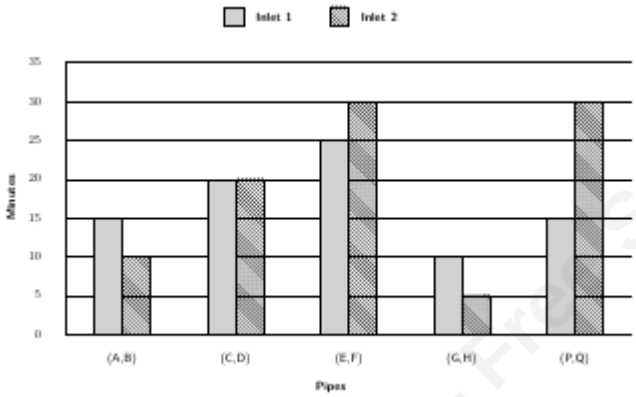
Q65. If $\sin(\theta + 30°) = 3/\sqrt{12}$, then the value of θ is equal to:

(a) 15°
(b) 60°
(c) 30°
(d) 45°

Q66. Study the following graph and answer the given question.

The graph shows the time (in minutes) taken by the pipes (A, B), (C, D), (E, F), (G, H), and (P, Q) to fill a tank.

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Two pipes P and Q are inlet pipes. If they are opened at alternate minutes and if pipe P is opened first, then in how many minutes will the tank be full?

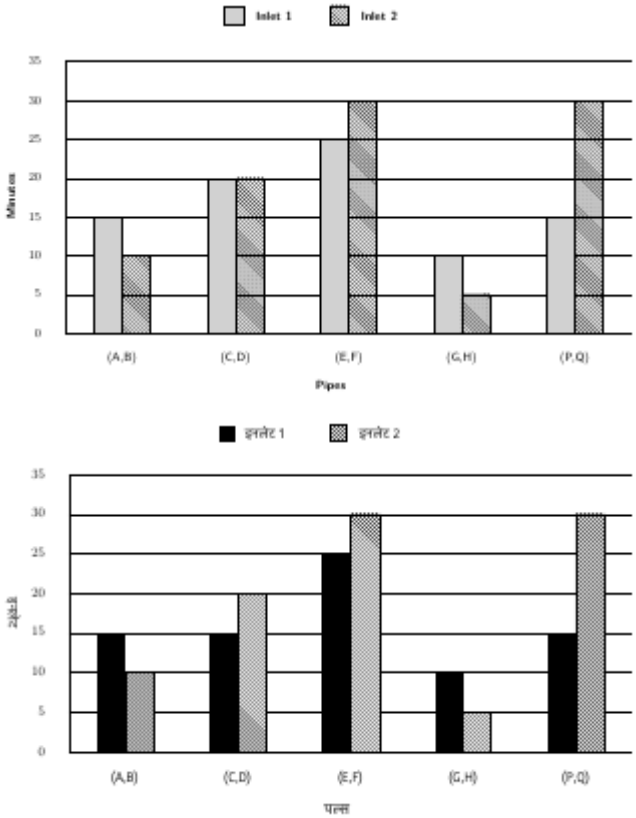
(a) 18 minutes
(b) 30 minutes
(c) 16 minutes
(d) 20 minutes

Q67. If x=(√3)/2, then the value of (√(1 + x) + √(1 - x))/(√(1 + x) - √(1 - x)) is equal to:

(a) √2
(b) √3
(c) 3
(d) 2

Q68. Study the following graph and answer the given question.

The graph shows the time (in minutes) taken by the pipes (A, B), (C, D), (E, F), (G, H) and (P, Q) to fill a tank.

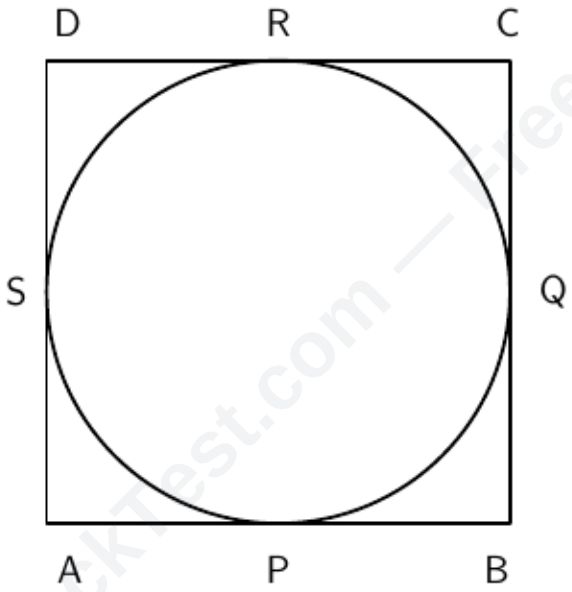


In how many minutes is an empty tank filled completely if pipe D fills it for half the time and then for the other half time, pipes C and D fill it together ?

(a) 18 minutes
(b) 10 minutes

(c) 15 minutes
(d) 12 minutes

Q69. In the figure, a circle touches all the four sides of a quadrilateral ABCD whose sides AB = 6.5 cm, BC = 5.4 cm, and CD = 5.3 cm. The length of AD is:



(a) 4.6 cm
(b) 5.8 cm
(c) 6.2 cm
(d) 6.4 cm

Q70. A is twice as good a workman as B and together they finish a piece of work in 22 days. In how many days will A alone finish the same work?

(a) 30 days
(b) 44 days
(c) 33 days
(d) 11 days

Q71. What is the third proportional to 16 and 24 ?

(a) 28
(b) 34
(c) 32
(d) 36

Q72. The side BC of a triangle ABC is extended to the point D. If angle ACD = 132° and angle B = 4/7angle A, then the measure of angle A is equal to:

(a) 60°
(b) 50°
(c) 84°
(d) 80°

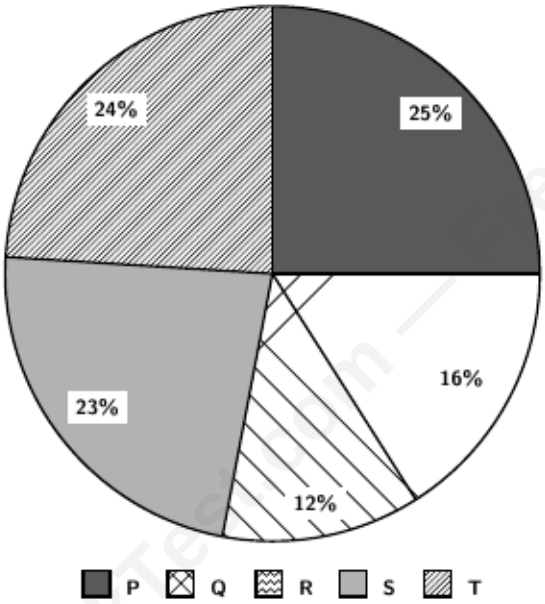
Q73. If $\sqrt{x} = \sqrt{3} - \sqrt{5}$, then the value of $x^2 - 16x + 6$ is:

(a) 4
(b) 0
(c) 2
(d) -2

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Q74. The pie-chart shows the percentage-wise distribution of the number of students in five different schools P, Q, R, S and T. The total number of students in all five schools together is 10,500.

Study the pie-chart and answer the question.



The number of students in school R is what percent of the total number of students in schools Q and T together?

(a) 40%
(b) 35%
(c) 25%
(d) 30%

Q75. If the price of an eraser is reduced by 25%, a person can buy three more erasers for Rs. 2. How many erasers can be bought for Rs. 2 as the original price ?

(a) 10
(b) 8
(c) 9
(d) 12

GENERAL AWARENESS

Q76. In which year did the first Elected Parliament with two houses come into being in India?

(a) 1953
(b) 1952
(c) 1955
(d) 1957

Q77. Which country ranked first in the 2019 Human Development India Index?

(a) Norway
(b) Switzerland
(c) Germany
(d) Ireland

Q78. How many Vedangas are there in total?

(a) Two
(b) Ten
(c) Six
(d) Five

Q79. The first barcode system was developed by:

(a) Norman Joseph Woodland
(b) John Barger
(c) David Bradley
(d) John Mc Carthy

Q80. Which of the following is the second largest artificial lake in Asia?

(a) Kolleru Lake in Andhra Pradesh
(b) Chilika Lake in Odisha
(c) Dhebar Lake in Rajasthan
(d) Chandubi Lake in Assam

Q81. Which of the following was invented by Walter Hunt?

(a) Ship
(b) Scooter
(c) Safety lamp
(d) Safety pin

Q82. The term ‘monsoon’ is derived from a/an:

(a) Italian word
(b) Latin word
(c) Greek word
(d) Arabic word

Q83. Who among the following is one of the Deputy Operation Directors of the Mars Orbiter Mission (MOM)?

(a) Nandini Harinath
(b) Seetha Somasundaram
(c) Minal Rohit
(d) Moumita Dutta

Q84. Which of the following characteristics of sound is measured in hertz (Hz)?

(a) Loudness of the sound
(b) Intensity of the sound
(c) Wavelength of the sound
(d) Frequency of the sound

Q85. The Tropic of Cancer does NOT pass through which of the following Indian states?

(a) Madhya Pradesh
(b) West Bengal
(c) Gujarat
(d) Andhra Pradesh

Q86. The Hornbill Festival is celebrated in which state?

(a) Nagaland
(b) Assam
(c) Meghalaya
(d) Arunachal Pradesh

Q87. Who among the following was a leader from Allahabad (now Prayagraj) in the revolt against the British in 1857?

(a) Maulvi Liaquat Ali
(b) Tatya Tope
(c) Khan Bahadur Khan
(d) Rani Laxmi Bai

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Q88. Who is author of the book ‘The Judgement: Inside Story of the Emergency in India’?

(a) KM Munshi
(b) Jawaharlal Nehru
(c) Indira Gandhi
(d) Kuldip Nayar

Q89. Who among the following is nicknamed the ‘Baltimore Bullet’?

(a) Michael Phelps
(b) Tom Jager
(c) Ian Thorpe
(d) Matt Biondi

Q90. Trackball is which of the following devices?

(a) Barcode reader
(b) Touchpad
(c) Output device
(d) Input device

Q91. Which country is the 2019 ICC Cricket World Cup champion?

(a) Pakistan
(b) England
(c) India
(d) Australia

Q92. Telangana became the 29th state of India in which year?

(a) 2015
(b) 2014
(c) 2017
(d) 2016

Q93. The Bomdila Pass is located in which state?

(a) Nagaland
(b) Arunachal Pradesh
(c) Sikkim
(d) Himachal Pradesh

Q94. Who Inaugurated the National Tribal Festival "Aadi Mahotsav" in New Delhi in November 2019?

(a) N. Sitharaman
(b) Amit Shah
(c) Narendra Modi
(d) Smriti Irani

Q95. In January 2020, who among the following launched the first girder of the Mumbai Trans - Harbour Link (MTHL)?

(a) Aaditya Thackeray
(b) Bal Thackeray
(c) Raj Thackeray
(d) Uddhav Thackeray

Q96. In which year did NITI Aayog come into existence?

(a) 2014
(b) 2016
(c) 2015
(d) 2013

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Q97. Who won the International Hockey Federation's (FIH) Player of the Year award in 2019?

(a) Manpreet Singh
(b) Dilip Tirkey
(c) Dhyan Chand
(d) Pargat Singh

Q98. In October 2019, which of the following pairs of Indian cities was included by UNESCO in its network of 'Creative Cities' on the occasion of World Cities Day 2019?

(a) Hyderabad & Mumbai
(b) Pune & Hyderabad
(c) Delhi & Mumbai
(d) Jodhpur & Kolkata

Q99. Which instrument is used to measure the level of humidity?

(a) Hydrometer
(b) Galvanometer
(c) Fathometer
(d) Hygrometer

Q100. Which of the following forms of martial arts is from Kerala?

(a) Paika Akhada
(b) Silambam
(c) Gatka
(d) Kalarippayattu

ANSWER KEY

1	a	2	b	3	d	4	c	5	c	6	b	7	a	8	a	9	b	10	b
11	d	12	a	13	c	14	b	15	a	16	a	17	c	18	b	19	a	20	c
21	a	22	a	23	c	24	c	25	d	26	a	27	d	28	b	29	b	30	a
31	c	32	d	33	d	34	d	35	b	36	b	37	c	38	c	39	a	40	c
41	b	42	c	43	d	44	c	45	c	46	c	47	c	48	b	49	a	50	a
51	d	52	d	53	c	54	c	55	d	56	b	57	a	58	b	59	c	60	b
61	c	62	c	63	a	64	a	65	c	66	d	67	b	68	d	69	d	70	c
71	d	72	c	73	c	74	d	75	c	76	b	77	a	78	c	79	a	80	c
81	d	82	d	83	a	84	d	85	d	86	a	87	a	88	d	89	a	90	d
91	b	92	b	93	b	94	b	95	d	96	c	97	a	98	a	99	d	100	d

SOLUTIONS

Q1. Answer: (a) Pnemonia

The correct answer is 'Pnemonia'.

Key Points

• The correct spelling is 'Pneumonia' which is a serious illness affecting one or both lungs that makes breathing difficult.
• E.g. He died from bronchial pneumonia.

Additional Information

• Let's know the meanings of other words:
• Deviation- the act of moving away from what is normal or acceptable.
• Miscellaneous- consisting of many different kinds of things that are not connected and do not easily form a group.
• Preamble- an introduction to a book or a written document.

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Q2. Answer: (b) Invalid

The correct answer is 'invalid'.

Key Points

• Invalid as a noun means "a person who needs other people to take care of them, because of illness that they have had for a long time".

• E.g. She had been a delicate child and her parents had treated her as an invalid.

• From the meaning and example that are given above, 'invalid' is the correct answer.

Additional Information

• Let's look at the meanings of other words:

• Athlete- a person who competes in sports.

• Activist- a person who works to achieve political or social change, especially as a member of an organization with particular aims.

• Petitioner- a person who organizes or signs a petition.

Q3. Answer: (d) disperse

The solution is in Hindi. Read it online.

Q4. Answer: (c) To believe only part of something

The correct answer is 'To believe only part of something'.

Key Points

• Take something with a pinch of salt means "to not completely believe something that you are told because you think it is unlikely to be true".

• E.g. You should take everything she says with a pinch of salt because she tends to exaggerate.

• According to the meaning and example that are given above, 'to believe only part of something' is the correct meaning of the given idiom.

Additional Information

• Similar idioms:

• Cast doubt on- to cause people to feel uncertainty about something.

• E.g. New evidence has cast doubt on the guilty verdict.

• Smell a rat- begin to suspect trickery or deception.

• E.g. When I got an e-mail asking for my password, I should have smelled a rat.

• Take with a grain of salt- to understand that something is not completely true or right.

• E.g. This newspaper is not reliable. Take whatever it publishes with a grain of salt.

Q5. Answer: (c) begin to

The correct answer is 'begin to'.

Key Points

• Let us refer to this line from the passage, "But the mere thought of ___(3)__ on occasions like these would throw her _(4)__ such a nervous state that a tiny muscle in the corner of her left eye would _(5)___ twitch."

• The word before the blank No 5 is 'would' which is a modal.

• Modals are followed by V1.

• Only option 3 has v1 i.e begin.

• So, 'begin to' is the correct option for blank No 5.

Additional Information

• Characteristics of modals:

• Modals are auxiliary verbs which are used to express certainty, possibility, willingness, obligation, ability, etc.

• Modals never change their form i.e. we can't use 's/es/ing/ed' with them.

• Modals are followed by bare infinitive i.e v1 without to.

Q6. Answer: (b) into

The correct answer is 'into'.

Key Points

• 'Throw into' is a phrasal verb which means "To suddenly or forcefully put someone or something into a particular condition, position, or situation".

• E.g. The explosion threw the crowd into chaos.

• Let us refer to this line from the passage, "But the mere thought of ___(3)__ on occasions like these would throw her _(4)____ such a nervous state".

• From the above sentence, we get to know that Ms Foster is put into a nervous state by the thought of being late.

• So, 'into' is the correct word for blank No 4.

Q7. Answer: (a) being late

The correct answer is 'being late'.

Key Points

• The passage talks about the fear of Ms Foster about missing a train, flight, etc.

• 'Being' is a gerund and a gerund is a word that acts like a noun and looks like a verb.

• E.g. I like being nice to people.

• 'Late' means "arriving, happening or done after the expected, arranged or usual time".

• Now, let us refer to this line from the passage, " But the mere thought of ___(3)____ on occasions like these".

• From the above sentence, we get to know that Ms Foster gets afraid at the thought of getting late on some specific occasions.

• 'Being late' in option 1 means 'getting late'.

• So, 'being late' is the correct option for blank No 3.

Q8. Answer: (a) particularly

The correct answer is 'particularly'.

Key Points

• Let's refer to this line from the passage, "In other respects, she was not a ___(2)____ nervous woman."

• The word after the blank is 'nervous' which is an adjective.

• Therefore, we need an adverb to qualify the adjective 'nervous'.

• Out of the given options, only 'particularly' is an adverb.

• So, 'Particularly' is the correct word for the blank No. 2.

Alternate Method

• 'Particularly' is an adverb which means 'very or very much'.

• E.g. I don't particularly care what happens to him.

• Let's refer to this line from the passage, "In other respects, she was not a ___(2)____ nervous woman."

• Form the above sentence, we get to know that Ms Foster is not a very nervous woman in general.

• So, 'particularly' is the correct word for the blank No. 2.

Additional Information

• Let's know the meanings of other words:

• Usual is an adjective which means "that happens or is done most of the time or in most cases".

• General is an adjective which means "affecting all or most people, places or things".

• Particular is an adjective which means "used to emphasize that you are referring to one individual person, thing or type of thing and not others".

Q9. Answer: (b) even

The correct answer is 'even'.

Key Points

• The given passage talks about the fear of Ms Foster.

• 'Even' is an adverb which is used to emphasize something unexpected or surprising.

• E.g. He didn't even call to say he wasn't coming.

• The above-mentioned sentence is emphasizing the fact that he didn't call.

• Let refer to this line from the passage, "All her life Ms Foster had a great fear of missing a train, a plane, a boat, or ___(1)____ a theatre curtain."

• The given sentence talks about the fear of missing a theatre curtain which is quite surprising and unexpected.

• According to the meaning and example that are given above, 'even' is the correct word for blank No 1.

Additional Information

• Let's know about the other options:

• Hardly is an adverb which means "almost none".

• Extremely is an adverb which means "to a very high degree".
• Quite is an adverb which means "to some degree".

Q10. Answer: (b) avid

The solution is in Hindi. Read it online.

Q11. Answer: (d) has been

The correct answer is 'has been'.

Key Points

• The usage of 'being' is wrong in the given sentence.
• The given sentence is in the present perfect continuous tense and 'has been' is used in the present perfect continuous tense.
• E.g. Girish has been working in this company for two years.
• According to the rule and example that are given above, 'has been' will be used in the underlined part of the sentence.

Correct Sentence: For the last two years Shweta has been diligently working with Rohingya refugees to create colourful table mats using their local weaving techniques.

Additional Information

• The present perfect continuous tense shows that something started in the past and is continuing at the present time.
• The present perfect continuous is formed using the construction "has/have been + v1 + ing + for/ since + time".
• E.g. we have been living in this house since 2007.
• Usage of 'since' and 'for':
• Since is used for a point of time.
• Since Monday, since, 2002, since, last year.
• For is used for a period of time.
• For the last two years, for the last 3 weeks

Q12. Answer: (a) DBCA

The correct answer is 'DBCA'.

Key Points

• Sentence D is independent of any other sentence as it is giving some general information about the film 'Wayfarers'. Hence, 'D' is the first sentence.
• 'Lakua and his wife' mentioned in sentence B refer to the phrase 'a poor couple' in sentence D. Hence, 'B' follows 'D'.
• The phrase 'the latter burdened with a paralytic husband' mentioned in the sentence C refers to 'Nathuni' in sentence B. Hence, 'C' follows 'B'.
• The adverb 'finally' indicates that 'A' is the last sentence.

Important Points

• Important Rules to Solve the Para Jumbles:
• Read the sentences attentively and try to comprehend the idea or theme of the paragraph and eliminate the irrelevant options.
• Try to identify the opening (independent sentence) and closing sentences of the paragraph (concluding sentence).
• Try to identify the mandatory pairs. Two sentences can be connected through various connectors and other determinants. Identify the pronouns connecting the sentences with each other.

Q13. Answer: (c) few time left

The correct answer is 'few time left'.

Key Points

• The usage of 'few' is wrong with the word 'time'.
• 'Time' is an uncountable noun.
• 'Few' is a quantifier which means 'some; not many' and is used with countable nouns.
• E.g. Few people understand this problem.
• 'Little' is a quantifier which means 'some' and is used with uncountable nouns.
• E.g. They had little money to spend.
• According to the rule and the examples given above, 'little' will be used instead of 'few' in the given sentence.

Correct Sentence: You must make a choice immediately because there is little time left.

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Additional Information

• Uncountable nouns are the nouns which cannot be counted.

• E.g. Equipment, time, hair, furniture, scenery, information, work, etc.

• Uncountable nouns cannot be made plural by adding an 's' at the end.

Q14. Answer: (b) Biennial

The solution is in Hindi. Read it online.

Q15. Answer: (a) Unproductive

The correct answer is 'Unproductive'.

Key Points

• The word 'Prolific' means "producing many works, etc."

• E.g. one of the most prolific periods in her career.

• The word 'Unproductive' means "not producing very much; not producing good results".

• E.g. I've had a very unproductive day.

• According to the meanings of the words and the examples given above, 'unproductive' is the correct antonym of the word 'prolific'.

Additional Information

• Let's know the meanings of other words:

• Abundant- existing in large quantities; more than enough.

• Several- more than two but not very many.

• Rich- containing or providing a large supply of something.

Q16. Answer: (a) alumni occupy

The correct answer is 'alumni occupy'.

Key Points

• The given sentence is in the present indefinite tense. Therefore, option 2 gets eliminated.

• 'Alumnus' means "a former male student of a school, college or university".

• E.g. Imran has received numerous job offers because he’s an alumnus of an elite medical school.

• 'Alumni' means "the former male and female students of a school, college or university".

• E.g. Several of the class of 1992 alumni donated money to their classmate’s account when he became ill last winter.

• The given sentence is not talking about a single student as is clear from 'leading positions in different areas'.

• Therefore, we cannot use 'alumnus'.

• According to the rule and examples that are given above, 'alumni occupy' will be used in the underlined part of the given sentence.

Correct Sentence: The Delhi Birla International School alumni occupy leading positions in different areas of profession and service.

Additional Information

• Present Indefinite Tense represents an action which is regular or normal or true and uses the base form of the verb.

• In the present indefinite tense 's/es' is used with the base form of the verb if the subject is "third-person singular".

• E.g. My father goes for a walk daily.

Q17. Answer: (c) Merely loud and angry words but ineffective

The correct answer is 'Merely loud and angry words but ineffective'.

Key Points

• Full of sound and fury- loud and angry words that attract a lot of attention but do nothing useful.

• E.g. The town meeting created lots of sound and fury, but no resolution.

• According to the meaning and example given above, 'merely loud and angry words but ineffective' is the correct meaning of the idiom 'full of sound and fury'.

Q18. Answer: (b) CBAD

The correct answer is 'CBAD'.

Key Points

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• Sentence C is independent of any other sentence and introducing the subject 'Bahadur Shah Jafar' for the first time. Hence, 'C' is the first sentence.

• Hence, options 1 and 3 get eliminated.

• Sentence D cannot be the second sentence as the word 'finally' used in the sentence indicates that it must be the last sentence.

• Hence, option 4 also gets eliminated.

• Therefore, 'CBAD' is the correct sequence.

Important Points

• Important Rules to Solve the Para Jumbles:

• Read the sentences attentively and try to comprehend the idea or theme of the paragraph and eliminate the irrelevant options.

• Try to identify the opening (independent sentence) and closing sentences of the paragraph (concluding sentence).

• Try to identify the mandatory pairs. Two sentences can be connected through various connectors and other determinants. Identify the pronouns connecting the sentences with each other.

Q19. Answer: (a) The first-ever ‘All India Folk Dance Festival’ was organised by Chhattisgarh in January 2020.

The correct answer is 'The first-ever ‘All India Folk Dance Festival’ was organised by Chhattisgarh in January 2020.'

Key Points

• We need to follow these instructions while changing the voice of an 'Assertive sentence'.

• Find the subject and object of the sentence and exchange their places; make changes in their cases as well if subject and object are pronouns.

• Use preposition by before agent. (Chhattisgarh)

• Use helping verb in passive form according to the tense of active form. (Past indefinite - was/ were)

• Always use the third form of the main verb in passive form.

• At last line up the remaining part.

Following these steps, we finally get- The first-ever ‘All India Folk Dance Festival’ was organised by the Chhattisgarh State in January 2020.

Additional Information

• Assertive sentence- The sentence which declares or asserts a statement, feeling, opinion, incident, event, history, or anything is called an assertive sentence.

• E.g. Virat Kohli is the best player in the Indian cricket team.

Q20. Answer: (c) Lineage

The correct answer is 'Lineage'.

Key Points

• The word 'Pedigree' means "the parents, grandparents, etc. of an animal that are all of the same breed".

• E.g. Dogs with good pedigrees.

• The word 'Lineage' means "the series of families that somebody comes from originally".

• E.g. The royal history traces the lineage of the kings to the ancient Buddhist monarchs of India.

• According to the meanings of words and the examples that are given above, 'lineage' is the correct synonym of the word 'pedigree'.

Additional Information

• Let's know the meanings of other words:

• Forbidden- not allowed.

• Illegitimate- not allowed by a particular set of rules or by law.

• Pediment- the part in the shape of a triangle above the entrance of a building in the ancient Greek style.

Q21. Answer: (a) which are type of Madhya Pradesh’s village culture

The correct answer is 'which are type of Madhya Pradesh’s village culture'.

Key Points

• The error lies in the wrong omission of the article 'a' in the given sentence.

• The indefinite article 'a/an' is used when we refer to a single entity out of many of similar kind or to refer to a thing in general.

• E.g. I need a laptop.

• In the above-mentioned sentence, we are referring to a laptop in general. It can be any laptop out of many laptops.

• There may be many types of village cultures in Madhya Pradesh and the sentence given in the question is referring to one out of many types which is not a specific type.

• According to the rule and example that are given above, the article 'a' will be used before the word 'type' in the given sentence.

Correct Sentence: Subhash Gidwani is selling dolls, which are a type of Madhya Pradesh's village culture, at the Annual Dastakar Bazaar, held in January every year in Delhi.

Additional Information

• 'Which' is a relative pronoun.

• A relative pronoun is a word that introduces a dependent (or relative) clause and connects it to an independent clause.

• E.g. His best movie, which won several awards, was about the life of Gandhi.

Q22. Answer: (a) Compatible

The correct answer is 'Compatible'.

Key Points

• The word 'Congenial' means "pleasant to spend time with because their interests and character are similar to your own".

• E.g. a congenial colleague.

• The word 'Compatible' means "if two people are compatible, they can have a good relationship because they have similar ideas, interests, etc."

• E.g. She found a compatible partner through a computer dating agency.

• According to the meanings of the words and examples given above, 'compatible' is the correct synonym of the word 'congenial'.

Additional Information

• Let's know the meanings of the other words:

• Bombastic- sounding important but having little meaning and used to impress people.

• Aloof- not friendly or interested in other people.

• Servile- wanting too much to please somebody and obey them.

Q23. Answer: (c) The foreigner asked the farmer if he could tell him the way to the nearest hotel.

The correct answer is 'The foreigner asked the farmer if he could tell him the way to the nearest hotel.'.

Key Points

• While changing the narration of an interrogative sentence, we need to follow the given steps-

• The conjunction 'if' should be used in place of a comma (,) and inverted commas (“ ”).

• 'Question mark (?)' is changed to full stop (.).

• 'Said to' will be changed into 'asked'.

• 'Can' is changed to 'could'.

• 2nd person (you) is changed into he and 1st person (me) is changed into him i.e.according to the object (farmer) and the subject (foreigner) of the reporting verb respectively.

The final sentence- The foreigner asked the farmer if he could tell him the way to the nearest hotel.

Additional Information

• A conjunction is not used in the sentence of wh-family words (what, where, who, whom, why, etc.).

• E.g. He said to her, "What are you doing these days?"

He asked her what she was doing those days.

• Change of modals:

• Can- could

• Will- would

• May- might

Q24. Answer: (c) Warmonger

The correct answer is 'Warmonger'.

Key Points

• The word 'Pacifist' means 'holding or showing the belief that war and violence are always wrong'.

• E.g. The pacifist was rewarded by his college for being a peacekeeper.

• The word 'Warmonger' means "a person, especially a politician or a leader, who wants to start a war or encourages people to start a war".

• E.g. He is a terrifying warmonger who loves to blow things up.

• According to the meanings of the words and examples given above, 'warmonger' is the correct antonym of the word 'pacifist'.

Additional Information

• Let's know the meanings of other words-
• Orator- a person who makes formal speeches in public or is good at public speaking.
• Peacemaker- a person who tries to persuade people or countries to stop arguing or fighting and to make peace.
• Nihilist- a person who believes in nihilism.

Q25. Answer: (d) Conscentious

The correct answer is 'Conscentious'.
Key Points
• The correct spelling is 'Conscientious' which means 'taking care to do things carefully and correctly'.
• Let's know the meanings of other words-
• Expanse- a wide and open area of something, especially land or water.
• Resultant- caused by the thing that has just been mentioned.
• Constraint- a thing that limits something, or limits your freedom to do something.
Additional Information
• Words similar to Conscientious:
• Conscience- the part of your mind that tells you whether your actions are right or wrong.
• Conscious- aware of something; noticing something.

Q26. Answer: (a) [figure]

When the paper is unfolded it will appear like :-
So, answer is the given figure below
Hence, the correct answer is "Option (1)".

Q27. Answer: (d) 28

Given figure :
Triangles :
ABC ABD ABE ABF ABG ABH ABI
ACD ACE ACF ACG ACH ACI ADE
ADF ADG ADH ADI AEF AEG AEH
AEI AFG AFH AFI AGH AGI AHI
So, 28 triangles are in the given figure.
Hence, the correct answer is "28".
First let's count the sections of given triangle and then add them, then that is the number of triangles.
Lines originating from the top vertex are dividing the triangle in 7 parts. And naming the parts as 1, 2 ,3, 4, 5, 6 and 7.
Then adding these parts separately we get,
Number of triangles = 1 + 2 + 3 + 4 + 5 + 6 + 7 = 28

Q28. Answer: (b) xxxaxx

According to the given information we have to check the options one by one :
Option 1) D A B X A D A B X D D A B X X D A B X X
Option 2) D A B X X D A B X X D A B X X D A B X X
Option 3) D A B X X D A B X C D B B X X D A B A X
Option 4) D A B X D D A B X A D D B A X D A B D X
Option (2) is giving a pattern of dabxxdabxxdabxxdabxx.
No other option is giving any particular pattern.
Hence, the correct answer is "xxxaxx".

Q29. Answer: (b) ÷, ×, =, ×

Interchanging the value of A,
40 A 2 A 3 A 4 A 15
Using BODMAS rules,
Option 1 → ÷, ×, =, -
40 ÷ 2 × 3 = 4 - 15
20 × 3 = - 11

60 ≠ -11
Option 2 → ÷, ×, =, ×
40 ÷ 2 × 3 = 4 × 15
20 × 3 = 60
60 = 60
Option 3 → ×, ÷, +, =
40 × 2 ÷ 3 + 4 = 15
40 × 0.67 + 4 = 15
26.8 + 4 = 15
30.8 ≠ 15
Option 4 → ×, =, -, ÷
40 × 2 = 3 - 4 ÷ 15
80 ≠ 3 - 0.26
80 ≠ 2.76
Hence, the correct answer is "÷, ×, =, ×".

Q30. Answer: (a) RQNKEG

The logic follows here is :- Each letter is increased by 2 and we get next letter.
Similarly,
Hence, "RQNKEG" is the correct answer.

Q31. Answer: (c) FUPNFS

The logic follows here is :
Similarly,
Hence, the correct answer is "FUPNFS".

Q32. Answer: (d) 71.5%

Given:
The rate of onion increased from Rs. 70 per kilogram to Rs. 120 per kilogram
Concept Used:
Concept of percentage. It is calculated on the basis of 100.
For example, x% means x out of 100
Calculation:
Initial price Rs. 70 per kg
Final price Rs. 120 per kg
Price increased by (120 - 70) = Rs. 50
Price increased in percentage (50/70) × 100
=> 71.42 ≈ 71.5%
Therefore The rate of onion was increased by 71.5%

Q33. Answer: (d) [figure]

Dirham and USD both are currencies of their country.
The Venn diagram will be :
Hence, the correct answer is "Option (4)".
Additional Information
Dirham is the currency of UAE (United Arab Emirates).
USD (United States Dollar) is the currency of USA (United States of America).

Q34. Answer: (d) 18

The logic follows here is :
(Sum of numbers at the base) - Number at the top = Number in the middle
For figure A :
(14 + 18) - 8 = 32 - 8 = 24.
For figure B :

(2 + 8) - 2 = 10 - 2 = 8.
Similarly,
For figure C :
(12 + 10) - 4 = 22 - 4 = 18.
Hence, the correct answer is "18".

Q35. Answer: (b) PPZF

The logic follows here is :
Similarly,
Hence, the correct answer is "PPZF".

Q36. Answer: (b) Father

Family chart :
Family Tree :
From the family tree, we can conclude that-
I is the Father of the Boy.
Hence, the correct answer is "Father".

Q37. Answer: (c) 1045

The logic follows here is :
Hence, the correct answer is "1045".

Q38. Answer: (c) [figure]

The given figure can be observed in the following :
Hence, the correct answer is "Option (3)".

Q39. Answer: (a) 676

The logic follows here is :
I. $676 = 26^2$
II. $216 = 6^3$
III. $125 = 5^3$
IV. $729 = 9^3$
All numbers are perfect cubes except 676 which is a perfect square.
Thus, 676 is the odd one of the given set of numbers.
Hence, the correct answer is "676".

Q40. Answer: (c) Only conclusion I follows

The least possible Venn diagram for the given statements will be :
Conclusions :
I. No mall is a heartz → True (All malls are kings but no king is a heartz implying no mall is a heartz either).
II. All kings are malls → False (It is possible but not definite. Hence, it is false).
Hence, the correct answer is "Only conclusion I follows".

Q41. Answer: (b) F

In the First Dice and Second dice,
Letter C is common.
The left letter will be opposite to each other writing them clock-wise starting from B.

Letter	Opposite
B	D
A	E

Option 1 → E is opposite to A, not C.
Option 2 → We left with the only F who is opposite to C.
Option 3 → B is opposite to D, not C.

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Option 4 → A is opposite to E, not C.
Hence, the correct answer is "F".
Additional Information
• Dices are of two types :
1. Standard Dice
2. Non-Standard Dice.
• Dice has:-
1. faces = 6
2. sides = 12
3. corners = 8
• Two opposite faces never seen together.
• Adjacent faces are never opposite to each other.

Q42. Answer: (c) Meter

The logic follows here is:
Second is the S.I unit of time.
Similarly,
Meter is the S.I unit of length.
Hence, the correct answer is "Meter".
Additional Information
• There is a total of 9 S.I units.
1. 7 of them are fundamental units.
2. 2 of them are Supplementary units.

S.I units	Unit
Length	meter
Mass	kilogram
Time	second
Intensity of light	candela
Current	ampere
Amount of substance	mol
Temperature	kelvin

Supplementary unit	unit
Angle / Plane angle	radian
Solid Angle	steradian

Q43. Answer: (d) 6 : 49

The logic follows here is:
Second number = (First number + 1)²
$25 = (4 + 1)^2$
$25 = 5^2$
25 = 25
Option 1 → 12 : 120
$120 = (12 + 1)^2$
$120 = 13^2$
$120 \neq 169$
Option 2 → 11 : 170
$170 = (11 + 1)^2$
$170 = 12^2$

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170 ≠ 144

Option 3 → 6 : 36

36 = (6 + 1)²

36 = 7²

36 ≠ 49

Option 4 → 6 : 49

49 = (6 + 1)²

49 = 7²

49 = 49

Hence, the correct answer is "Option 4".

Q44. Answer: (c) 34

From the diagram given below.:

The shaded part represents persons who use both a bicycle and a bike but not a car is = 34

Hence, the correct answer is "34".

Q45. Answer: (c) NOPE

The logic follows here is:

3 letters of the cluster follow the same pattern as the same number is added and subtracted from the letter.

Option 1 →

Option 2 →

Option 3 →

Option 4 →

Thus we can see NOPE doesn't follow the pattern of the same number in addition and subtraction.

Hence, the correct answer is "NOPE".

Q46. Answer: (c) [figure]

The Correct mirror image of the given figure when the mirror is placed on the right is:

Hence, the correct answer is "Option 3".

Additional Information

In a mirror image Left changes to right and the right changes to left vice-versa.

When placement of mirror not given, By default we will assume it in Vertical direction.

The Letter adjacent to the mirror after the mirror image will adjacent to it just with the left change to right and right change to left vice-versa.

The starting letter of the word will be at last after the mirror image drawn with left changes to right and right changes to left.

Q47. Answer: (c) 225

The logic follows here is:

80 = 12² - 8²

80 = 144 - 64

80 = 80

220 = 16² - 6²

220 = 256 - 36

220 = 220

Similarly,

? = 25² - 20²

? = 625 - 400

? = 225

Hence, the correct answer is "225".

Q48. Answer: (b) 4, 5, 1, 6, 3, 2

The logic follows here is:

Arrangement of words in a meaningful and ascending order: (As per the mean distance from the Sun).

The correct sequence will be:

4. Mercury
5. Venus
1. Earth
6. Mars
3. Jupiter
2. Saturn

Hence, the correct answer is "4, 5, 1, 6, 3, 2".

Q49. Answer: (a) Istanbul

The logic follows here is:

Except for Istanbul rest, all are the capital of a country.

Words	Their meaning
Istanbul	A City in Turkey
Maputo	Capital of Mozambique
London	Capital of England
Paris	Capital of France

Hence, the correct answer is "Istanbul".

Additional Information

• In September 2016, India inked a direct deal with the French government to purchase 36 new Rafale fighter jets in a 7.87 billion euro deal.

• India will also get the latest weapons like the Meteor and Scalp missiles as part of the contract, besides a five-year support package that assures high availability of the fighter. India will pay a 15% advance and deliveries are to start in three years.

• Rafale is a twin-engine medium multi-role combat aircraft, manufactured by the French company Dassault Aviation.

• The Tower of London, officially Her Majesty's Royal Palace and Fortress of the Tower of London is a historic castle on the north bank of the River Thames in central London. It is a cultural World Heritage site.

• Maputo is the capital and largest city of Mozambique. It is known as the City of Acacias, in reference to acacia trees commonly found along its avenues, and the Pearl of the Indian Ocean.

Q50. Answer: (a) GHSD

The pattern follows here is:

Similarly,

Hence, the correct answer is "GHSD".

Q51. Answer: (d) 36 years

Given:

Total people = 150

Average age of men = 50 years

Formula used:

Average = Sum of values/Number of values

Calculation:

Total men in the group = (2/5) × 150 = 60

Total women in the group = (1/3) × 150 = 50

Total children in the group = 150 – 60 – 50 = 40

Average age of men = 50 (given)

Average age of women = (4/5) × 50 = 40

Average age of children = (1/5) × 50 = 10

Now, Total age of men in the group = 60 × 50 = 3000

Total age of women in the group = 50 × 40 = 2000

Total age of children in the group = 40 × 10 = 400Total age of all persons in the group = 3000 + 2000 + 400 = 5400

Average age of persons in the group = 5400/150 = 36

Therefore The average age of all the people in the group is 36

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Q52. Answer: (d) 24 years

Formula used:

A = P(1 + RT/100)

A → Amount

P → Principal

R → Rate

T → Time

Calculation:

A sum at simple interest becomes two times in 8 years

=> 2P = P(1 + 8R/100)

=> R = 100/8

=> R = 12.5

Therefore The rate of interest is 12.5%

The time in which the same sum will be 4 times

=> 4P = P(1 + 12.5 × T)/100

=> 300 = 12.5T

=> T = 24

Therefore The sum will be 4 times in 24 years

Q53. Answer: (c) 43.2°

Given:

T = 24% and R = 12%

Calculation:

Percentage difference between the number of students in school T and R = 24% – 12% = 12%

The difference between the central angles corresponding to schools T and R = (12/100) × 360° = (6/5) × 36 = 43.2°

Therefore The difference between the central angles corresponding to schools T and R is 43.2°.

Q54. Answer: (c) 45°

Given:

sin(A – B) = 1/2

Calculation:

We know that

sin 30° = 1/2

sin(A – B) = sin 30°

=> A – B = 30° ----(i)

Also, cos(A + B) = 1/2

cos 60° = 1/2

cos(A + B) = cos 60°

=> A + B = 60° ----(ii)

Adding (i) and (ii)

2A = 90°

=> A = 45°

Therefore The value of A is 45°

Q55. Answer: (d) -9

Given:

a + b = 2

a3 + b3 = 62

Formula used:

$(a + b)^3 = a3 + b3 + 3ab(a + b)$

Calculation:

a + b = 2

Cubing the given equation

$(a + b)^3 = 2^3$

$\Rightarrow a^3 + b^3 + 3ab(a + b) = 8$

$\Rightarrow 62 + 3ab\ (2) = 8$

$\Rightarrow 6ab = 8 - 62$

$\Rightarrow 6ab = -54$

$\Rightarrow ab = -54/6 = -9$

Therefore The value of ab is -9.

Q56. Answer: (b) 120cm3

Given:

Area of three adjacent faces of a cuboid are 30 cm2, 20 cm2, and 24 cm2

Formula used:

Area of rectangle = length × breadth

Volume of cuboid = length × breadth × height

Calculation:

Area of three adjacent faces of cuboid are lb, bh, lh

where l → Length of cuboid

b → Breadth of cuboid

h → Height of cuboid

According to question,

lb = 30, bh = 20, lh = 24

Now, lb/bh = 30/20

$\Rightarrow l/h = 3/2$

$\Rightarrow l = (3/2) \times h$ ----(i)

lh = 24 ----(ii)

Putting value of l from (i) in (ii)

$(3/2) \times h \times h = 24$

$\Rightarrow h^2 = 16$

$\Rightarrow h = 4$ cm

$l = (3/2) \times 4 = 6$ cm

b = 30/6 = 5 cm

Volume of cuboid = lbh = $6 \times 5 \times 4 = 120\ cm^3$.

Therefore Volume of cuboid is 120 cm3.

Shortcut Tricklb = 30; bh = 20; lh = 24

$(lbh)^2 = 30 \times 20 \times 24$

so the volume of cuboid = lbh = $120\ cm^3$

Q57. Answer: (a) 11

Given:

A number, when divided by 14, leaves a remainder of 9

Calculation:

Suppose the number is = 14 + 9 = 23

Now, the square of the number is divided by 14

$\Rightarrow 23^2/14 = 529$

$\Rightarrow$ 529/14 leaves a remainder is 11

Therefore The remainder will be 11.

Q58. Answer: (b) 2√5 cm

Given:

angle BAC = 90°

BD = 4 cm

CD = 5 cm

Concept used:

In ΔABC, Right angle at B
AD is perpendicular to BC, then
$AD^2 = BD \times DC$
Calculation:
According to property
AD2 = BD × DC
=> $AD^2 = 4 \times 5$
=> $AD = \sqrt{20}$
=> $AD = 2\sqrt{5}$ cm
Therefore The AD is $2\sqrt{5}$ cm.

Q59. Answer: (c) Rs. 75

Given:
Selling Price = Rs. 1350
Calculation:
Let the cost price of one ball be x
Now selling 26 balls for Rs. 1,350, there is a loss equal to the cost price of eight balls
Cost price of 26 balls = 26x, loss = 8x(8 balls)
Loss = Cost Price – Selling Price
=> 8x = 26x – 1350
=> 18x = 1350
=> x = 75
Therefore The cost price of a ball is Rs.75

Q60. Answer: (b) 385 km

Given:
Distance = 950 km
Time = 19 hours
Formula used:
Speed = Distance/Time
Calculation:
Speed of car = 950/19 = 50 km/hr
Speed of train = (220/100) × 50 = 110 km/hr
Now, distance covered by train in 3.5 hrs
Distance = 110 × 3.5 = 385 km
Therefore The correct answer is option (2).

Q61. Answer: (c) 24 cm

Given:
Radius of circle = 13 cm
AB = 10 cm
Formula used:
The formula of Pythagoras, for right-angled triangle,
Hypotenuse2 = perpendicular2 + base2
Concept used:
Perpendicular from the center of the circle to a chord bisects the chord.
Calculation:
AB = 10 cm
In ΔOAX
=> $OA^2 = AX^2 + OX^2$
=> $(13)^2 = (AB/2)^2 + OX2$
=> $OX^2 = (13)^2 - (5)^2$
=> $OX^2 = 169 - 25$

=> OX = 12 cm

Similarly, XM = 12 cm

OX = OX + XM

=> 12 + 12

=> 24 cm

Therefore The distance between centre is 24 cm.

Q62. Answer: (c) 1

Concept used:

Follow BODMAS rule to solve this question, as per the order given below,

(33/40) + (1/5)[(4/5) – (1/5)(7/8 – 5/4)]

=> 33/40 + (1/5)[(4/5) – (1/5){(7 – 10)/8}]

=> 33/40 + (1/5)[4/5 + 3/40]

=> 33/40 + (1/5) × 35/40

=> 40/40 = 1

Therefore The value of 33/40 + 1/5[4/5 - 1/5 × (7/8 - 5/4)] is 1.

Q63. Answer: (a) 12.5%

Calculation:

Let the cost price of the article be Rs.100

Then, the marked price of the article = 100 × (125/100) = Rs.125

Discount of 10% given on marked price

Selling price of the article = 125 × (90/100) = Rs.112.5

Profit percentage = (SP – CP/CP) × 100

Therefore Profit percentage = {(112.5 – 100)/100} × 100 = 12.5%

Shortcut TrickP = M - D - (M × D)/100

P = 25 - 10 - (25 × 10)/100

P = 12.5%

Q64. Answer: (a) 4

Given:

$(\sec\theta + \tan\theta)/(\sec\theta - \tan\theta) = 5$

Concept used:

$\sec\theta$ = Hypotenuse/Base, $\tan\theta$ = perpendicular/base, $\cos\theta$ = base/hypotenuse

Pythgorus theorem

Hypotenuse² = Perpendicular² + Base²

Calculation:

Let Perpendicular = P, Base = B, Hypotenuse = H

$(\sec\theta + \tan\theta)/(\sec\theta - \tan\theta) = 5$

=> {(H/B) + (P/B)}/{(H/B) - (P/B)} = 5/1

=> (H + P)/(H - P) = 5/1

=> H + P = 5 ----(1)

=> H - P = 1 ----(2)

Solve (1) and (2)

=> H = 3, P = 2

Hypotenuse2 = Perpendicular2 + Base2

=> Base = √5

$(3\cos^2\theta + 1)/(3\cos^2\theta - 1)$

=> {3 × (√5/3)² + 1}/{3 × (√5/3)2 - 1}

=> (8/3)/(2/3)

=> 4

Therefore The value is 4.

Q65. Answer: (c) 30°

Calculation:

sin(θ + 30°) = 3/√12

=> sin(θ + 30°) = 3/2√3 ----(√12 = 2√3)

=> sin(θ + 30°) = (3/2√3) × (√3/√3)

=> sin(θ + 30°) = (3/2√3) × (√3/√3)

=> sin(θ + 30°) = √3/2

=> sin(θ + 30°) = sin 60°

=> (θ + 30°) = 60°

=> θ = 30°

The value of θ is equal to 30°

Q66. Answer: (d) 20 minutes

Calculation:

Time taken by P to fill the tank = 15 minutes

P's 1 minute work = 1/15

Time taken by Q to fill the tank = 30 minutes

Q's 1 minute work = 1/30

Now, they are opened at alternate minutes

In 2 minutes = 1/15 + 1/30 = 3/30 = 1/10 tank is filled

Time taken to completely fill the tank = 2 × 10 = 20 minutes

Q67. Answer: (b) √3

Calculation:

(√(1 + x) + √(1 - x))/(√(1 + x) - √(1 - x)) × (√(1 + x) + √(1 - x))/(√(1 + x) + √(1 - x))

=> (1 + x) + (1 – x) + 2√(1 – x²) over(1 + x) – (1 – x)

=> 2 + 2√(1 – (√3/2)²)over2x

=> 2 + 2 × (1/2)over 2 × (√3/2)

=> (3/√3) × (√3/√3)

=> √3

Q68. Answer: (d) 12 minutes

Calculation:

Let the tank be filled in x minutes

For half the time D alone fill the tank

D's 1 minute work = 1/20

For 1st half = (x/2) × (1/20) = x/40

For second half C and D together work

C and D working together = (1/15 + 1/20) = 7/60

For second half = (x/2) × (7/60) = 7x/120

Total work is completed

=> x/40 + 7x/120 = 1

=> 10x/120 = 1

=> x = 12

Therefore The tank will be filled in 12 minutes

Q69. Answer: (d) 6.4 cm

Given:

A circle is inscribed in a Quadrilateral ABCD

AB = 6.5 cm, BC = 5.4 cm, CD = 5.3 cm

Concept used:

The length of two tangents drawn from the external point is equal.

Calculation:

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AP = AS, BP = BQ, CR = CQ, DR = DS
=> (AP + PB) + (DR + RC) = (BQ + QC) + (AS + DS)
=> AB + CD = AD + BC
=> 6.5 + 5.3 = AD + 5.4
=> 11.8 = AD + 5.4
=> AD = 11.8 - 5.4
=> 6.4 cm
Therefore The AD is 6.4 cm.

Q70. Answer: (c) 33 days

Given:
A is twice as good as B
Time is taken to finish work = 22 days
Calculation:
A is twice as good as B
A can complete the given work in half time of B
Suppose B can complete work in 2x days
Then, A can complete the work in 2x/2 = x days
According to the question.
=> (1/x) + (1/2x) = 1/22
=> (1 + 2)/2x = 1/22
=> 3/2x = 1/22
=> x = 33 days
Therefore A alone can finish the given work in 33 days

Q71. Answer: (d) 36

Shortcut Trick
For third proportional of a and b, use formula: $c = b^2 \div a$
Given: a = 16, b = 24
Third Proportional = $(24 \times 24) \div 16$
Third Proportional = $576 \div 16 = 36$
Therefore The correct option is D.
Alternate Method
Given:
First term (a) = 16
Second term (b) = 24
Formula used:
If a, b, and x are in continued proportion, then a : b = b : x => $x = b^2 \div a$
16
Term 1 (a)
× 1.5
24
Term 2 (b)
× 1.5
36
Third Prop (x)
Logic: 16 : 24 :: 24 : x
Calculations:
=> Let the third proportional be x.
=> 16 : 24 :: 24 : x
=> 16 ÷ 24 = 24 ÷ x
=> 16 × x = 24 × 24

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=> x = 576 ÷ 16

=> x = 36

Therefore The correct option is D.

Additional Information

Mean Proportional

For any two numbers a and b, the mean proportional is calculated as √(a × b).

Fourth Proportional

If four numbers a, b, c, and d are in proportion (a:b = c:d), then the fourth proportional d = (b × c) ÷ a.

Continued Proportion

Three numbers a, b, and c are in continued proportion if the ratio of the first to the second is the same as the ratio of the second to the third (a/b = b/c).

Q72. Answer: (c) 84°

BCD forms a straight line i.e 180°

=> angle BCA = 180° – 132° = 48°

Now, Sum of all angles of a triangle is equal to 180°

=> angle B + angle C + angle A = 180°

=> (4/7) × angle A + angle A = 180° – 48°

=> (11/7) × angle A = 132°

=> angle A = 84°

Therefore The measure of angle A is equal to 84°

Q73. Answer: (c) 2

Given:

√x = √3 – √ 5

Calculation:

Squaring both sides

$(\sqrt{x})^2 = (\sqrt{3} - \sqrt{5})^2$

=> x = 3 + 5 – 2√15

=> x – 8 = -2√15

Again, squaring both sides

$(x - 8)^2 = (-2\sqrt{15})^2$

=> $x^2 + 64 - 16x = 4 \times 15$

=> $x^2 + 4 - 16x = 0$

=> $x^2 - 16x + 6 = 2$

Therefore The value is 2.

Q74. Answer: (d) 30%

Total number of students in school R = (12/100) × 10,500 = 1,260

Total number of students in school Q and T = {(16 + 24)/100} × 10,500 = 4200

=> Required percentage = (1260/4200) × 100 = 30%

Therefore The number of students in school R is 30% of the total number of students in schools Q and T together

Percentage of students in school R = 12%

Percentage of students in school Q and T = 16% + 24% = 40%

Therefore Required percentage = (12/40) × 100 = 30%

Q75. Answer: (c) 9

Calculation:

Let the cost price of one eraser be Rs.x

The number of erasers bought by the person in Rs.2 be y

Expenditure = Price × consumption

=> 2 = x × y ----(i)

The price of an eraser is reduced by 25%, a person can buy three more erasers for Rs.2

=> 2 = (75x / 100) × (y + 3) ----(ii)

Equating (i) and (ii)

=> xy = (3x / 4) × (y + 3)

=> 4y = 3y + 9

=> y = 9

Therefore The total number of erasers that can be bought for the original price is 9.

Q76. Answer: (b) 1952

The correct answer is 1952.

Key Points

• In the year 1952, the first Elected Parliament with two houses come into being in India.

• The first general elections under the new Constitution were held during the year 1951-52.

• The first elected Parliament came into existence in April 1952.

• The Seventeenth Lok Sabha was held in May 2019.

Additional Information

• Indian Parliament is the supreme legislative body of India.

• The Indian Parliament comprises of the President and the two Houses -

• Rajya Sabha

• Lok Sabha

• Lok Sabha:

• 543 members are directly elected by citizens of India on the basis of universal adult franchise representing Parliamentary constituencies across the country.

• It has a term of five years.

• Rajya Sabha:

• Rajya Sabha or the upper house is a permanent body not subject to dissolution.

• One-third of the members retire every second year and are replaced by newly elected members.

• Each member is elected for a term of six years.

• Session of Parliament :

• The period during which the House meets to conduct its business is called a session.

• The Constitution empowers the President to summon each House at such intervals that there should not be more than a six-month gap between the two sessions.

• The President has the power to summon and prorogue either House of Parliament or to dissolve Lok Sabha.

• The Constitution of India came into force on January 26, 1950.

Q77. Answer: (a) Norway

The correct answer is Norway.

Key Points

• Norway country ranked first in the 2019 Human Development India Index.

• HDI is part of the Human Development Report that is published by the United Nations Development Programme (UNDP).

• India was ranked 129 out of 189 countries on the 2019 Human Development Index (HDI) improving from the 130th position in 2018.

• The other indices that form the part of the 2019 Report are:

• Inequality-adjusted Human Development Index (IHDI),

• Gender Development Index (GDI),

• Gender Inequality Index (GII) and

• Multidimensional Poverty Index (MPI).

• The focus of the 2019 Report is on ‘Inequality in Human Development’.

Additional Information

• HDI emphasizes that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone.

• HDI measures the average achievement of a country in three basic dimensions of human development:

• A long and healthy life,

• Access to knowledge, and

• A decent standard of living

• Top Performers in 2019 :

• Norway, Switzerland, Ireland occupied the top three positions in that order.

• Germany is placed fourth along with Hong Kong, and Australia secured the fifth rank on the global ranking.

• India's Performance :

• India's HDI value increased by 50% (from 0.431 to 0.647), which places it above the average for other South Asian countries (0.642).

• In India, between 1990 and 2018, life expectancy at birth increased by 11.6 years, mean years of schooling increased by 3.5 years, and expected years of schooling increased by 4.7 years. Per capita incomes rose by over 250%.

Q78. Answer: (c) Six

The correct answer is Six.

Key Points

• Six Vedangas are there in total.

• The Vedanga are six auxiliary disciplines of Hinduism that developed in ancient times and have been connected with the study of the Vedas.

• They are as follows:

• Shiksha (Phonetics)

• Kalpa (Ritual Canon)

• Vyakaran (Grammar)

• Nirukta (explanation)

• Chhanda (Vedic meter)

• Jyotisha (Astrology)

Additional Information

• Shiksha :

• This auxiliary discipline has focused on the letters of the Sanskrit alphabet, accent, quantity, stress, melody, and rules of euphonic combination of words during a Vedic recitation.

• Chandas :

• This auxiliary discipline has focused on the poetic meters, including those based on a fixed number of syllables per verse, and those based on a fixed number of morae perverse.

• Vyakarana :

• This auxiliary discipline has focused on the rules of grammar and linguistic analysis to establish the exact form of words and sentences to properly express ideas.

• Nirukta :

• This auxiliary discipline has focused on linguistic analysis to help establish the proper meaning of the words, given the context they are used in.

• Kalpa :

• This field focused on standardizing procedures for Vedic rituals, rites of passage rituals associated with major life events such as a birth, wedding, and death in the family, as well as discussing the personal conduct and proper duties of an individual in different stages of his life.

• Jyotisha :

• This auxiliary Vedic discipline focused on time keeping.

Q79. Answer: (a) Norman Joseph Woodland

The correct answer is Norman Joseph Woodland.

Key Points

• The first Barcode system was developed by Norman Joseph Woodland.

• The barcode was invented by Norman Joseph Woodland and Bernard Silver and patented in the US in 1951.

• The invention was based on Morse code that was extended to thin and thick bars.

• Barcode contains information about a product like-

• price & weight of the product, date of manufacturing and expiry, name of the manufacturer.

• Barcode is allocated by an international institution set up for this purpose.

• Every product has a unique barcode all over the world.

Additional Information

• On June 26, 1974, the UPC barcode was used for the first time in Troy, Ohio, at Marsh Supermarket.

• The first product that was scanned with the new barcode was a pack of Wrigley's Juicy Fruit chewing gum.

• The choice of a pack of gum as the first product to be scanned wasn't just by chance.

• A barcode scanner will read this pattern of black and white bars and translate them into a line of test that your retail point of sale system can understand.

• Barcodes are applied to products as a means of quick identification.

• They are used in retail stores as part of the purchase process, in warehouses to track inventory, and on invoices to assist in accounting, among many other uses.

Q80. Answer: (c) Dhebar Lake in Rajasthan

The correct answer is Dhebar Lake in Rajasthan.

Key Points

• Dhebar Lake in Rajasthan is the second largest artificial lake in Asia.

• Dhebar Lake is India's second-largest artificial lake, after Govind Ballabh Pant Sagar.

• It is located in the Udaipur District of Rajasthan State in western India.

• Jaisamand Lake is also known by the name of Dhebar Lake.

• Dhebar Lake, built by Maharana Jai Singh in 1685, covers an area of 36 square miles.

Additional Information

• Chandubi Lake in Assam :

• Chandubi Lake is a natural lake located in Rabha Hasong Autonomous Council, Kamrup District, Assam at a distance of 64 kilometers.

• From the city of Guwahati accessible through National Highway 37.

• The lake is located at the foot of Garo hills surrounded by Assam and Meghalaya.

• Chilika Lake in Odisha :

• Chilika is the largest brackish water estuarine Lake in Asia.

• It sprawls over an area of 1100 sq km.

• Covering parts of three districts of Odisha i.e Puri on the East, Khurda on the North, and Ganjam on the South.

• It is the largest coastal lagoon in India and the second largest lagoon in the World.

• The Lake is a highly productive ecosystem, with rich fishery resources.

• Kolleru Lake in Andhra Pradesh :

• Kolleru Lake is one of the largest freshwater lakes in India located in the state of Andhra Pradesh.

• It forms the largest shallow freshwater lake in Asia, 15 kilometers away from the Eluru and 65km from Rajamahendravaram.

• it is located between Krishna and Godavari deltas.

Q81. Answer: (d) Safety pin

The correct answer is Safety pin.

Key Points

• The safety pin was invented by Walter Hunt.

• American mechanic Walter Hunt is regarded as the inventor of the safety pin.

• The safety pin included a clasp that covered the point and kept it from opening and a circular twist at the bend to act as a spring and hold it in place.

• The safety pin was invented while Hunt was twisting a piece of wire and trying to think of something that would help him pay off a debt of fifteen dollars.

• It was the first pin to have a clasp and spring action and Hunt claimed

• it was designed to keep fingers safe from injury, hence the name.

Additional Information

• Scooter :

• The concept of the scooter stretches back at least a century before to 1817 and Baron Karl von Drais de Sauerbrun of Germany.

• Safety Lamp :

• The Davy lamp is a safety lamp for use in flammable atmospheres, invented in 1815 by Sir Humphry Davy.

• It consists of a wick lamp with the flame enclosed inside a mesh screen.

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Q82. Answer: (d) Arabic word

The correct answer is Arabic word.

Key Points

• The term ‘monsoon’ is derived from an Arabic word.

• The word 'monsoon' is known to have been derived from the Arabic word 'mausim', meaning season.

• The term was reportedly first used in English in British India and refers to the seasonal change in the direction of the prevailing winds of a region.

• Basically, it describes a seasonal wind shift over a region that is usually accompanied by a dramatic increase in precipitation.

• Many of us are familiar with the Indian-Asian monsoon that brings heavy rains during the summer months over widespread areas of India and SE Asia.

Additional Information

• June 1 is regarded as the date of onset of the monsoon in India

• as indicated by the arrival of the monsoon in the southernmost state of Kerala.

• The monsoon accounts for nearly 80% of the rainfall in India.

• The rainfall is a result of the convergence of wind flow from the Bay of Bengal and reverses winds from the South China Sea.

• The onset of the monsoon occurs over the Bay of Bengal in May, arriving at the Indian Peninsula by June, and then the winds move towards the South China Sea.

• Monsoon Formed :

• The primary cause of monsoons is the difference between annual temperature trends over land and sea.

• The apparent position of the Sun with reference to the Earth oscillates from the Tropic of Cancer to the Tropic of Capricorn.

• Thus the low-pressure region created by solar heating also changes latitude.

Q83. Answer: (a) Nandini Harinath

The correct answer is Nandini Harinath.

Key Points

• Nandini Harinath is one of the Deputy Operations Director of the Mars Orbiter Mission (MOM).

• Nandini Harinath is a rocket scientist at ISRO’s Satellite Centre in Bengaluru.

• She is a part of the Mars Orbiter Mission, Maangalyaan.

• She has co-authored a research paper on mission planning, analysis, and operations—Outline of key components.

• Nandini is also the Mission system leader of NISAR which is a joint NASA-ISRO satellite that is to be developed to launch in 2020.

Additional Information

• Mars Orbiter Mission:

• The Mars Orbiter Mission, also called Mangalyaan, is a space probe orbiting Mars since 24 September 2014.

• It was launched on 5 November 2013 by the Indian Space Research Organisation.

• It was the fourth space agency to reach Mars, after Roscosmos, NASA, and the European Space Agency.

• It made India the first Asian nation to reach Martian orbit and the first nation in the world to do so on its maiden attempt.

• Mars Orbiter Mission (MOM), the maiden interplanetary mission of ISRO, launched on November 5, 2013, by PSLV-C25 and it got inserted into Martian orbit on September 24, 2014, in its first attempt.

• 1000 Earth days corresponds to 973.24 Mars Sols (Martian Solar day) and MOM completed 388 orbits.

Q84. Answer: (d) Frequency of the sound

The correct answer is Frequency of the sound.

Key Points

• Frequency of the sound characteristics of sound is measured in hertz (Hz).

• When sound travels through air, the atmospheric pressure varies periodically.

• The number of pressure variations per second is called the frequency of sound,

• Sound wave frequencies can be measured with a frequency counter or with a spectrum analyzer.

• These devices work by using a microphone to convert the sound wave into an electrical signal.

• The peaks and valleys of the wave are counted to find the frequency.

Additional Information

• The intensity of the sound :

• Sound intensity, also known as acoustic intensity, is defined as the power carried by sound waves per unit area in a direction

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perpendicular to that area.

• The SI unit of intensity, which includes sound intensity, is the watt per square meter (W/m^2).

• Sound intensity is not the same physical quantity as sound pressure.

• The loudness of the sound :

• Loudness refers to how loud or soft a sound seems to a listener.

• The loudness of sound is determined, in turn, by the intensity of the sound waves.

• Intensity is a measure of the amount of energy in sound waves.

• The unit of intensity is the decibel (dB).

• The wavelength of the sound :

• The wavelength of a sound, therefore, is the distance between adjacent identical parts of a sound wave.

• Just as the distance between adjacent crests in a transverse wave is one wavelength.

• the distance between adjacent compressions in a sound wave is also one wavelength,

Q85. Answer: (d) Andhra Pradesh

The correct answer is Andhra Pradesh.

Key Points

• The Tropic of Cancer does NOT pass through Andhra Pradesh.

• Tropic of Cancer passes through the middle part of India.

• Tropic of Cancer is an imaginary line that is at an angle of 23.50 degrees.

• It is North of the Equator, which passes through the middle of India.

• Tropic of Cancer passes through 17 countries and India is one of them.

Additional Information

• It passes through the other eight states.

• Gujarat (Jasdan)

• Rajasthan (Kalinjarh)

• Madhya Pradesh (Shajapur)

• Chhattisgarh (Sonhat)

• Jharkhand (Lohardaga)

• West Bengal (Krishnanagar)

• Tripura (Udaipur)

• Mizoram (Champh)

• The Tropic of Cancer (23°30’N) passes almost halfway through the country India.

• From the extends south to north, the mainland of India extends between 8°4’N and 37°6’N latitudes.

• From the other extends west to east, India extends between 68°7’E and 97°25’E longitudes.

• Due to the great longitudinal extent and difference of about 29°, wide differences in local time of places located at two extreme points of the country.

• The difference between these two points would be approximately two hours.

Q86. Answer: (a) Nagaland

The correct answer is Nagaland.

Key Points

• The Hornbill Festival is a celebration held every year from 1 to 10 December, in Nagaland, Northeast India.

• It is also called the 'Festival of Festivals'.

• Significance:

• To revive, protect, sustain, and promote the richness of the Naga heritage and traditions.

Q87. Answer: (a) Maulvi Liaquat Ali

The correct answer is Maulvi Liaquat Ali.

Key Points

• Maulvi Liaquat Ali

• Maulvi Liaquat Ali was a Muslim religious leader from Allahabad (Prayagraj), in the state of Uttar Pradesh in present-day India.

• He was one of the leaders in the revolt against the British in 1857.

• This war was also known as the First War of Independence.

• Hence option 1 is correct.

Additional Information

• List of Important Leaders associated with the revolt of 1857 -

• Delhi

• Bahadur Shah II

• General Bakht Khan

• Lucknow

• Begum Hazrat Mahal

• Birjis Qadir

• Ahmadullah

• Kanpur

• Nana Sahib

• Rao Sahib

• Tantia Tope

• Azimullah Khan

• Jhansi

• Rani Laxmibai

• Bihar

• Kunwar Singh

• Amar Singh

• Rajasthan

• Jaidayal Singh

• Hardayal Singh

• Farrukhabad

• Tufzal Hasan Khan

• Assam

• Kandapareshwar Singh

• Maniram Dutta Baruah

• Orissa

• Surendra Shahi

• Ujjwal Shahi

Q88. Answer: (d) Kuldip Nayar

The correct answer is Kuldip Nayar.

Key Points

• Kuldip Nayar is author of the book ‘The Judgement: Inside Story of the Emergency in India’.

• A revelatory narration of the nineteen dark months of emergency in India

• Kuldip Nayar was an Indian journalist, syndicated columnist, human rights activist, author.

• He was former High Commissioner of India to the United Kingdom noted for his long career as a left-wing political commentator.

• He was also nominated as a member of the Upper House of the Indian Parliament in 1997.

• Books:

• India after Nehru, In Jail, The Martyr, scoop! without fear, India house

Additional Information

• Jawaharlal Nehru :

• Jawaharlal Nehru was an Indian independence activist and, the first Prime Minister of India, as well as a central figure in Indian politics both before and after independence.

• He was also known as Pandit Nehru due to his roots with the Kashmiri Pandit community, while Indian children knew him better as Chacha Nehru.

• Nehru was honoured with Bharat Ratna Award in the year 1955.

• Books :

• The discovery of India, An Autobiography, China, Spain and the war, Letters from a father to his.

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• KM Munshi :
• Kanhaiyalal Maneklal Munshi, popularly known by his pet name Ghanshyam Vyas.
• He was an Indian independence movement activist, politician, writer and educationist from Gujarat state.
• A lawyer by profession, he later turned to author and politician.
• He is a well-known name in Gujarati literature.
• Books :
• Lopamudra, Lomaharshini, The glory of patan, Akhand Hindustan, The book of Satyabhama.
• Indira Gandhi :
• She was an Indian politician and a central figure of the Indian National Congress.
• She was the first only female Prime Minister of India.
• Indira Gandhi was the daughter of Jawaharlal Nehru, the first prime minister of India.
• Books :
• My truth, a journey of friendship, of man and his environment

Q89. Answer: (a) Michael Phelps

The Correct answer is Michael Phelp.

Key Points

• Michael Phelps is nicknamed the ‘Baltimore Bullet’.
• The Baltimore Bullet is a 1980 American comedy film based on the adventures of two pool hustlers in the United States.
• It was directed by Robert Ellis Miller and starred James Coburn, Omar Sharif, Bruce Boxleitner, and Ronee Blakley.
• The screenplay was written by film and stage dancer John Brascia, from a story by Brascia and Robert Vincent O'Neil. Brascia also produced the film.
• Phelps started the Michael Phelps Foundation, which focuses on growing the sport of swimming and promoting healthier lifestyles.
• Michael Fred Phelps II is an American former competitive swimmer and the most successful and most decorated Olympian of all time, with a total of 28 medals.

Additional Information

• Tom Jager :
• Thomas Michael Jager is an American former competition swimmer.
• He is a five-time Olympic gold medalist in relay events, a two-time World Championship individual gold medalist for the 50-meter freestyle.
• a former world record-holder in two events
• Medals:
• Swimming at the 1984 Summer Olympics – Men's 4 × 100-meter medley relay.
• Ian Thorpe :
• Ian James Thorpe is an Australian retired swimmer who specialized in freestyle but also competed in backstroke and the individual medley.
• He has won five Olympic gold medals, the most won by any Australian.
• Medals:
• Swimming at the 2004 Summer Olympics – Men's 4 × 200-meter freestyle relay.
• Matt Biondi :
• Matthew Nicholas Biondi is an American former competition swimmer, eleven-time Olympic medalist, and former world record-holder in five events.
• Biondi competed in the Summer Olympic Games in 1984, 1988, and 1992, winning a total of eleven medals.
• Gold medals:
• Swimming at the 1992 Summer Olympics – Men's 4 × 100-meter freestyle relay.

Q90. Answer: (d) Input device

The correct answer is an Input device.

Key Points

• A trackball is an Input device.
• A trackball is a pointing device consisting of a ball held by a socket containing sensors to detect a rotation of the ball about two axis -

• like an upside-down mouse with an exposed protruding ball.
• A trackball is an input device used to enter motion data into computers or other electronic devices.
• A trackball is essentially a different kind of computer mouse.
• It is a plastic case containing a ball on the top that moves a computer cursor around on the screen.
• The user can move the ball with their thumb or fingers, and sensors inside the case detect which direction the ball is moving.
• A trackball is a computer cursor control device used in many notebook and laptop computers

Additional Information
• Barcode reader :
• A barcode reader is an optical scanner that can read printed barcodes, decode the data contained in the barcode and send the data to a computer.
• Like a flatbed scanner, it consists of a light source, a lens, and a light sensor translating for optical impulses into electrical signals.
• A barcode scanner will read this pattern of black and white bars and translate them into a line of test that your retail point of sale system can understand.
• Touchpad :
• The touchpad on a laptop does the same job as the mouse on a desktop PC.
• It is sometimes also called a trackpad.
• The touchpad is used to control the mouse pointer, also known as the cursor.
• The cursor is used to point to and choose items on the screen.
• Output device :
• Any information that is processed by and sent out from a computer or other electronic device is considered output.
• An output device is any piece of computer hardware equipment that converts information into human-readable form.
• It can be text, graphics, tactile, audio, and video.
• Some of the output devices are Visual Display Units i.e. a Monitor, Printer, Graphics Output devices, Plotters, Speakers.

Q91. Answer: (b) England

the correct answer is England.

Key Points
• England country is the 2019 ICC Cricket World Cup champion.
• England became the sixth Test playing nation to win the Cricket World Cup after beating New Zealand on boundary count at the Lord's Cricket Ground in London.
• The 2019 ICC Cricket World Cup was the 12th Cricket World Cup, a quadrennial One Day International cricket tournament contested by men's national teams.
• It was organised by the International Cricket Council (ICC).
• It was hosted between 30 May to 14 July 2019 across 10 venues in England.
• The ICC announced its team of the tournament on 15 July 2019 with Kane Williamson being named as player of the tournament and captain of the team.
• Hence, option 2 is correct.

Additional Information
• A total of twenty teams have competed in the eleven editions of the tournament, with ten teams competing in the recent 2019 tournament.
• Australia has won the tournament five times, India and West Indies twice each, while Pakistan, Sri Lanka and England have won it once each.
• World Cup winners
• West Indies: 1975, 1979
• India: 1983, 2011
• Australia: 1987, 1999, 2003, 2007, 2015
• Pakistan: 1992
• Sri Lanka: 1996

Q92. Answer: (b) 2014

The correct answer is 2014.

Key Points

• Telangana became the 29th state of India in the 2014 year.

• After various stages, the bill was placed in the Parliament of India in February 2014.

• In February 2014, Andhra Pradesh Reorganisation Act, 2014 bill was passed by the Parliament of India for the formation of Telangana state comprising ten districts from north-western Andhra Pradesh.

• Telangana, as a geographical and political entity, was born on June 2, 2014, as the 29th and the youngest state in the Union of India.

• However, as an economic, social, cultural, and historical entity, it has a glorious history of at least two thousand five hundred years or more.

Additional Information

• The word "Telinga" changed over time to "Telangana" and the name "Telangana" was designated to distinguish the predominantly Telugu-speaking region of the erstwhile Hyderabad State from its predominantly Marathi-speaking one, Marathwada.

• On 2nd June 2014, the northwestern part of Andhra Pradesh was separated and 29th state Telangana was created with Hyderabad as its capital.

• The Andhra State Act (1953) formed the first linguistic state of India, known as the state of Andhra, by taking out the Telugu speaking areas from the State of Madras (now Tamil Nadu).

• The States Reorganisation Act (1956) merged the Telugu-speaking areas of Hyderabad state with the Andhra state to create the enlarged Andhra Pradesh state.

• The Andhra Pradesh Reorganisation Act (2014) bifurcated Andhra Pradesh into two separate states, namely, the Andhra Pradesh (residuary) and the Telangana.

• Four icons of Telangana are:

• State Bird - Palapitta (Indian Roller or Blue Jay).

• State Animal - Jinka (Deer).

• State Tree - Jammi Chettu (Prosopis Cineraria).

• State Flower - Tangedu (Tanner’s Cassia).

Q93. Answer: (b) Arunachal Pradesh

The correct answer is Arunachal Pradesh.

Key Points

• Bomdi La is in Arunachal Pradesh.

• At an altitude of 4331 m

• Situated at an altitude of 4331 m near the western boundary of Arunachal Pradesh in the Greater Himalayas, this pass connects Arunachal Pradesh with Lhasa.

Additional Information

• Some of the Important Mountain Passes India are:

• Shipki La Pass

• It is located through Sutlej Gorge.

• It connects Himachal Pradesh with Tibet.

• It is India’s third border post for trade with China after Lipu Lekh and Nathula Pass.

• Qara Tagh Pass

• It is located in the Karakoram Mountains

• It was a subsidiary of the ancient silk route.

• Khardung La

• It is the highest motorable pass in the country.

• It connects Leh and Siachen glaciers.

• This pass remains closed during the winter.

• Chang-La

• It is a high mountain pass in the Greater Himalayas.

• It connects Ladakh with Tibet.

• Lipu Lekh: Uttarakhand-Tibet

• It is located in Uttarakhand.

• It connects Uttarakhand with Tibet.

• This pass is an important border post for trade with China.

• The pilgrims for Manasarovar travel through this pass.

Q94. Answer: (b) Amit Shah

The correct answer is Amit Shah.

Key Points

• Union Home Minister Amit Shah Inaugurated the National Tribal Festival “Aadi Mahotsav” in New Delhi.

• The theme of the 15-day Mahotsav is a celebration of the Spirit of Tribal Culture, Craft, Cuisine, and Commerce.

• It will be held at Dilli Haat in INA, New Delhi.

• The tribal textiles manufactured by master tribal craftsmen from Jammu & Kashmir in the North to Tamil Nadu in the South and from Gujarat in the West to Nagaland/Sikkim in the East will be the main attractions.

Additional Information

• About the Aadi Mahotsav:

• The Aadi Mahotsav – A Celebration of the Spirit of Tribal Culture, Crafts, Cuisine, and Commerce – is an annual initiative being organized by TRIFED, Ministry of Tribal Affairs since 2017.

• The festival will comprise of display and sale of tribal art and craft, medicine & healers, cuisine and folk performances, in which around 1000 tribal artisans, artists, and chefs from more than 20 States of the country shall participate and provide a glimpse of their rich traditional culture.

Q95. Answer: (d) Uddhav Thackeray

The correct answer is Uddhav Thackeray.

Key Points

• Chief Minister Uddhav Thackeray in January 2020 launched the first girder for the Mumbai Trans Harbour Link (MTHL) project, which will connect Mumbai with Navi Mumbai.

• The Sewri to Nhava Sheva sea link will become the longest bridge in India with a length of almost 22 km and has been in the planning stage for over four decades now.

• An automatic girder launching system, which was used for the first time in India, helped lay the foundation of the bridge.

• “We all know that the Sewri-Nhava Sheva bridge, which is very essential for the people, was being postponed for a long time.

• The work has now begun and is going very fast.

• According to the Mumbai Metropolitan Region Development Authority (MMRDA), the bridge will be 21.8-km long and will cost Rs. 17,000 crores, 80% of which will be funded by Japan International Cooperation Agency (JICA).

Q96. Answer: (c) 2015

The correct answer is 2015.

Key Points

• Planning Commission was replaced by a new institution – NITI AAYYOG on January 1, 2015, with emphasis on ‘Bottom –Up’ approach to envisage the vision of Maximum Governance, Minimum Government, echoing the spirit of ‘Cooperative Federalism’.

Additional Information

• Administrative Skeltal

• Chairperson: Prime Minister

• Vice-Chairperson: To be appointed by Prime-Minister

• Governing Council: Chief Ministers of all states and Lt. Governors of Union Territories.

• Regional Council: To address specific regional issues, Comprising Chief Ministers and Lt. Governors Chaired by Prime Minister or his nominee.

• Adhoc Membership: 2 members in ex-officio capacity from leading Research institutions on a rotational basis.

• Ex-Officio membership: Maximum four from Union council of ministers to be nominated by Prime minister.

• Chief Executive Officer: Appointed by Prime-minister for a fixed tenure, in the rank of Secretary to Government of India.

• Special Invitees: Experts, Specialists with domain knowledge nominated by Prime-minister.

• NITI Aayog Hubs

• Team India Hub acts as an interface between States and Centre.

• Knowledge and Innovation Hub builds the think-tank acumen of NITI Aayog.

Q97. Answer: (a) Manpreet Singh

The correct answer is Manpreet Singh.

Key Points

• National men's team captain Manpreet Singh became the first Indian to win the International Hockey Federation's (FIH) Player of the Year award, capping a memorable 2019 season in which he led the side to Olympic qualification.

• The 27-year-old midfielder, thus, became the first from the country to win the accolade since the awards were introduced in 1999.

• He beat competition from Belgium's Arthur van Dorren and Lucas Villa of Argentina, who came second and third respectively.

Additional Information

• The FIH Player of the Year Awards is awarded annually by the International Hockey Federation to the male and female field hockey players adjudged to be the best in the world.

• The awards were established in 1998 and have been awarded annually ever since.

• In 2001 the FIH Young Player of the Year award was created, to be awarded to the best young field hockey player of the year.

Important Points

• Luciana Aymar has won the award a record eight times between 2001 and 2013

Q98. Answer: (a) Hyderabad & Mumbai

The correct answer is Hyderabad & Mumbai.

Key Points

• United Nations Educational, Scientific and Cultural Organization (UNESCO) has included Mumbai and Hyderabad in its network of 'Creative Cities' among the 66 cities selected on the occasion of World Cities Day 2019 (31st October).

• With the addition of 66 new cities, the UNESCO Creative Cities Network counts a total of 246 cities.

• Mumbai has been designated as Creative City of Films and Hyderabad as a Creative City of Gastronomy.

• Earlier, Indian cities like Chennai and Varanasi have been included in UNESCO Cities of Music while Jaipur has been included in the City of Crafts and Folk Arts.

Additional Information

• UNESCO Creative Cities Network (UCCN)

• It was created in 2004.

• Currently (2019), 246 cities make up this network which aims towards a common objective of placing creativity and cultural industries at the heart of their development plans at the local level and cooperating actively at the international level.

• The UNESCO Creative Cities aims to achieve Sustainable Development Goals through innovative thinking and action.

• Also, cities are championing sustainable development actions that directly benefit communities at the urban level.

• Sustainable Development Goal 11 aims for Sustainable Cities and Communities.

• The network covers seven creative fields: crafts and folk arts, media arts, film, design, gastronomy, literature and music.

Important Points

• World Cities Day 2019

• The United Nations General Assembly has designated the 31st of October as World Cities Day.

• The theme for World Cities Day,2019 is, “Changing the world: innovations and a better life for future generations”.

Q99. Answer: (d) Hygrometer

The correct answer is Hygrometer.

Key Points

• A hygrometer is an instrument used to measure the amount of water vapour in the air, in soil, or in confined spaces.

• Humidity measurement instruments usually rely on measurements of some other quantities such as temperature, pressure, mass, a mechanical or electrical change in a substance as moisture is absorbed.

Additional Information

• Hydrometer

• A hydrometer is an instrument used for measuring the relative density of liquids based on the concept of buoyancy.

• They are typically calibrated and graduated with one or more scales such as specific gravity.

• A Thermometer is a device that measures temperature or a temperature gradient (the degree of hotness or coldness of an object).

• A thermometer has two important elements:

• Temperature sensor

• Some means of converting this change into a numerical value.

• A fathometer is used to measure Ocean depth.

• A fathometer is a depth finder that uses sound waves to determine the depth of water.
• Galvanometer – Used to measure electric current.

Q100. Answer: (d) Kalarippayattu

The correct answer is Kalaripayattu.

Key Points

• Kalaripayattu
• Kalaripayattu is a martial art based on the ancient knowledge of the human body.
• It originated in Kerala from 3nd century BC to the 2nd century AD.
• It is now practised in Kerala and some parts of Tamil Nadu.
• The place where this martial art is practised is called a 'Kalari'. It is a Malayalam word that signifies a kind of gymnasium.
• Kalari literally means 'threshing floor' or 'battlefield'.
• The word Kalari first appears in the Tamil Sangam literature to describe both a battlefield and combat arena.
• It is considered to be one of the oldest fighting systems in existence.
• It is also considered the father of modern Kung - Fu.

Additional Information

• Gatka Martial Art
• Gatka is a traditional martial art form associated with the Sikh gurus.
• It imbibes sword and sticks fighting skills and self-control.
• Gatka is believed to have originated when the 6th Sikh Guru Hargobind adopted ‘Kirpan’ for self-defence during the Mughal era.
• A style of stick fighting between two or more practitioners, Gatka is a toned-down version of the deadlier Shastar Vidya.
• The sharp swords of Shastar Vidya have been replaced by wooden sticks (soti) and shields (farri) in Gatka.
• It is considered a battle technique.
• Paika akhada is an Odia term that roughly translates as "warrior gymnasium" or "warrior school".
• In former times they served as the training schools of the peasant-militias in Odisha, eastern India.

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