SSC CHSL Previous Paper 4 (Held On: 18 March 2020 Shift 1) (Previous Year Paper)

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

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Practise under exam conditions, then review your answers after you submit.

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ENGLISH LANGUAGE

Q1. Directions: Select the correct passive form of the given sentence.

The students have performed a new version of Shakespeare's 'Macbeth'.

(a) Shakespeare's 'Macbeth' has been performed by the new version of the students.
(b) A new version of Shakespeare's 'Macbeth' have been performed by the students.
(c) A new version of Shakespeare's 'Macbeth' has been performed by the students.
(d) Shakespeare's 'Macbeth' have been performed by the new version of the students.

Q2. Directions: Select the correct indirect form of the given sentence.

Shanti asked me, "Why did you keep this smartphone in the bin?"

(a) Shanti asked me why I was keeping that smartphone in the bin.
(b) Shanti asked me why I kept that smartphone in the bin.
(c) Shanti asked me why I had kept that smartphone in the bin.
(d) Shanti asked me why I had been keeping that smartphone in the bin.

Q3. Directions: Select the most appropriate meaning of the given idiom.

Vanish into thin air

(a) Permanently mix
(b) Totally dilute
(c) Completely disappear
(d) Perpetually postpone

Q4. Directions: Select the wrongly spelt word.

(a) Valediction
(b) Defenition
(c) Conviction
(d) Selection

Directions

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.

The internet is fast becoming trusted by (1)____ children and adults as reliable and accurate (2)__ of information. Through the internet children now have (3)__ to an almost endless supply of information and opportunity for (4)__. However, there can be real risks and dangers for an (5)____ child.

Q5. Select the most appropriate option for blank No. 1.

(a) not only
(b) neither
(c) both
(d) often

Q6. Select the most appropriate option for blank No. 2.

(a) piece
(b) collection
(c) source
(d) deposit

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

(a) easiness
(b) gathering
(c) access
(d) ability

Q8. Select the most appropriate option for blank No. 4.

(a) interaction
(b) consultation
(c) intimation
(d) deliberation

Q9. Select the most appropriate option for blank No. 5.

(a) unsupervised
(b) unauthorized
(c) undeveloped
(d) unparalleled

Q10. Directions: 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'.

As of you are here with me, who cares about the outcome of the issue.

(a) So long
(b) As long to
(c) No improvement
(d) As long as

Q11. Directions: Select the most appropriate synonym of the given word.

JOVIAL

(a) Judgmental
(b) Jeering
(c) Jealous
(d) Joyous

Q12. Directions: Select the wrongly spelt word.

(a) Corporate
(b) Comemorate
(c) Collaborate
(d) Conjugate

Q13. Directions: Select the word which means the same as the group of words given.

Something which is considered to be very important

(a) Cardinal
(b) Scanty
(c) Meager
(d) Supplementary

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Q14. Directions: 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'.

Before it was modified, the Law provided with the owner could take possession of the goods at any time.

(a) provided on
(b) provided as
(c) No improvement
(d) provided that

Q15. Directions: Given below are four jumbled sentences. Out of the given options select the one that gives their correct order.

A. In the evening, Tejaswini would sing songs praising the Lord.

B. She would go to the Lord's temple twice a day.

C. Tejaswini was known in the village for her devotion to the Lord.

D. In the morning, she would take with her a pot of milk and a bunch of flowers as an offering.

(a) DCAB
(b) CBDA
(c) ACDB
(d) CADB

Q16. Directions: Given below are four jumbled sentences. Out of the given options select the one that gives their correct order.

A. One day, a strange crow from the west, landed on one of the branches.

B. There was a large mango tree deep inside a thick forest.

C. The branches were full of leaves, which crackled when the storm blew.

D. Its branches spread in all directions, lobbing a large shadow on the ground.

(a) CDBA
(b) ACDB
(c) BCAD
(d) BDCA

Q17. Directions: Select the most appropriate word to fill in the blank.

I had a broken bone in the hand which the doctor called a _____ and suggested immediate surgery.

(a) fracture
(b) contamination
(c) infection
(d) wound

Q18. Directions: Select the word which means the same as the group of words given.

A person who is neither well experienced nor professional

(a) Proficient
(b) Expert
(c) Veteran
(d) Amateur

Q19. Directions: Select the most appropriate meaning of the given idiom.

Take one's hat off to someone

(a) Indicate disapproval
(b) Show admiration
(c) Express anger
(d) Display humility

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Q20. Directions: Select the most appropriate ANTONYM of the given word.

OBSCURE

(a) Uncertain
(b) Vague
(c) Clear
(d) Ambiguous

Q21. Directions: Select the most appropriate ANTONYM of the given word.

EARTHLY

(a) Celestial
(b) Peripheral
(c) Temperamental
(d) Temporal

Q22. Directions: Select the most appropriate word to fill in the blank.

She has shown a great interest towards space science, since her early childhood and a passion to _____ the outer space.

(a) explore
(b) elicit
(c) entertain
(d) enlighten

Q23. Directions: In the sentence identify the segment which contains the grammatical error.

Thomas is a man of word who have been paying back the borrowed money in installments.

(a) who have been paying back
(b) in instalments
(c) the borrowed money
(d) Thomas is a man of word

Q24. Directions: In the sentence identify the segment which contains the grammatical error.

Though she was able to finish the work on time, she couldn't do that out in fear.

(a) finish the work on time,
(b) Though she was able to
(c) out in fear
(d) she couldn't do that

Q25. Directions: Select the most appropriate synonym of the given word.

CHOOSY

(a) Tricky
(b) Selective
(c) Frank
(d) Productive

GENERAL INTELLIGENCE

Q26. Sheela introduced Rahul saying, "His sister is the single daughter of my mother". How are Rahul and Sheela related to each other?

(a) Cousins
(b) Son-Mother
(c) Brother-Sister
(d) Uncle-Niece

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Q27. Select the combination of letters what when sequentially placed in the blanks of the given letter series will complete the series.

e_geef_gg_ee_f_ggg

(a) f, f, e, f, f
(b) f, g, f, g, g
(c) g, f, e, f, f
(d) f, f, f, f, f

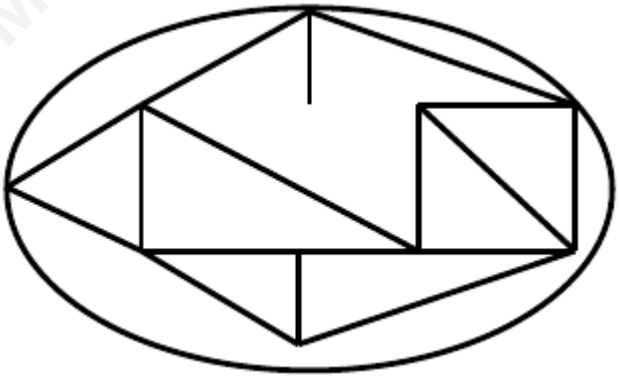
Q28. Rishabh is a 10 year old boy. If his mother is 20 years older than him and 6 years younger than his father, then what is his father's age?

(a) 34 years
(b) 26 years
(c) 36 years
(d) 30 years

Q29. In a certain code language, 'APRICOT' is written as 'GLXRIKZ' then how will 'ORANGE' be written in the same code language?

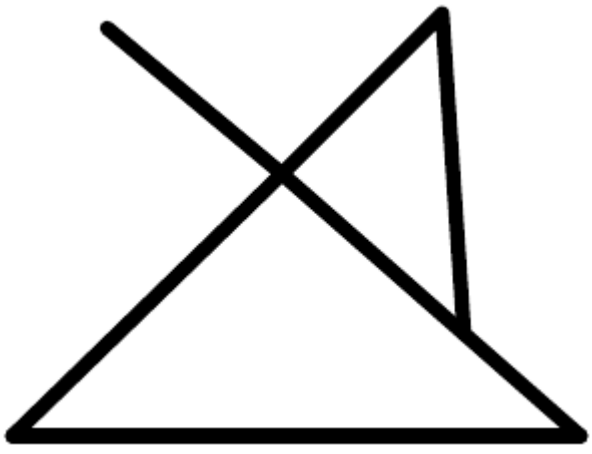
(a) LHZMSV
(b) LIZMTV
(c) VTNZHM
(d) VTMZIL

Q30. How many triangles are there in the given figure?



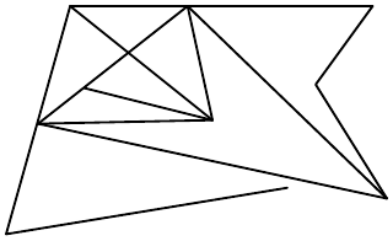
(a) 8
(b) 10
(c) 13
(d) 12

Q31. Select the option in which the given figure is embedded. (Rotation is not allowed)

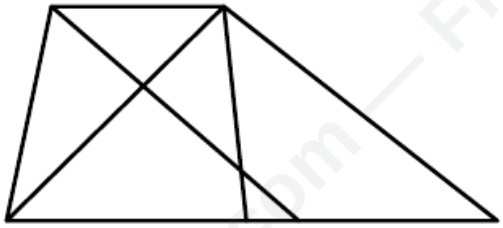


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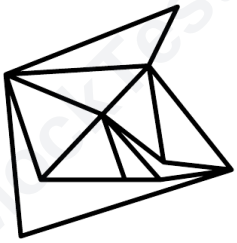
(a)



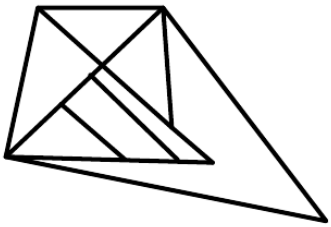
(b)



(c)



(d)



Q32. Four letter-pairs have been given, out of which three are alike in some manner and one is different. Select the odd letter-pair.

(a) US
(b) OM
(c) AY
(d) BE

Q33. Select the option that is related to the third number in the same way as the second number is related to the first number.

9 : 121 :: 7 : ?

(a) 102
(b) 79
(c) 81
(d) 105

Q34. Which of the options is the exact mirror image of the given alphanumeric figure when the mirror is held at the right side?



(a)



(b)



(c)



(d)



Q35. Which two signs should be interchanged to make the following equation correct?

4 ÷ 6 + 9 - 48 × 8 = 27

(a) • and -
(b) • and ×
(c) ÷ and +
(d) ÷ and ×

Q36. 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.

INTEX : EINTX :: SMALL : ?

(a) LLAMV
(b) ALMLV
(c) AJKLM
(d) ALLMS

Q37. Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

ab_ _ _cba_ _ _dd_ _ _abcd_ _ baa_ _ _ _cba

(a) acbdecdeaacecdd
(b) abeaacdecdeecdd
(c) abbaacdeecdecdd
(d) cddabccbadcbcdd

Q38. In a code certain code language, MUSIC is coded as 60 and TUNE is coded as 56. How will LYRIC be coded as in that language?

(a) 65
(b) 63
(c) 62
(d) 67

Q39. In a certain code language, PAGER is written as MIDOO. How will ANGEL be written as in that language?

(a) IKDOI
(b) AVIDI
(c) AOIDK
(d) ILVDN

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Q40. Select the set in which the numbers are related in the same way as are the numbers of the following set.

(2, 6, 32)

(a) (4, 12, 36)
(b) (4, 8, 33)
(c) (9, 13, 43)
(d) (8, 18, 80)

Q41. Arrange the following words in a logical and meaningful order.

1. Letter
2. Satellite
3. Telephone
4. Smartphone

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

Q42. Select the number that can replace the question mark (?) in the following series.

2, 8, 15, 24, 36, 52, ?

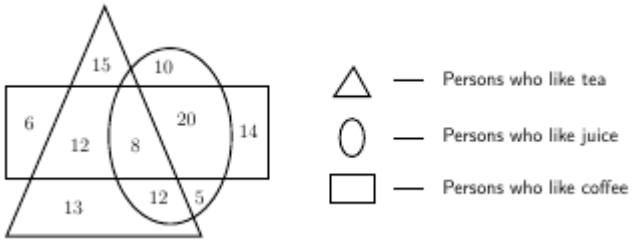
(a) 83
(b) 78
(c) 63
(d) 73

Q43. Select the option in which the words share the same relationship as that shared by the given pair of words.

Chair : Furniture

(a) Bicycle : Travel
(b) Seat : Cover
(c) Letter paper : stationery
(d) Pencil : Wood

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

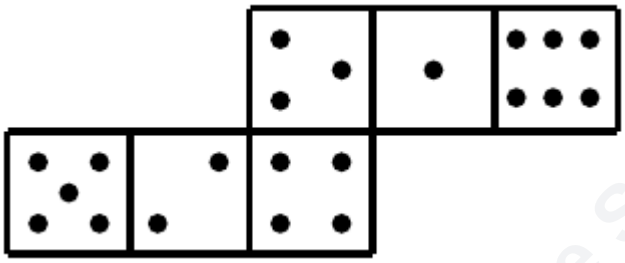


How many people like both tea and coffee, but do NOT like juice?

(a) 8
(b) 22
(c) 12
(d) 20

Q45. If the following figure is folded to form a cube, then how many dots will be on the face opposite to the face having 2 dots?

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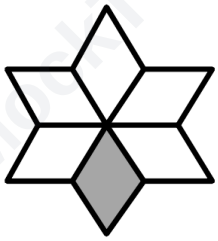


(a) 3
(b) 6
(c) 4
(d) 1

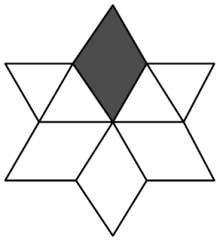
Q46. Select the option figure that will come next in the following series.



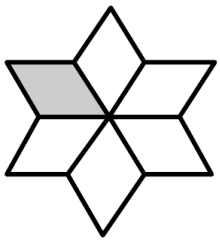
(a)



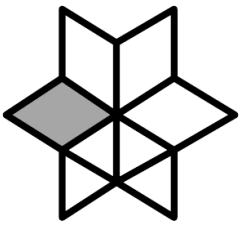
(b)



(c)

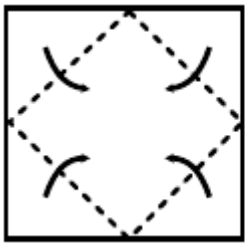


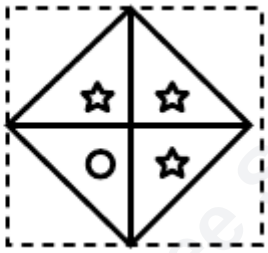
(d)



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Q47. A paper is folded and cut as shown in the following figures. How will this paper appear when unfolded?





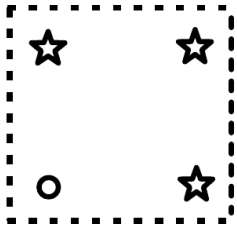
(a)



(b)



(c)



(d)



Q48. A and B can do a piece of work in 30 days and 18 days respectively. A started the work alone and then after 6 days B joined him till the completion of the work. In how many days has the whole work completed?

(a) 12
(b) 9
(c) 15
(d) 17

Q49. Which two signs and numbers should be interchanged to make the following equation correct?

16 × 18 + 2 - 14 ÷ 3 = 38

(a) 14 and 18, + and -
(b) 14 and 18, + and ×
(c) 16 and 3, - and ÷

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(d) 16 and 14, - and ×

Q50. 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 follow(s) from the statements.

Statements:

1. All doors are teachers.

2. All teachers are cups.

Conclusions:

I. All cups are doors.

II. All doors are cups.

III. All teachers are doors.

IV. Some cups are teachers.

(a) Only conclusions I and II follow.
(b) Only conclusion I follows.
(c) Only conclusions II and IV follow.
(d) Only conclusions I and III follow.

QUANTITATIVE APTITUDE

Q51. (1 - tan A)/(1 + tan A) = (tan 3° tan 15° tan 30° tan 75° tan 87°)/(tan 27° tan 39° tan 51° tan 60° tan 63°), then the value of cot A is:

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

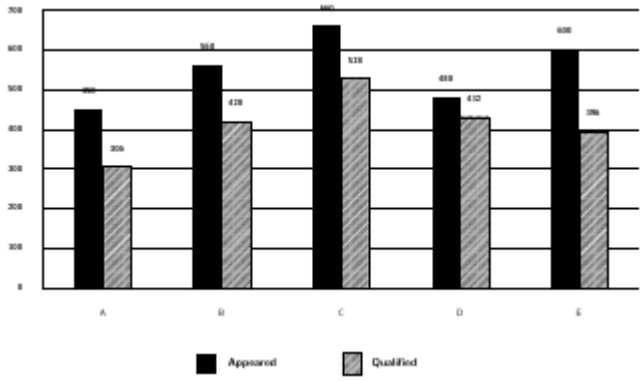
Q52. Which of the following numbers is divisible by 2, 5 and 10?

(a) 720345
(b) 149
(c) 125372
(d) 19400

Q53. If a SinA + b cosA = c, then a cosA - b sinA is equal to:

(a) $\sqrt{(a^2 + b^2 + c^2)}$
(b) $\sqrt{(a^2 - b^2 + c^2)}$
(c) $\sqrt{(a^2 + b^2 - c^2)}$
(d) $\sqrt{(a^2 - b^2 - c^2)}$

Q54. The following graph shows the data of the number of candidates that appeared and qualified for a competitive exam from the colleges A, B, C, D, E.

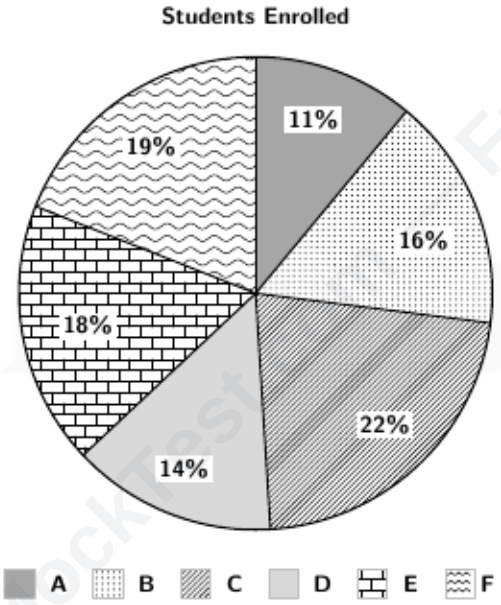


Based on the information, the difference between the percentage of students that qualified, from the college B and D is:

(a) 20

(b) 15
(c) 12
(d) 18

Q55. The given pie chart shows the percentage of students enrolled into the colleges A, B, C, D, E and F in a city, and the table shows the ratio of boys to girls in the college.



A	**9 : 4**
B	5 : 9
C	3 : 4
D	7 : 2
E	1 : 4
F	3 : 2

Based on this information, if the total number of students is 9800, then the number of girls in the college B is:

(a) 504
(b) 560
(c) 280
(d) 1008

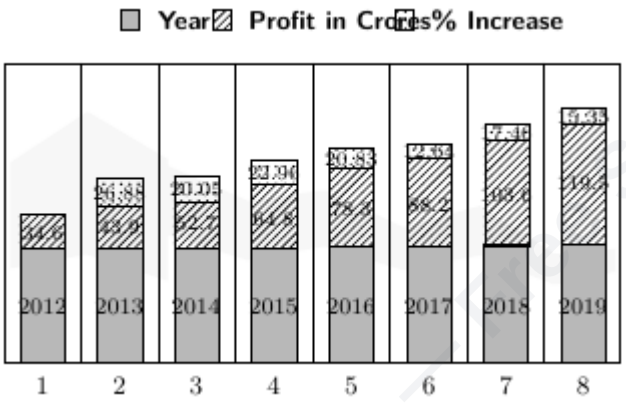
Q56. Ravi starts for his school from his house on his cycle at 8:20 a.m. If he runs his cycle at a speed of 10 km/h, he reaches his school 8 minutes late, and if he drives the cycle at a speed of 16 km/h, he reaches his school 10 minutes early. The school starts at:

(a) 8:40 a.m.
(b) 9:40 a.m.
(c) 8:50 a.m.
(d) 9:00 a.m.

Q57. If x is the square of the number when (2/5of61/4 ÷ 3/7) of 12/7 is divided by 111/4, then the value of 81x is:

(a) 9
(b) 36
(c) 4
(d) 16

Q58. The following graph shows the profit (in crore Rs.) earned by a company in the years from 2012 to 2019.



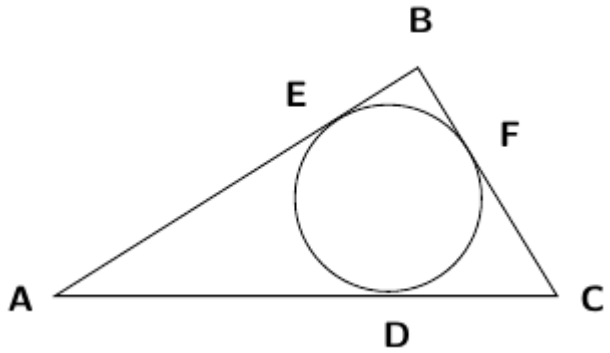
The percentage increase in the profit from the previous year, is greatest in the year:

(a) 2013
(b) 2017
(c) 2015
(d) 2018

Q59. If [{(2/3)³} ^((2x + 3))]^((- 3)/4) = [{(2/3)^(2/3)} ^((3x + 7))]^((- 6)/5), then the value of √(2 - 42x) is:

(a) 5
(b) 4
(c) 6
(d) 3

Q60.



A circle is inscribed in the triangle ABC whose sides are given as AB = 10, BC = 8, CA = 12 units as shown in the figure. The value of AD × BF is:

(a) 18 units
(b) 15 units
(c) 21 units
(d) 16 units

Q61. If tan a = 2/√13, then the value of (cosec²a + 2sec²a)/(cosec²a - 3sec²a) is:

(a) 14
(b) 21
(c) 32
(d) 16

Q62. A person purchased 40 items at some price. He sold some items at a profit of 30% by selling them at a price equal to the cost price of 26 items. The remaining items are sold at 18% profit. The total profit percentage is:

(a) 24%
(b) 25%

(c) 28%
(d) 27%

Q63. Several students have taken an exam. There was an error in the answer key which affected the marks of 48 students, and their average marks reduced from 78 to 66. The average of remaining students increased by 3.5 marks. This resulted the reduction of the average of all students by 4.5 marks. The number of students that attended the exam is:

(a) 100
(b) 96
(c) 84
(d) 93

Q64. A shopkeeper pays 12% of the cost price as tax while purchasing an item whose cost is Rs.500. He wants to earn a profit of 20% after giving a discount of 16% on the marked price. So, the marked price should be:

(a) Rs. 780
(b) Rs. 960
(c) Rs. 840
(d) Rs. 800

Q65. In a 56 lilters mixture of milk and water, the ratio of milk to water is 5 : 2. In order to make the ratio of milk to water 7 : 2, some quantity of milk is to be added to the mixture. The quantity of the milk present in the new mixture will be:

(a) 40 liters
(b) 16 liters
(c) 56 liters
(d) 48 liters

Q66. If a% of 240 is c and c% of a is 117.6, then the value of a + c is:

(a) 144
(b) 260
(c) 196
(d) 238

Q67. If the value of $(3x\sqrt{y} + 2y\sqrt{x})/(3x\sqrt{y} - 2y\sqrt{x}) - (3x\sqrt{y} - 2y\sqrt{x})/(3x\sqrt{y} + 2y\sqrt{x})$ is same as that of $\sqrt{x}\sqrt{y}$, then which of the following relations between x and y is correct?

(a) 9x - 4y = 24
(b) 9x + 4y = 24
(c) 9x + 4y = 36
(d) 9x - 4y = 36

Q68. If the length of a rectangle is increased by 12% and the breadth is decreased by 8%, the net effect on the area is:

(a) increase by 2.6%
(b) decrease by 3.04%
(c) increase by 3.04%
(d) decrease by 2.6%

Q69. If one side of a triangle is 7 with its perimeter equal to 18, and area equal to $\sqrt{108}$, then the other two sides are:

(a) 3 and 8
(b) 3.5 and 7.5
(c) 7 and 4
(d) 6 and 5

Q70. If $4/(1 + \sqrt{2} + \sqrt{3}) = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$, where a, b, c, d are whole numbers, then the value of a + b + c + d is:

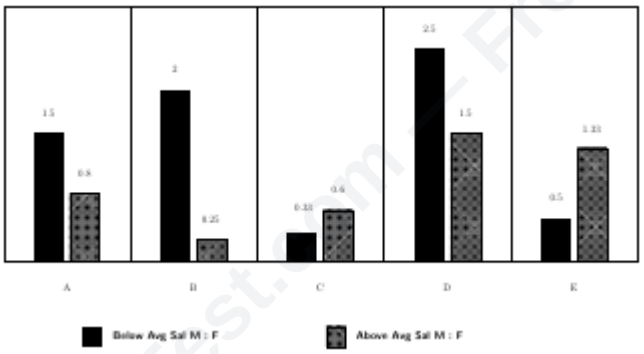
(a) 1
(b) 0
(c) 2
(d) 4

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Q71. A man has Rs. 10,000. He lent a part of it at 15% simple interest and the remaining at 10% simple interest. The total interest he received after 5 years amounted to Rs. 6,500. The difference between the parts of the amounts he lent is:

(a) Rs. 1,750
(b) Rs. 2,500
(c) Rs. 2,000
(d) Rs. 1,500

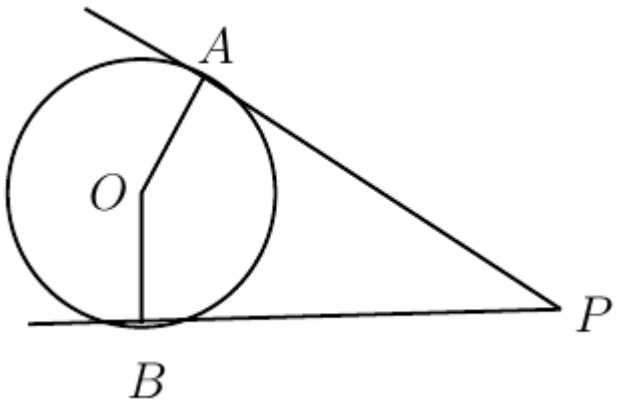
Q72. The following graph shows the data of five companies A, B, C, D, E with respect to the male and female ratio of employees above, or below the average salary.



If the company D, the percentage of employees above the average salary is 16% which is equal to 80, then the number of employees below average salary are:

(a) 300
(b) 520
(c) 420
(d) 470

Q73.



PA and PB are tangents to the circle and O is the center of the circle. The radius is 5 cm and PO is 13 cm. If the area of the triangle PAB is M, then the value of √(M/15) is:

(a) √(12/13)
(b) 24/13
(c) √(24/13)
(d) 12/13

Q74. A secant is drawn from a point P to a circle so that it meets the circle first at A, then goes through the centre, and leaves the circle at B. If the length of the tangent from P to circle is 12 cm, and the radius of the circle is 5 cm, then the distance from P to A is:

(a) 10 cm
(b) 8 cm
(c) 12 cm
(d) 18 cm

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Q75. 25 men can complete a task in 16 days. Four days after they started working, 5 more men, with equal workmanship, joined them. How many days will be needed by all to complete the remaining task?

(a) 15 days
(b) 18 days
(c) 12 days
(d) 10 days

GENERAL AWARENESS

Q76. The rhythmic rise and fall of ocean water twice in a day is called _____.

(a) Wave
(b) Tsunami
(c) Current
(d) Tide

Q77. Which of the following is NOT a credit rating agency in India?

(a) CARE
(b) RBI
(c) ICRA
(d) CRISIL

Q78. Which is the largest uranium producing country in the world?

(a) USA
(b) India
(c) Kazakhstan
(d) Uzbekistan

Q79. Tummalapalle, believed to have one of the largest uranium reserves in the world, is situated in which of the following states?

(a) Tamil Nadu
(b) Andhra Pradesh
(c) Telangana
(d) Karnataka

Q80. Which of the following teams won the 129th edition of Durand Cup in August 2019?

(a) Mohun Bagan
(b) Mohammedan Sporting Club
(c) Gokulam Kerala
(d) East Bengal

Q81. Which of the following scientists was awarded a Nobel Prize for his services to Theoretical Physics, and especially for his discovery of the Law of the Photoelectric Effect?

(a) Thomas Edison
(b) Albert Einstein
(c) Ernest Rutherford
(d) Nikola Tesla

Q82. Who among the following took charge as India's first Chief of Defence Staff (CDS) on 1 January 2020?

(a) General Bipin Rawat
(b) Navy Chief Admiral Karambir Singh
(c) General Manoj Mukund Naravane
(d) Air Chief Marshal Rakesh Kumar Singh Bhadauria

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Q83. 'Gurpurab' is the most important and sacred festival of the Sikh community. In which of the following months of the Hindu calendar is it celebrated?

(a) Shravana
(b) Kartik
(c) Jyaistha
(d) Vaisakha

Q84. A hard disk is an example of which type of data storage device?

(a) Primary Storage
(b) Offline Storage
(c) Tertiary Storage
(d) Secondary Storage

Q85. Who among the following was appointed as the Deputy Governor of Reserve Bank of India (RBI) in January 2020?

(a) Viral Acharya
(b) Michael Debabrata Patra
(c) BP Kanungo
(d) NS Vishwanathan

Q86. Who among the following won ICC's '2019 Sir Garfield Sobers Trophy'?

(a) Virat Kohli
(b) Rohit Sharma
(c) Ben Stokes
(d) Ken Williamson

Q87. Under which of the following schemes has the Government of India set up a new institution for development and refinancing activities related to micro units?

(a) Pradhan Mantri MUDRA Yojana
(b) Pradhan Mantri Yojna
(c) Pradhan Mantri MNREGA Yojana
(d) Pradhan Mantri Sadak Yojana

Q88. _____ is the term used for breeding of fish in specially constructed tanks and ponds.

(a) Viticulture
(b) Agriculture
(c) Horticulture
(d) Pisciculture

Q89. Which of the following statements is not correct?

(a) The Governor has power to suspend, remit or commute a sentence of death.
(b) The Governor has no power to grant pardon in respect of punishment or sentence inflicted by Court Martial.
(c) The President has the power to grant pardon in respect of punishment or sentence inflicted by Court Martial.
(d) The Governor has the power to grant pardon in case of a death sentence.

Q90. In which of the following years did India come under the direct rule of the British crown?

(a) 1878
(b) 1858
(c) 1868
(d) 1888

Q91. In the context of memory size in computer data storage, one gigabyte is equal to how many megabytes?

(a) 1. 64 MB
(b) 2. 32 MB
(c) 1012 MB
(d) 1024 MB

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Q92. Who among the following scientists invented dynamite?

(a) Alfred Nobel
(b) Thomas Alva Edison
(c) Rudolf Diesel
(d) Benjamin Franklin

Q93. The ‘Kathakali’ dance is a harmonious combination of _____ forms of fine art.

(a) six
(b) seven
(c) five
(d) four

Q94. What was India’s overall rank in the medals tally in the 23rd edition of the Asian Athletics Championship?

(a) First
(b) Third
(c) Fifth
(d) Fourth

Q95. Who was the Chairman of the Drafting Committee of the Constituent Assembly of India?

(a) Rajendra Prasad
(b) Sardar Vallabhbhai Patel
(c) BR Ambedkar
(d) Jawaharlal Nehru

Q96. Who among the following won the ‘Women's World Rapid Chess Championship 2019’?

(a) Sopiko Khukhashvili
(b) Dronavalli Harika
(c) Koneru Humpy
(d) Lei Tingjie

Q97. Which of the following cities hosted the third edition of the Khelo India Youth Games?

(a) Patna
(b) Cuttack
(c) Guwahati
(d) Panaji

Q98. Which of the following is a disease caused by protozoa?

(a) Small Pox
(b) Rabies
(c) Kala azar
(d) AIDS

Q99. Which of the following articles of the Constitution of India has a provision for financial emergency?

(a) Article 365
(b) Article 356
(c) Article 360
(d) Article 330

Q100. Who among the following was conferred with the ‘Dadasaheb Phalke Award 2019’?

(a) Amitabh Bachchan
(b) Dilip Kumar
(c) Kabir Bedi
(d) Anupam Kher

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ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) A new version of Shakespeare's 'Macbeth' has been performed by the students.

The correct answer is 'A new version of Shakespeare's 'Macbeth' has been performed by the students'.

Key Points

• The given sentence is in Active Voice. As per the given question we have to change it into Passive Voice.
• The structure of the given sentence as follows:
• Subject+has/have+V3+Object. (Active Voice)
• Subject (Objective Case)+has/have+V3+Object (Subjective Case). (Passive Voice)
• Example:
• We have finalized the site for our new factory. (Active Voice)
• The site for our new factory has been finalized by us. (Passive Voice)
• The subject of the given sentence is 'The students'. And the object of the given sentence is 'A new version'.
• The subject will be put in place of the object and the object will be put in place of the subject.
• And 'have performed' will be changed into 'has been performed'.
• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: A new version of Shakespeare's 'Macbeth' has been performed by the students.

Additional Information

• The transformation of imperative sentences:
• If someone gives a command, do request, express a desire or wish, in sentences then such sentences are called an imperative sentence.
• If the notion of a sentence is 'Command' then structure:
• V1 + Object. (Active Voice)
• Let + subject + be + V3. (Passive Voice)
• Example:
• Teach your students. (Active Voice)
• Let your students be taught. (Passive Voice)
• If the notion of a sentence is that of an 'Order', then structure:
• V1 + Object. (Active Voice)
• You are ordered + V 1+ Object. (Passive Voice)
• Example:
• Drive the car. (Active Voice)
• You are ordered to drive the car. (Passive Voice)

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Q2. Answer: (c) Shanti asked me why I had kept that smartphone in the bin.

The correct answer is 'Shanti asked me why I had kept that smartphone in the bin'.

Key Points

• The given sentence is in Direct Speech. As per the given question we have to change it into Indirect Speech.

• The process of transformation as follows:

• There will be no change in reporting verb. Because we know that the given sentence is interrogative with a question word.

• Comma and inverted commas will be removed.

• 'Why' will be used as a conjunction because we know that in an interrogative sentence with a question word the question word itself becomes the conjunction.

• 'You' will be changed into 'I' because in 'direct to indirect transformation' second-person pronoun (you) is changed according to the object of reporting verb that is 'me'.

• 'Did keep' will be changed into 'Had kept'.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: Shanti asked me why I had kept that smartphone in the bin.

Additional Information

• Transformation of Imperative Sentence:

• 'Orders', 'Command', 'Request', 'Advice' are given in these kinds of sentences.

• Reporting Verb is changed into 'ordered, advised, requested, commanded, beg, forbade, suggested, proposed, assured, asked, reminded, warned, agreed, refused, promised', etc.

• Inverted Commas will be removed. And conjunction 'to/not to' will be used.

• Example:

• He said, "John, please bring me my towel." (Direct Speech)

• He requested John to bring him his towel. (Indirect Speech)

Q3. Answer: (c) Completely disappear

The correct answer is 'Completely disappear'.

Key Points

• The most appropriate meaning of the given idiom is 'Completely disappear'.

• Vanish into thin air: to disappear suddenly and completely

• Example: The ship simply vanished into thin air.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Answer: Completely disappear.

Additional Information

• Let's look at some idioms of the word 'Cast':

Idiom	Meaning	Example
cast a shadow over/on sth	to spoil a good situation with something unpleasant	Her father's illness had cast a shadow over the birth of her baby.
cast doubt on someone/something	to cause people to feel uncertainty about something	New evidence has cast doubt on the guilty verdict.
cast pearls before swine	to offer something valuable or good to someone who does not know its value	I'm afraid you're casting pearls before swine with your good advice - he won't listen.
cast sb/sth adrift	to leave something such as a small boat, or the people in it, moving on the water without being controlled by anyone	They plotted to get rid of the Duke by casting him adrift on the ocean in a tiny boat.

Q4. Answer: (b) Defenition

The correct answer is 'Defenition'.

Key Points

• In the given question 'Defenition' is misspelt.

• The correct spelling of it is 'Definition'.
• It means a statement that explains the meaning of a word or phrase.
• Example: The legal definition of what is and what is not pornography is very unsatisfactory.
• Therefore, as per the points mentioned above, we find that the correct answer is Option 2.

Correct Answer: Defenition.

Additional Information

• Let's look at the meaning of the other words given in the Options:

Words	Meaning	Example
Valediction	the act of saying goodbye, especially formally, or a formal speech in which someone says goodbye	His valediction can, however, be read more than one way.
Conviction	the fact of officially being found to be guilty of a particular crime, or the act of officially finding someone guilty	He has a long record of previous convictions for similar offenses.
Selection	the act of choosing someone or something	Success is achieved by the careful selection of projects.

Q5. Answer: (c) both

The correct answer is 'both'.

Key Points

• The most appropriate fill in the blank for the given sentence is 'both'.
• We use both to refer to two things or people together. We use both … and to emphasize the link between two things. This puts more emphasis on the linkage than and alone.
• Example: Both Britain and France agree on the treaty. (stronger link than Britain and France agree on the treaty.)
• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: "The internet is fast becoming trusted by both children and adults..."

Q6. Answer: (c) source

The correct answer is 'source'.

Key Points

• The most appropriate option for blank 2 is 'source'.
• Here, 'source of information' means 'someone or something that supplies information'.
• Example: The journalist refused to reveal her sources (= say who had given the information to her).
• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: "The internet is fast becoming trusted by both children and adults as reliable and accurate source of information".

Additional Information

• Let's look at the meaning and examples of the other words given in the option:

Words	Meaning	Example
Piece	a part of something	This jigsaw puzzle has two pieces missing.
Collection	a group of objects of one type that have been collected by one person or in one place	We're having a collection for Tom's retirement present.
Deposit	to put something valuable, especially money, in a bank or safe (= strong box or cupboard with locks):	There's a night safe outside the bank, so you can deposit money whenever you wish.

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Q7. Answer: (c) access

The correct answer is 'access'.

Key Points

• The most appropriate fill in the blank for the given sentence is 'access'.

• It means 'to be able to use or obtain something such as a service'.

• Example: It needs to be easier for small businesses to access government resources and advice.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: "Through the internet children now have access to an almost..."

Additional Information

• Let's look at the meaning and examples of the other options:

Words	Meaning	Example
Easiness	the quality of needing little effort	The winner wasn't a big surprise to most people but the easiness of the win was.
Gathering	a party or a meeting when many people come together as a group	There will be a gathering of world leaders in Vienna next month.
Ability	the physical or mental power or skill needed to do something	She had the ability to explain things clearly and concisely.

Q8. Answer: (a) interaction

The correct answer is 'interaction'.

Key Points

• The most appropriate fill in the blank for the given sentence is 'interaction'.

• It means 'an occasion when two or more people or things communicate with or react to each other'.

• Example: There's not enough interaction between the management and the workers.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 1.

Correct Sentence: "Through the internet children now have access to an almost endless supply of information and opportunity for interaction".

Additional Information

• Let's look at the meaning and examples of the other options:

Words	Meaning	Example
Consultation	a meeting to discuss something or to get advice	After consultations with our accountants, we've decided how to cut costs within the company.
Intimation	the action of making clear what you think or want without saying it directly, or something that makes something clear in this way	His suicide attempt was the first intimation that he was seriously depressed.
Deliberation	considering or discussing something	After much deliberation, she decided to accept their offer.

Q9. Answer: (a) unsupervised

The correct answer is 'unsupervised'.

Key Points

• The most appropriate fill in the blank for the given sentence is 'unsupervised'.

• It means 'without anyone watching to make sure that nothing dangerous or wrong is done or happening'.

• Example: Young children should not be left alone with animals unsupervised.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 1.

Correct Sentence: "However, there can be real risks and dangers for an unsupervised child".

Additional Information

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• Let's look at the meaning and examples of the other options:

Words	Meaning	Examples
Unauthorized	without someone's official permission to do something or be in a particular place	This unauthorized biography of the star has sold over 10,000 copies in its first week in print.
Undeveloped	not developed, used, or advanced	Rhum is the UK's largest undeveloped gas field.
Unparalleled	having no equal; better or greater than any other	They enjoyed success on a scale unparalleled by any previous rock band.

Q10. Answer: (d) As long as

The correct answer is 'As long as'.

Key Points

• The most appropriate option to substitute the underlined segment in the given sentence is 'As long as'.

• As long as: during the whole time that

• Example: They have been there as long as anyone can remember.

• We use 'as long as' to refer to the intended duration of a plan or idea, most commonly referring to the future.

• We always use the present simple to refer to the future after 'as long as'.

• Therefore, the correct answer is Option 4.

Correct Sentence: As long as you are here with me, who cares about the outcome of the issue.

Mistake Points

• We tend to go for Option 1 but it would be wrong because 'So long as' is the correct conjunction but here in the given option only 'So long' is used.

• Similarly, Option 2 is also grammatically incorrect because the 'As long to' kind of conjunction does not exist.

• Therefore, the correct answer is Option 4.

Additional Information

• The structure so…that

• It is used to show cause and effect.

• Example: She was very tired. She could not walk.

• We can combine these two sentences using so…that.

• Example: She was so tired that she could not walk.

Q11. Answer: (d) Joyous

The solution is in Hindi. Read it online.

Q12. Answer: (b) Comemorate

The correct answer is 'Comemorate'.

Key Points

• In the given question 'Comemorate' is incorrectly spelt.

• It's correct spelling is 'Commemorate'.

• Let's look at the meaning and examples of the given words:

Word	Meaning	Example
Commemorate	to remember officially and give respect to a great person or event, especially by a public ceremony or by making a statue or special building	Gathered all together in this church, we commemorate those who lost their lives in the war.
Corporate	of or shared by a whole group and not just of a single member	All adults take corporate responsibility for the upbringing of the tribe's children.
Collaborate	to work with someone else for a special purpose	Two writers collaborated on the script for the film.

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Conjugate	If a verb conjugates, it has different forms that show different tenses, the number of people it refers to, etc., and if you conjugate a verb, you list its different forms	In particular, the resulting parabolic map is topologically conjugate to the hyperbolic function it originated from.

Q13. Answer: (a) Cardinal

The correct answer is 'Cardinal'.

Key Points

• The most appropriate one-word for the given group of words is 'Cardinal'.

Word	Meaning	Example
Cardinal	of great importance	Finding food was a cardinal concern.
Scanty	smaller in size or amount than is considered necessary or is hoped for	Evidence of such an association is, however, scanty in children of pre-school age.
Meager	(of amounts or numbers) very small or not enough	The prisoners existed on a meager diet.
Supplementary	added to something else in order to improve it or complete it	Teachers often create supplementary materials for their classes.

Q14. Answer: (d) provided that

The correct answer is 'provided that'.

Key Points

• The most appropriate option to substitute the underlined segment in the given sentence is 'provided that'.

• The conditional 'provided that' means 'if, or only if'.

• Example: ILO conventions allow schoolchildren to work during their holidays and free time provided that strict safety measures are taken.

• Here, in the given question 'provided with' is incorrectly used because the correct usage is 'provide sb with sth'. It means 'to give something to a person to make it available for them to use'.

• Example: Customers, suppliers, and contractors will be provided with the specialist training they need to work on the project.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 4.

Correct Sentence: Before it was modified, the Law provided that the owner could take possession of the goods at any time.

Additional Information

• Let's look at some different usage of 'provide' when it is used as a verb:

• When we use 'provide' as a verb it means 'to give something to a person, company, or organization, or to make it available for them to use'.

• provide sth for sb/sth:

• Example: The enhanced cash flow will also provide funds for expansion into television.

• provide sth to sb:

• Example: Our digital imaging center provides a 3D scanning service to a wide range of customers in Europe, the Middle East, and Africa.

• be provided by sb/sth:

• Example: According to Census data provided by the state Department of Labor and Industry, Hispanic workers constitute about 3% of the workforce.

Q15. Answer: (b) CBDA

The correct answer is 'CBDA'.

Key Points

• The given sentence is an example of a Sentence Jumble.

• The first statement of a sentence jumble question is usually an independent general statement, a noun, a universal fact, the starting of an incident, or it starts with 'most' or 'once'.

• Part C will be the first sentence because it is talking about a past happening. It talks about a girl named 'Tejaswini' who is known in her village for her devotion to the Lord.

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• Part B will be the second sentence because it is connected with Part B. And further explains 'How many times she visits the temple a day'.
• Part D will be used next because it tells us about her visit in the morning to the temple.
• And finally, Part A will be used because it tells us about her visit to the temple in the evening.
• Therefore, as per the points mentioned above, we find that the correct answer is Option 2.

Correct Sentence: "Tejaswini was known in the village for her devotion to the Lord. She would go to the Lord’s temple twice a day. In the morning, she would take with her a pot of milk and a bunch of flowers as an offering. In the evening, Tejaswini would sing songs praising the Lord."

Q16. Answer: (d) BDCA

The correct answer is 'BDCA'.

Key Points

• The given sentence is an example of a Sentence Jumble.
• The first statement of a sentence jumbled question is usually an independent general statement, a noun, a universal fact, the starting of an incident, or it starts with 'most' or 'once'.
• Part B will be the first sentence because it is talking about a past happening. It is talking about a large mango tree in a forest.
• Part D will be the second sentence because it further explains that tree. How the tree looks etc.
• Part C will be the next sentence because it is connected with Part D. Part D talks about the physical appearance of that tree. And Part D further explains it.
• Finally, Part A will be used because Part C starts with 'The Branches' and Part A further explains an incident that 'One day' a crow from the west landed on one of the branches of that mango tree.
• Therefore, as per the points mentioned above, we find that the correct answer is Option 4.

Correct Sentence: "There was a large mango tree deep inside a thick forest. Its branches spread in all directions, lobbing a large shadow on the ground. The branches were full of leaves, which crackled when the storm blew. One day, a strange crow from the west, landed on one of the branches."

Q17. Answer: (a) fracture

The correct answer is 'fracture'.

Key Points

• The most appropriate word to fill in the blank is 'fracture'.
• It means 'If something hard, such as a bone, fractures, or is fractured, it breaks or cracks'.
• 'Bone' is fractured not 'contaminated or any other options' given in the question.
• Example: She fractured her skull in the accident.
• Therefore, as per the points mentioned above, we find that the correct answer is Option 1.

Correct Sentence: I had a broken bone in the hand which the doctor called a fracture and suggested immediate surgery.

Additional Information

• Let's look at the meaning and examples of the other words given in the Options:

Words	Meaning	Example
Contamination	the process of making something dirty or poisonous, or the state of containing unwanted or dangerous substances	The water supply is being tested for contamination.
Infection	a disease in a part of your body that is caused by bacteria or a virus	Bandage the wound to reduce the risk of infection.
Wound	a damaged area of the body, such as a cut or hole in the skin or flesh made by a weapon	He died from multiple stab wounds to the neck and upper body.

Q18. Answer: (d) Amateur

The correct answer is 'Amateur'.

Key Points

• The most appropriate one-word for the given group of words is 'Amateur'.

Word	Meaning	Example
Amateur	taking part in an activity for pleasure, not as a job	He was an amateur singer until the age of 40 when he turned professional.
Proficient	skilled and experienced	It takes a couple of years of regular driving before you become proficient at it.
Expert	a person with a high level of knowledge or skill relating to a particular subject or activity	My mother is an expert at dress-making (= she does it very well).
Veteran	a person who has had a lot of experience of a particular activity	Thousands of veterans will take part in a commemoration of the battle.

Q19. Answer: (b) Show admiration

The correct answer is 'Show admiration'.

Key Points

• The most appropriate meaning of the given idiom 'Take one's hat off to someone' is 'Show admiration'.

• Take one's hat off to someone: To express admiration; a form of applause.

• Example: We should take off our hats to them and wish them godspeed.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 2.

Correct Answer: Show admiration

Additional Information

• Let's look at the meaning and examples of some idioms of the word 'Play':

Idiom	Meaning	Example
play (merry) hell with sth	to seriously damage or confuse something	The power cuts played hell with our computers.
play (sth) by ear	to play a piece of music by remembering the notes	He did not need sheet music. He could play the piece by ear.
play a joke/trick on sb	to confuse someone or cause a problem for them	Fate played a cruel trick on him when he was injured in his first game.

Q20. Answer: (c) Clear

The solution is in Hindi. Read it online.

Q21. Answer: (a) Celestial

The correct answer is 'Celestial'.

Key Points

• The most appropriate antonym of the given word 'Earthly' is 'Celestial'.

• Let's look at the meaning and examples of the given options:

Word	Meaning	Example
Earthly	happening in or relating to this world and this physical life, not in heaven or relating to a spiritual life	All my earthly possessions are in that moving van.
Celestial	of or from the sky or outside this world	The moon is a celestial body.
Peripheral	Something that is peripheral is not as important as something else	The book contains a great deal of peripheral detail.
Temperamental	A temperamental person is someone whose mood often changes very suddenly	Be careful how you approach her - she's very temperamental.
Temporal	relating to practical matters or physical things, rather than spiritual ones	Of these, only 1% of past temporal reference contexts were marked by periphrastic did.

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Q22. Answer: (a) explore

The correct answer is 'explore'.

Key Points

• The most appropriate word to fill in the blank is 'explore'.

• It means 'to search and discover (about something)'.

• Example: The best way to explore the countryside is on foot.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 1.

Correct Sentence: She has shown a great interest towards space science, since her early childhood and a passion to explore the outer space.

Additional Information

• Let's look at the meaning and examples of the other words given in the option:

Words	Meaning	Example
Elicit	to get or produce something, especially information or a reaction	The questionnaire was intended to elicit information on eating habits.
Entertain	to keep a group of people interested or enjoying themselves	We hired a magician to entertain the children.
Enlighten	to provide someone with information and understanding, or to explain the true facts about something to someone	I don't understand this. Could you enlighten me?

Q23. Answer: (a) who have been paying back

The correct answer is 'who have been paying back'.

Key Points

• The given sentence is grammatically incorrect.

• Here, 'who has been paying back' should be used instead of 'who have been paying back'.

• The given sentence is an example of the relative pronoun.

• Since the antecedent of the relative pronoun is a person that is 'Thomas'.

• 'Thomas' is a singular noun. Hence, a singular helping verb that is 'has' should be used.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 1.

Correct Sentence: Thomas is a man of word who has been paying back the borrowed money in installments.

Additional Information

• Let's have a look at different usage of 'who':

Usage of 'who'	Examples
'who' as 'an interrogative pronoun' to begin questions about people	Who makes the decisions here?
'who' in 'indirect questions and statements'	The phone rang. She asked me who it was.
who' as a 'relative pronoun' to introduce a relative clause about people.	He shared a flat with Anne Bolton, who he married, and eventually, they moved to Australia.

Q24. Answer: (c) out in fear

The correct answer is 'out in fear'.

Key Points

• The given sentence is grammatically incorrect.

• Here, 'out of fear' should be used instead of 'out in fear'.

• In the given question 'Out of fear' means 'a feeling of distress, apprehension, or alarm caused by impending danger, pain, etc.

• Example: The surgeon comes to look at Paul, who refuses to be chloroformed out of fear that they will amputate his leg.

• Therefore, as per the points mentioned above we find that the correct answer is Option 3.

Correct Sentence: Though she was able to finish the work on time, she couldn't do that out of fear.

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Q25. Answer: (b) Selective

The correct answer is 'Selective'.

Key Points

• The most appropriate synonym of the given word 'Choosy' is 'Selective'.

• Let's look at the meaning and examples of the given options:

Word	Meaning	Example
Choosy	difficult to please because you are very exact about what you like	She's very choosy about what she eats and drinks.
Selective	intentionally choosing some things and not others	As a teacher she was very selective, accepting only a small number of exceptionally gifted pupils.
Tricky	If a piece of work or problem is tricky, it is difficult to deal with and needs careful attention or skill	It's tricky to learn to ride a skateboard, but you never forget how.
Frank	honest, sincere, and telling the truth, even when this might be awkward or make other people uncomfortable	There followed a frank exchange of views.
Productive	resulting in or providing a large amount or supply of something	In order to turn the deserts into fertile and productive land, engineers built an 800-mile canal.

Q26. Answer: (c) Brother-Sister

According to given conditions,

Rahul and Sheela are brother and sister.

Hence, ‘Brother-Sister’ is the correct answer.

Q27. Answer: (a) f, f, e, f, f

1) f, f, e, f, f

Efge / effgge / eefffggg

After filling the blanks we observe a particular pattern is formed.

When the series is divided into three parts, we observe that in 1^(st) part ‘f’ and ‘g’ appears once, in the 2^(nd) part ‘f’ and ‘g’ appears twice and in the 3^(rd) part ‘f’ and ‘g’ appears thrice.

2) f, g, f, g, g

Efge / efgggf / eegfgggg

No pattern is formed.

3) g, f, e, f, f

Egge / effgge / eefffggg

No pattern is formed.

4) f, f, f, f, f

Efge / effggf / eefffggg

No pattern is formed.

Hence, ‘f, f, e, f, f’ is the correct answer.

Q28. Answer: (c) 36 years

Age of Rishabh = 10 years

If his mother is 20 years older than him.

So, age of his mother = (10 + 20) years

= 30 years

If his mother is 6 years younger than his father.

Age of his father = (30 + 6) years

= 36 years

Hence, ’36 years’ is the correct answer.

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Q29. Answer: (d) VTMZIL

The pattern followed here is:

According to the alphabetical positions of the letters,

A	P	R	I	C	O	T
Z	K	I	R	X	L	G

Reverse letters of each letter is shown in the above table.

These reverse letters when written from right to left, we get GLXRIKZ which is the code for the word APRICOT.

Similarly,

O	R	A	N	G	E
L	I	Z	M	T	V

These reverse letters when written from right to left, gives the code VTMZIL.

Hence, 'VTMZIL' is the correct answer.

Q30. Answer: (a) 8

The number of triangles in the given figure is shown below:

Hence, '8' is the correct answer.

Q31. Answer: (b) [figure]

The option in which the given figure is embedded when rotation is not allowed is shown below:

Hence, 'option 2' is the correct answer.

Q32. Answer: (d) BE

The pattern followed here is:

According to the alphabetical positions of the letters,

1) US → U – 2 = S

2) OM → O – 2 = M

3) AY → A – 2 = Y

4) BE → B + 3 = E

Hence, 'BE' is the odd one out.

Q33. Answer: (c) 81

The logic is:

$9 : 121 \rightarrow 9 : (9 + 2)^2$

Similarly,

$7 : ? \rightarrow 7 : (7 + 2)^2$

$\Rightarrow ? = 9^2$

$\Rightarrow ? = 81$

Hence, '81' is the correct answer.

Q34. Answer: (c) [figure]

The option which is the exact mirror image of the given alphanumeric figure when the mirror is held at the right side is shown below:

Hence, 'option 3' is the correct answer.

Q35. Answer: (d) ÷ and ×

1) + and –

Given expression: 4 ÷ 6 + 9 - 48 × 8 = 27

After replacing the symbols, we get:

4 ÷ 6 – 9 + 48 × 8 = 27

=> 0.67 – 9 + 384 = 27

=> 384.67 – 9 = 27

=> 375.67 ≠ 27

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2) + and ×
Given expression: 4 ÷ 6 + 9 - 48 × 8 = 27
After replacing the symbols, we get:
4 ÷ 6 × 9 - 48 + 8 = 27
=> 6 – 48 + 8 = 27
=> 14 – 48 = 27
=> -34 ≠ 27
3) ÷ and +
Given expression: 4 ÷ 6 + 9 - 48 × 8 = 27
After replacing the symbols, we get:
4 + 6 ÷ 9 - 48 × 8 = 27
=> 4 + 0.67 – 384 = 27
=> 4.67 – 384 = 27
=> -379.33 ≠ 27
4) ÷ and ×
Given expression: 4 ÷ 6 + 9 - 48 × 8 = 27
After replacing the symbols, we get:
4 × 6 + 9 - 48 ÷ 8 = 27
=> 24 + 9 – 6 = 27
=> 33 – 6 = 27
=> 27 = 27
Hence, '÷ and ×' is the correct answer.

Q36. Answer: (d) ALLMS

The pattern followed here is:
According to the alphabetical positions of the letters,
INTEX : EINTX → Letters are arranged in alphabetical order.
Similarly,
SMALL : ? → Letters when arranged in alphabetical order will give ALLMS.
Hence, 'ALLMS' is the correct answer.

Q37. Answer: (d) cddabccbadcbcdd

1) acbdecdeaacecdd
abacbcba / decdddea / abcdacba / aecddcba
No pattern is formed.
2) abeaacdecdeecdd
ababecba / aacdddec / abcddeba / aecddcba
No pattern is formed.
3) abbaacdeecdecdd
ababbcba / aacdddee / abcdcdba / aecddcba
No pattern is formed.
4) cddabccbadcbcdd
abcddcba / abcddcba / abcddcba / abcddcba
The series when divided into four equal parts, we observe that a particular pattern is repeated every single time.
Hence, 'cddabccbadcbcdd' is the correct answer.

Q38. Answer: (c) 62

LOGIC: Sum of position values of all the terms – Number of terms = Code
The pattern followed here is:
According to the alphabetical positions of the letters,
Similarly,
Hence, '62' is the correct answer.

Q39. Answer: (a) IKDOI

The pattern followed here is:

According to the alphabetical positions of the letters,

Note: Vowel ‘A’ is moved eight steps forward and vowel ‘E’ is moved ten steps forward, while consonants are moved three steps backward.

Similarly,

Hence, ‘IKDOI’ is the correct answer.

Q40. Answer: (d) (8, 18, 80)

The logic is:

(2nd number - 1st number) × 8 = 3rd number

(2, 6, 32) → (6 – 2) × 8 = 32

Similarly,

(8, 18, 80) → (18 – 8) × 8 = 80

Hence, ‘(8, 18, 80)’ is the correct answer.

Q41. Answer: (a) 1, 3, 4, 2

Words are arranged in the order of their technological advantages.

1. Letter - By letter, we can send information to someone.

3. Telephone - We can call to someone.

4. Smartphone - We can voice call, video call, and text messages to one person/more than one person.

2. Satellite - It is used in a wide variety of applications such as global mobile communication, private business networks, Long distance telephone transmission, weather forecasting, radio/TV signal broadcasting, connecting remote areas, television distribution etc.

Hence, ‘1, 3, 4, 2’ is the correct answer.

Q42. Answer: (d) 73

The logic is:

Hence, ‘73’ is the correct answer.

Q43. Answer: (c) Letter paper : stationery

The logic is:

Chair : Furniture → Chair is categorized as a furniture.

Similarly,

Letter paper : stationery → Letter paper is categorized as a stationary item.

Hence, ‘Letter paper : Stationary ’ is the correct answer.

Q44. Answer: (c) 12

People who like both tea and coffee, but do NOT like juice is shown below:

Hence, ‘12’ is the correct answer.

Q45. Answer: (d) 1

The following figure when folded to form a cube, then the faces opposite to each other is shown below:

1 dot will be on the face opposite to the face having 2 dots.

Hence, ‘1’ is the correct answer.

Q46. Answer: (c) [figure]

The option figure that will come next in the following series is shown below:

Dividing the series into two parts we observe that:

Images at odd position: Rotating in anti-clockwise direction.

Images at even position: Rotating in anti-clockwise direction.

So, the image that will complete the series will be similar to ‘option 3’ as shown below.

Hence, ‘option 3’ is the correct answer.

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Q47. Answer: (b) [figure]

The paper when unfolded will appear as shown below:

Hence, ‘option 2’ is the correct answer.

Q48. Answer: (c) 15

Total work is 90 units.

A worked for 6 days and efficiency of A is 3.

So, total work done by A in 6 days = (6 × 3)

= 18 units

Remaining work = (90 – 18) units

= 72 units

Efficiency of A and B is 3 and 5 respectively.

So, together they will complete the remaining work in [72 ÷ (3 + 5)] days

= [72 ÷ 8] days

= 9 days

Number of days in which the whole work was completed = (6 + 9) days

= 15 days

Hence, ‘15’ is the correct answer.

Q49. Answer: (b) 14 and 18, + and ×

1) 14 and 18, + and –

Given expression: 16 × 18 + 2 - 14 ÷ 3 = 38

After replacing the numbers and symbols, we get:

16 × 14 – 2 + 18 ÷ 3 = 38

=> 224 – 2 + 6 = 38

=> 230 – 2 = 38

=> 228 ≠ 38

2) 14 and 18, + and ×

Given expression: 16 × 18 + 2 - 14 ÷ 3 = 38

After replacing the numbers and symbols, we get:

16 + 14 × 2 - 18 ÷ 3 = 38

=> 16 + 28 – 6 = 38

=> 44 – 6 = 38

=> 38 = 38

3) 16 and 3, - and ÷

Given expression: 16 × 18 + 2 - 14 ÷ 3 = 38

After replacing the numbers and symbols, we get:

3 × 18 + 2 ÷ 14 - 16 = 38

=> 54 + 0.14 – 16 = 38

=> 54.15 – 16 = 38

=> 38.15 ≠ 38

4) 16 and 14, - and ×

Given expression: 16 × 18 + 2 - 14 ÷ 3 = 38

After replacing the numbers and symbols, we get:

14 - 18 + 2 × 16 ÷ 3 = 38

=> 14 – 18 + 10.67 = 38

=> 24.67 – 18 = 38

=> 6.67 ≠ 38

Hence, ‘14 and 18, + and ×’ is the correct answer.

Q50. Answer: (c) Only conclusions II and IV follow.

Concept:

1) We have to check the conclusions are 100% match with the statement. If the conclusion is 100% match with the given

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statement then the conclusion is true. If there is a 1% chance of not following the statement then the conclusion is considered to be false.

2) The possibility case can be considered to be "false" in "definite case".

3) In Possibility case, either "can" or "possible" word must be present.

Explanation

The least possible Venn diagram is:

I. All cups are doors. → False (It can be possible but it is not definite)

II. All doors are cups. → True (It is definite)

III. All teachers are doors. → False (It can be possible but it is not definite)

IV. Some cups are teachers. → True (It is definite)

Hence, only conclusions II and IV follow.

Additional Information

Q51. Answer: (b) 2

GIven:

(1 - tan A)/(1 + tan A) = (tan 3° tan 15° tan 30° tan 75° tan 87°)/(tan 27° tan 39° tan 51° tan 60° tan 63°)

Formula used:

If A + B = 90°

Then tan A × tan B = 1

Tanθ = 1/cotθ

Tan 30° = 1/√3

Tan 60° = √3

Calculation:

Using the above formula

=> tan 3° × tan 87° = 1

=> tan 15° × tan 75° = 1

=> tan 27° × tan 63° = 1

=> tan 39° × tan 51° = 1

Put values in the given equation we get

=> (1 - tan A)/(1 + tan A) = (1/√3)/√3

=> (1 - tan A)/(1 + tan A) = 1/3

=> 3 - 3tan A = 1 + tan A

=> 4 tan A = 2

=> tan A = 2/4

=> cot A = 2

Therefore The value of cot A is 2.

Q52. Answer: (d) 19400

Given:

The number is divivible by 2, 5 and 10

Concept used:

Number must be divisible by LCM of the numbers

Calculation:

Lcm of 2,5 and 10

=> LCM = 10

Number must have a zero at the end to be divisble by 10

So, Option 4 is divisible by 2,5 and 10

Therefore 19400 is divisible by 2, 5 and 10.

Shortcut Trick Number which is divided by 10 should have 0 at its unit digit. And out of all the question we have one such option available.

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Q53. Answer: (c) √(a² + b² - c²)

GIven:

a SinA + b cosA = c

Formula used:

If a Sinθ + b Cosθ = c

Then, a Cosθ – b Sinθ = √ a² + b² - c²

Calculation:

Apply above formula on a SinA + b cosA = c

We get

=> a CosA – b SinA = √ a² + b² - c²

Therefore a CosA – b SinA is equla to √ a² + b² - c²

Alternate Method

Given, a sinA + b cosA = c -----(1)

Let, x = a cosA - b sinA -----(2)

On Square equation (1)

=> a² sin²A + b²cos²A + 2a sinA × b cosA = c² -----(3)

On Square equation (2)

=> a² cos²A + b² sin²A - 2a cosA × b sinA = x² -----(4)

On adding (3) and (4)

=> x² + c² = a² + b²

=> x = √(a² + b² - c²)

Therefore a CosA – b SinA is equla to √(a2 + b2 - c2).

Q54. Answer: (b) 15

Given:

Colleges	Appeared	Qualified
A	450	306
B	560	420
C	660	528
D	480	432
E	600	396

Formula used:

Percentage = (part value/ whole value) × 100

Calculation:

Percentage of students qualified in college B

=> (420/560) × 100

=> 75%

Percentage of students qualified in college D

=> (432/480) × 100

=> 90%

Difference between there percentage is

=> 90% – 75% = 15%

Therefore The difference between the percentage of students that qualified, from college B and D is 15%.

Q55. Answer: (d) 1008

Given:

College	Percentage	Boys	Girls
A	11%	9	4
B	16%	5	9

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C	22%	3	4
D	14%	7	2
E	18%	1	4
F	19%	3	2

Formla used:

Percentage = (part value/whole value) × 100

Calculation:

Total number of student = 9800

Students in college B is

=> (9800/100) × 16 = 1568

Ratio of Boys and Girls is 5 : 9

=> 14x = 1568

=> x = 1568/14 = 112

=> 9x = 9 × 112 = 1008

Therefore Number of girls in college B is 1008.

Q56. Answer: (d) 9:00 a.m.

GIven:

Ravi starts from his house to school at 8:20 a.m with speed of 10 km/h and reaches 8 minutess late

If he ride the cycle at speed of 16 km/h he reaches his school 10 minutes early

Formula used:

Calculation:

Let the distance between home and school be x km

And time take to reach school at the time be t hrs

With the speed of 10 km/h, Ravi reaches 8 minutes late

=> x/10 = t + 8/60

=> x/10 = t + 2/15 ----(1)

With the speed of 16 km/h, Ravi reaches 10 minutes early

=> x/16 = t – 10/60

=> x/16 = t – 1/6 ----(2)

Now, Subtract (2) from (1)

=> x/10 – x/16 = t + 2/15 – t + 1/6

=> (5x – 8x)/80 = (4 + 5)/30

=> 3x × 30 = 9 × 80

=> x = 720/90

=> x = 8 km

Now, put the value of x in (1)

=> 8/10 = t + 2/15

=> t = 8/10 – 2/15

=> t = (24 – 4)/30

=> t = 2/3

To convert it into minutes by 60

=> (2/3) × 60 = 40 minutes

College starts at 8:20 + 40 mins = 9 A.M

Therefore College starts at 9 A.M

=> 8x = 48 minutes

Ravi is 8 min late, the correct time will be

=> 48 - 8 = 40 minutes

College starts at 8:20 + 40 mins = 9 A.M

Therefore College starts at 9 A.M

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Q57. Answer: (b) 36

Given:

Value of x is square of (2/5of61/4 ÷ 3/7) of 12/7 / 111/4

Formula used:

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

Calculation:

Value of x is square of (2/5of61/4 ÷ 3/7) of 12/7 / 111/4

=> (2/5of61/4 ÷ 3/7) of 12/7 / 111/4

=> (2/5of25/4 ÷ 3/7) of 9/7 / 45/4

=> (5/2 ÷ 3/7) × 9/7 / 45/4

=> 35/6 × 9/7 ÷ 45/4

=> 35/6 × 9/7 × 4/45

=> 2/3

Value of x is square of 2/3 = 4/9

Value of 81x is

=> 81 × (4/9) = 36

Therefore value of 81x is 36

Q58. Answer: (a) 2013

Given:

In 2013 % increase = 26.88%

In 2017 % increase = 12.64%

In 2015 % increase = 22.96%

In 2018 % increase = 17.46%

Calculation:

According to the question,

In 2013 profit % is the greatest.

Therefore The greatest year in profit percent is 2013.

Q59. Answer: (a) 5

Given:

[{(2/3)³} ^((2x + 3))]^((- 3)/4) = [{(2/3)^(2/3)} ^((3x + 7))]^((- 6)/5)

Formula Used:

(a^b)^c = a^(b × c)

Calculation:

(2/3)^(3 × (2x + 3) × (–3/4)) = (2/3)^((2/3) × (3x + 7) × (–6/5))

On comparing the powers,

=> 3 × (2x + 3) × (–3/4) = (2/3) × (3x + 7) × (–6/5)

=> 45 × (2x + 3) = 16 × (3x + 7)

=> 90x + 135 = 48x + 112

=> 90x – 48x = 112 – 135

=> 42x = –23

√(2 - 42x)

=> √{2 – (–23)}

=> √(2 + 23)

=> √25

=> 5

Therefore The value of √(2 - 42x) is 5.

Q60. Answer: (c) 21 units

Given:

AB = 10 units, BC = 8 units, and CA = 12 units

Concept Used:

The length of two tangents drawn on the same circle, from the same external point is same.
Calculation:
=> AD = AE, CD = CF, BE = BF
Let AD = AE be x, CD = CF be y, and BE = BF be z.
AB = AE + EB
=> 10 = x + z ----(1)
BC = BF + FC
=> 8 = z + y ----(2)
AC = AD + DC
=> 12 = x + y ----(3)
Adding equation 1, 2 and 3, we get
=> 30 = x + z + z + y + x + y
=> 30 = 2 (x + y + z)
=> x + y + z = 15
From equation 1, x + z = 10
=> y = 15 – (x + z)
=> y = 15 – (10)
=> y = 5
From equation 2, z + y = 8
=> x = 15 – (y + z)
=> x = 15 – (8)
=> x = 7
From equation 3, x + y = 12
=> z = 15 – (x + y)
=> z = 15 – 12
=> z = 3
Now AD × BF,
=> x × z
=> 7 × 3
=> 21
Therefore The value of AD × BF is 21.

Q61. Answer: (b) 21

Given:
$\tan\alpha = 2/\sqrt{13}$
Concept Used:
$\tan\theta$ = Opposite side/Adjacent side
$\sec\theta$ = Hypotenuse/Adjacent side
$\operatorname{cosec}\theta$ = Hypotenuse/Opposite side
Calculation:
Applying Pythagoras theorem;
=> $H^2 = 2^2 + (\sqrt{13})^2$
=> H2 = 4 + 13
=> $H = \sqrt{17}$
$\operatorname{Cosec}\theta = \sqrt{17}/2$ and $\sec\theta = \sqrt{17}/\sqrt{13}$
=> $\operatorname{Cosec}^2\theta = 17/4$ and $\sec^2\theta = 17/13$
Putting values in the given equation,
=> {(17/4) + 2(17/13)}/{(17/4) – 3(17/13)}
=> (17/4 + 34/13)/(17/4 – 51/13)
=> {(221 + 136)/52}/{(221 – 204)/52}
=> 357/17
=> 21

Therefore The value of (cosec²a + 2sec²a)/(cosec²a - 3sec²a) is 21.

Q62. Answer: (a) 24%

Given:

Total items purchased = 40 items

Sold some items at 30% profit

Remaining items sold at 18% profit

Formula Used:

SP = (100 + Profit%)/CP × 100

Calculation:

Let the cost price be 40x

And number of items sold at 30% profit be y

=> Cost price of y items = xy

=> Selling price of y items = 130/100 × (xy)

According to the question,

Selling price of y items = Cost price of 26 items

=> 130/100 × (xy) = 26x

=> 13/10 × y = 26

=> y = 20

=> Number of items sold at 30% profit = 20

Remaining items sold at profit 18%,

=> 40 – 20 = 20

Selling price of items sold at 30%,

=> 130/100 × 20x = 26x

Selling price of items sold at 18%,

=> 118/100 × 20x = 23.6x

Total profit percent,

=> (26x + 23.6x – 40x)/40x × 100

=> 9.6/40 × 100 = 24%

Therefore Total profit percentage is 24%

Let the CP of 40 items be Rs.100

=> Total CP = 40 × 100 = 4,000

Let say he sold x items at 30% profit

=> SP of x items = x × 130/100 × 100

=> SP of x items = x × 130

Which is equal to the CP of 26 items.

=> x × 130 = 26 × 100

=> x = 20

He sold 20 items at 30% profit,

=> Total SP of 20 items = Rs. 2,600

=> Remaining items = 40 – 20 => 20

He sold remaining items at 18% profit

=> Remaining 20 articles SP = 20 × 118/100 × 100

=> Remaining 20 articles SP = Rs.2,360

Total SP of 40 articles = 2,600 + 2,360 => Rs.4,960

Total SP of 40 articles = Rs.4,960

Profit % = (SP – CP)/CP × 100

=> Profit % = (4,960 – 4,000)/4,000 × 100

Profit % = 960/4000 × 100 => 24%

Therefore Total profit percentage is 24%

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Q63. Answer: (d) 93

Given:

For 48 students, average marks reduced from 78 to 66

The remaining students increased by 3.5 marks.

Total average reduced by 4.5 marks.

Concept Used:

Using mixture and allegation

Calculation:

Let the total number of students be x

Number of students whose average is reduced is 48

Number of students whose average is increased is x – 48.

=> 48 : (x – 48)

=> The marks of 48 students reduced by,

=> 78 – 66

=> The marks of 48 students reduced by 12,

And the marks of remaining students increased by 3.5.

=>

=> 48 : (x – 48) = 8 : 7.5

=> 48 : (x – 48) = 16 : 15

=> 48/x – 48 = 16/15

=> 3/x – 48 = 1/15

=> x – 48 = 45

=> x = 45 + 48

=> x = 93

Therefore Total number of students is 93.

Q64. Answer: (d) Rs. 800

Given:

CP of item = Rs.500

Tax payed on purchasing = 12%

Profit % while selling = 20%

Discount % given while selling = 16%

Concept Used:

Profit value = {(100 + % Profit)/100} × CP

Discounted price = {100/(100 – % Discount)} × CP

Calculation:

CP = Rs.500

After-tax paid CP,

=> 112/100 × 500 = 560

He wants a profit of 20%

The selling price should be,

=> 120/100 × 560 = Rs. 672

The discount he wants to give is 16%,

=> 100/84 × 672 = 800

Therefore The marked price of the article is Rs. 800.

Q65. Answer: (c) 56 liters

Given:

In 56 liters,

The ratio of milk to water is 5 : 2

Calculation:

The ratio of milk to water is 5 : 2

=> Milk in the total mixture = 5/7 of the total mixture
=> Quantity of Milk = 5/7 × 56
=> Quantity of Milk = 40 liters
Quantity of Water = Total mixture – Quantity of Milk
=> Quantity of Water = 56 – 40
=> Quantity of Water = 16 liters
Now, in the final mixture,
the ratio of milk to water 7 : 2
=> Water in the final mixture = 2/9 of the total mixture
=> 16 = 2/9 × Total mixture
=> Total mixture = (16 × 9)/2
=> Total mixture = 72 liters
Quantity of Milk = Total mixture – Quantity of Water
=> Quantity of Milk = 72 – 16
=> Quantity of Milk = 56 liters
Therefore The quantity of milk in the new mixture is 56 liters.

Q66. Answer: (d) 238

Given:
a% of 240 = c
c% of a = 117.6
Concept used:
m% of n = (m × n)/100
Calculation:
(a × 240)/100 = c
=> a/c = 5/12
Let the number a and c be 5x and 12x
(12x × 5x)/100 = 117.6
=> $60x^2 = 11760$
=> $x^2 = 11760/60$
=> $x^2 = 196$
=> x = 14
(a + c) = (5x + 12x) = 17x
After putting the value of x
17x = 17 × 14
=> (a + c) = 238
Therefore The value of (a + c) is 238

Q67. Answer: (a) 9x - 4y = 24

Given:
$[(3x\sqrt{y} + 2y\sqrt{x})/(3x\sqrt{y} - 2y\sqrt{x})] - [(3x\sqrt{y} - 2y\sqrt{x})/(3x\sqrt{y} + 2y\sqrt{x})] = \sqrt{x} \times \sqrt{y}$
Concept Used:
We need to take LCM and simplify the equation.
Formula Used:
$(a + b)^2 - (a - b)^2 = 4ab$
$(a^2 - b^2) = (a + b)(a - b)$
Calculation:
Take $a = 3x\sqrt{y}$ and $b = 2y\sqrt{x}$
Given expression will be transformed to $[(a + b)/(a - b)] - [(a - b)/(a + b)]$
=> $[(a + b)^2 - (a - b)^2]/[(a + b)(a - b)] = \sqrt{(xy)}$
=> $4ab/(a^2 - b^2) = \sqrt{(xy)}$
=> $(4 \times 3x\sqrt{y} \times 2y\sqrt{x})/[(3x\sqrt{y})^2 - (2y\sqrt{x})^2] = \sqrt{(xy)}$

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=> (24x√x × y√y)/(9x²y - 4y²x) = √(xy)
=> [24 × xy × √(xy)]/[(xy)(9x - 4y) = √(xy)
=> 24/(9x - 4y) = 1
=> 9x - 4y = 24
Therefore The correct relation between x and y is 9x - 4y = 24

Q68. Answer: (c) increase by 3.04%

Given:
Increase in Length = 12%
Decrease in Breadth = 8%
Formula Used:
Increase in Area = +(Length %) - (Breadth %) - [(Length × Breadth)/100]
Calculation:
Increase in Area = (12%) - (8%) - [(12 × 8)/100]
=> Increase in Area = (4 - 0.96)%
=> Increase in Area = 3.04%
Therefore The increase in area will be 3.04%

Q69. Answer: (a) 3 and 8

Given:
One side of triangle = 7 cm
Perimeter of triangle = 18 cm
Area of triangle = √108 cm²
Formula Used:
If sides of triangle are a, b, and c
then,
Semi perimeter (S) = (a + b + c)/2
Area of triangle = √[s(s - a)(s - b)(s - c)
Calculation:
18 = (7 + b + c)
=> (b + c) = 11
=> c = 11 - b
S = 18/2 = 9
√108 = √[(9)(9 - 7)(9 - b)(9 - c)]
Squaring both sides,
108 = 18 × (9 - b) × (9 - c)
Substituting Value of c as 11 - b
6 = (9 - b)[9 - (11 - b)]
=> 6 = (9 - b)(b - 2)
=> 6 = 9b + 2b - b² - 18
=> b² - 11b + 24 = 0
=> b2 - 8b - 3b + 24 = 0
=> b(b - 8) - 3(b - 8) = 0
=> (b - 8)(b - 3) = 0
=> b = 8, 3
If we Take side b as 8
Then,
c = 11 - 8 = 3
Therefore The other two sides of triangle are 8 cm and 3 cm.

Q70. Answer: (d) 4

Given:
[4/(1 + √2 + √3)] = a + b√2 + c√3 - d√6

Concept Used:
We need to rationalize the given equation.
Calculation:
$[4/(1 + \sqrt{2} + \sqrt{3})] \times [(1 + \sqrt{2} - \sqrt{3})/(1 + \sqrt{2} - \sqrt{3})] = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$
$\Rightarrow [4 \times (1 + \sqrt{2} - \sqrt{3})]/[(3 + 2\sqrt{2}) - (\sqrt{3})^2] = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$
$\Rightarrow [4 \times (1 + \sqrt{2} - \sqrt{3})]/2\sqrt{2} = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$
$\Rightarrow [\sqrt{2} \times (1 + \sqrt{2} - \sqrt{3})] = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$
$\Rightarrow 2 + \sqrt{2} - \sqrt{6} = a + b\sqrt{2} + c\sqrt{3} - d\sqrt{6}$
On comparing equations,
a = 2, b = 1, c = 0, and d = 1
Now,
a + b + c + d = 2 + 1 + 0 + 1
$\Rightarrow$ a + b + c + d = 4
Therefore The Value of a + b + c + d is 4

Q71. Answer: (c) Rs. 2,000

Given:
Principal = Rs 10,000
Some part of money lent at 15%
Some part of it lent at 10%
Total interest earned = Rs. 6,500
Time = 5 years
Formula Used:
Interest = (Principal × Rate × Time)/100
Calculation:
Let the money lent at 15% be x
Then money lent at 10% be (10,000 - x)
$6,500 = [(x \times 15 \times 5)/100] + [(10,000 - x) \times 10 \times 5]/100$
$\Rightarrow 6,500 = (3x/4) + [(10,000 - x)/2]$
$\Rightarrow 6,500 = (3x + 20,000 - 2x)/4$
$\Rightarrow 26,000 = 20,000 + x$
$\Rightarrow$ x = Rs 6,000
Then,
(10,000 - x) = (10,000 - 6,000) = Rs 4,000
Difference between the two sums lent = Rs 6,000 - Rs 4,000
$\Rightarrow$ Difference between the two sums lent = Rs 2,000
Therefore The difference between the sums lent is Rs 2,000.
Shortcut TrickTotal S.I. on 10,000 = (10000 × 5 × R)/ 100 = 6500
R = 13%
Now the difference = (1/ 5) × 10000
$\Rightarrow$ 2,000 Rs.

Q72. Answer: (c) 420

Given:
People below average salary is 16% which is 80 in numbers.
Calculation:
16% of total people from Company D = 80
Total number of people in Company D (100%) = (80/16) × 100
$\Rightarrow$ Total number of people in Company D (100%) = 500
Number of people below average salary = 500 - 80
$\Rightarrow$ Number of people below average salary = 420
Therefore The number of people below average salary in Company D is 420.

Q73. Answer: (b) 24/13

Given:

PA and PB are tangents to circle with center O

Radius of circle = 5 cm and PO = 13 cm

Formula Used:

1. In right angle triangle, by Pythagoras theorem

$(Base)^2 + (Perpendicular)^2 = (Hypotenuse)^2$

2. Area of Triangle = (1/2) × Base × Height

Calculation:

angle OAP = 90° (Angle made my radius and tangent)

In ΔOAP, by Pythagoras theorem

$AP^2 = 13^2 - 5^2$

$\Rightarrow AP^2 = 144$

$\Rightarrow AP = 12$ cm

ΔOAP and ΔOBP are congruent triangles

$\Rightarrow$ Area of quadrilateral PAOB = 2 × (Area of ΔOAP)

$\Rightarrow$ Area of quadrilateral PAOB = 2 × [(1/2) × 5 × 12]

$\Rightarrow$ Area of quadrilateral PAOB = 60 cm^2----(01)

Also

Area of quadrilateral PAOB = Area of ΔOAB + Area of ΔPAB

$\Rightarrow$ Area of quadrilateral PAOB = [(1/2)AB × (x)] + [(1/2)AB × (13 - x)]

$\Rightarrow$ Area of quadrilateral PAOB = (1/2)AB [x + 13 - x]

$\Rightarrow$ Area of quadrilateral PAOB = (13/2)AB ----(02)

From (01) and (02)

(13/2)AB = 60

$\Rightarrow$ AB = 120/13

Since ON perpendicular to AB and O is the center, then ON will bisect AB

AN = AB/2 = 60/13

In ΔANO, by Pythagoras theorem

$ON^2 = 5^2 - (60/13)^2$

$\Rightarrow ON^2 = 625/169$

$\Rightarrow$ ON = 25/13

From the figure, OP = ON + NP

$\Rightarrow$ NP = 13 - (25/13)

$\Rightarrow$ NP = 144/13

According to the question,

M is the area of ΔPAB

Area of ΔPAB = M = (1/2) × AB × NP

$\Rightarrow$ M = (1/2) × (120/13) × (144/13)

$\Rightarrow$ M = 8640/169

Now,

$\sqrt{(M/15)} = \sqrt{(8640/169 \times 15)}$

$\Rightarrow \sqrt{(M/15)} = \sqrt{(576/169)} = 24/13$

Therefore The value of $\sqrt{(M/15)}$ is 24/13.

Alternate Method

In ΔOAP,

OP2 = OA2 + AP2

=>132 = 52 + AP2

=> AP2 = 169 - 25

=> AP2 = 144

=> AP = 12 cm

sinx = OA/OP
=> Sinx = 5/13
cosx = AP/OP
=> cosx = 12/13
In ΔACP,
sinx = AC/AP
=> 5/13 = AC/12
=> AC = 60/13 cm
Similarly, BC = 60/13 cm
cosx = CP/AP
=> 12/13 = CP/12
=> CP = 144/13
Area of ΔPAB = M
=> (1/2) × AB × CP = M
=> (1/2) × (AC + BC) × CP = M
=> (1/2) × {(60/13) + (60/13)} × (144/13) = M
=> (1/2) × (120/13) × (144/13) = M
=> M = (60/13) × (144/13)
So, √(M/15) = √{(60/13) × (144/13) × (1/15)}
=> √(M/15) = 24/13
Therefore The Value of √(M/15) is 24/13.

Q74. Answer: (b) 8 cm

Given:
Radius of the circle = 5cm
Length of the tangent from point P to circle = 12 cm
Formula Used:
Pythagoras theorem
$(PO)^2 = (PT)^2 + (AT)^2$
Calculation:
OT = 5 cm (radius)
OA = 5 cm (radius)
Let the value of PA be X
The tangent PT is perpendicular to OT
By Pythagoras theorem,
(PO)2 =(PT)2 + (OT)2
PO = PA + OA = X + 5
substituting the value in the formula
$(PO)^2 = 12^2 + 5^2$
=> (PO)2 = 144 + 25
=> (PO)2 = 169
=> PO = 13 cm
X + 5 = 13
PA = X = 8 cm
Therefore The distance from P to A is 8 cm.

Q75. Answer: (d) 10 days

Given:
25 men do the task in 16 days
5 more men had joined them
Formula Used:
If M1 men can finish W1 work in D1 days and M2 men can finish W2 work in D2 days then,

(M1 × D1)/W1 = (M2 × D2)/W2

Calculation:

Total work done by 25 men = 25 × 16 = 400 units

Work done in 1st four days = 25 × 4 = 100 units

Remaining work = 400 - 100 = 300 units

Numbers of men joined = 5

Total number of men = 25 + 5 = 30

Remaining work done by 30 men in x days

300 = 30 × x

x = 10

Therefore 10 days will be needed by all to complete the remaining task

Q76. Answer: (d) Tide

The correct answer is Tide.

Key Points

• The rhythmic rise and fall of the ocean twice a day is called a tide.

• The intense gravitational force exerted by the sun and the moon on the surface of the earth induce tides.

Additional Information

• When water covers most of the shore by rising to its maximum level, it is known as high tide.

• It is low tide as the waterfalls to its lowest level and recedes from the sea.

• The water of Earth closer to the moon is drawn under the influence of the gravitational force of the moon which creates a high tide.

• The sun, the moon, and the earth are in the same line during the full moon and new moon days and the tides are highest. These tides are called the spring tides.

• But when the moon is in its first and last quarter, the ocean waters are drawn in diagonally opposite directions through the gravitational force of the sun and earth resulting in low tides. These tides are called neap tides.

• High tides help in navigation as they raise the level of water closer to the coast. This makes it easier for ships to enter the harbour.

• High tides assist with fishing as well as much more fish, move closer to the sea during the high tide. This helps fishermen to have an abundant harvest.

• The rise and fall of water due to tides is being used in some places to generate electricity.

Earth's Tides

Q77. Answer: (b) RBI

The correct answer is RBI.

Important Points

• Reserve Bank of India (RBI) is India's central bank, which is responsible for issuing and distributing the Indian rupee and controlling the Indian banking system.

• It also operates the key payment networks of the nation and works to facilitate its economic growth.

• RBI began its operations on 1 April 1935 in compliance with the Reserve Bank of India Act, 1934.

• The RBI was nationalized on 1 January 1949 following India's independence on 15 August 1947.

Additional Information

• A credit rating agency (CRA, also referred to as a rating service) is a corporation that issues credit ratings that rate the ability of a debtor to pay back loans by making regular payments of principal and interest and the risk of default.

• Credit Review & Research Ltd (CARE) which started operations in 1993, is one of India's leading credit rating firm which offers multiple credit scores that help businesses raise money for their diverse needs and help investors make educated investment decisions based on credit risk and their own perceptions of risk-return.

• ICRA is one of the most experienced credit rating companies in India which rates rupee-denominated loan instruments offered by manufacturing undertakings, commercial banks, non-banking undertakings, public sector undertakings, municipalities and financial institutions.

• CRISIL Ltd is a global analytical firm offering ratings research and risk and strategy advisory services, and also provides the world's largest banks and major companies with high-end research.

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Q78. Answer: (c) Kazakhstan

The correct answer is Kazakhstan.

Important Points

• For more than 50 years, Kazakhstan has been a major producer of uranium.

• Kazakhstan has 12% of the uranium deposits in the world.

• Output grew from 2022 to about 22,550 U tonnes per year between 2001 and 2013, making Kazakhstan the world's leading producer of uranium.

• It became the world's top producer of uranium in 2009, with approximately 28% of world supply.

• The volume is approximately 25,000 tU/yr.

• Production was 22,808 tU in 2019, which constituted 43% of the uranium in the world.

Additional Information

Facts about Kazakhstan:

• Capital: Astana

• Currency: Kazakhstani tenge

• President: Kassym-Jomart Tokayev

• Population: 1.85 crores (2019) World Bank

• Official languages: Kazakh, Russian

Uranium Production in Kazakhstan

Q79. Answer: (b) Andhra Pradesh

The correct answer is Andhra Pradesh.

Important Points

• The Tummalapalle Mine is a uranium mine located in Kadapa in the Indian state of Andhra Pradesh, in the village of Tumalapalli.

• Results from research conducted by India's Atomic Energy Commission in 2011 have led analysts to conclude that this mine may have one of the world's largest uranium reserves.

• On 19 July 2011, Dr. S. Banerjee, Secretary of the Department of Atomic Energy, who was also Chairman of the Indian Atomic Energy Commission, confirmed reserves of 49,000 tonnes and suggested that it could be three times larger to make Tummalapalle the largest uranium deposit mine in the world.

• In 2014, the estimates were subsequently raised to 85,000 tonnes.

• Recent findings allegedly show that the reserves are as deep as 1,000 meters.

• This finding has significantly increased India's ability to generate energy from nuclear power plants.

• India produced about 3.13 percent of its energy from nuclear plants as of 2018.

• These results indicate that this output can be increased to more than 30 percent by 2050, which is essential if India hopes to reduce its carbon emissions, pollution, and use.

• Not only will this domestic uranium discovery improve India's nuclear energy ambitions, but it will also help cut costs by moving from costly electricity sources like coal.

Additional Information

• Facts about Andhra Pradesh:

• Legislative Capital: Amaravati

• Population: 4.94 crores (2011)

• Chief minister: N. Chandrababu Naidu

• Governor: Shri Justice Nazeer

• Founded: 1 November 1956

Q80. Answer: (c) Gokulam Kerala

The correct answer is Gokulam Kerala.

Important Points

• Gokulam Kerala Football Club, based in Kozhikode, Kerala, is an Indian professional football club.

• Established in 2017, the team competes in Indian football's second division, the I-League.

• They were the winners of the Durand Cup tournament, which was established in 1888.

• The 2019 Durand Cup has been the 129th edition of the Durand Cup, Asia's oldest football tournament.

• In the tournament, 16 teams had participated.

• Gokulam Kerala secured their maiden trophy by beating Mohun Bagan 2-1 in the 2019 Durand Cup Final at the Salt Lake

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Stadium in Kolkata, which was held on 24 August 2019,

• Gokulam Kerala became the state's first club in 22 years to clinch the tournament with this win.

• In the year 1997, the first Kerala club to claim the title was The I.M. Vijayan-led FC Kochin.

• Marcus Joseph scored his 10th and 11th goals of the tournament which helped Gokulam Kerala FC win,

• 2019 Durand Cup’s Award-

• Golden Ball & Golden Boot awards won by Gokulam Kerala FC forward Marcus Joseph.

• Golden Glove*:* Gokulam Kerala FC’s goalkeeper CK Ubaid**

Q81. Answer: (b) Albert Einstein

The correct answer is Albert Einstein.

Important Points

• Albert Einstein was a German-born theoretical physicist who founded the theory of relativity, one of the two foundations of scientific physics.

• His work is also known for its influence on scientific theory.

• He also discovered the law of photoelectric effect, for which he won the Nobel Prize for Physics in 1921.

• The photoelectric effect is a phenomenon in which electrons are released from the surface of the metal when there is a proper light frequency.

• Heinrich Hertz first documented the idea of the photoelectric effect in 1887, and Lenard later in 1902.

• Also, Maxwell's electromagnetic wave theory of light couldn't justify both of the results of the photoelectric effect.

• Using the groundbreaking theory of Planck that light was a photon, Einstein addressed this question.

• The energy that each particle of light carries (called quanta or photon) depends on the frequency of the light (v), as shown:

$E = h\nu$

Where h = Planck’s constant = 6.6261 × 10-34 Js.

• Because light is bundled into photons, Einstein theorized that the energy of the whole photon is passed to the electron when a photon falls on the surface of a metal.

• Thus, by using the particle nature of light, Einstein demonstrated the Photoelectric effect.

Q82. Answer: (a) General Bipin Rawat

The correct answer is General Bipin Rawat.

Important Points

• General Bipin Rawat is a four-star Indian Army general.

• He is India's first and current Chief of Staff for Defence (CDS).

• He was named as India's first CDS on 30 December 2019 and took office on 1 January 2020.

• Prior to taking over as the CDS, he served as Chairman of the Chiefs of Staff Committee as well as 27th Chief of Army Staff of the Indian Army.

• The Government of India appointed him as the 27th Chief of the Army Staff on 17 December 2016, succeeding two other senior Lieutenant Generals, Praveen Bakshi, and P. M. Hariz.

• On 31 December 2016, after the retirement of General Dalbir Singh Suhag, he assumed the post of Chief of Army Staff as the 27th COAS.

• After Field Marshal Sam Manekshaw and General Dalbir Singh Suhag, he is the third officer from the Gorkha Brigade to become the Chief of the Army Staff.

• He has been honored with the Param Vishisht Seva Medal, Uttam Yudh Seva Medal, Ati Vishisht Seva Medal, Yudh Seva Medal, Sena Medal, Vishisht Seva Medal, and the COAS Commendation on two occasions and the Army Commander's Commendation for gallantry and exemplary service during his career span of over 40 years.

• Lieutenant General Manoj Pande appointed as 29th Chief of the Army Staff (2022).

Q83. Answer: (b) Kartik

The correct answer is Kartik.

Important Points

• In the Sikh tradition, a Gur Purab is a celebration of the anniversary of the birth of a guru, marked by a festival.

• The word Gur Purab first appeared in the days of the gurus.

• It is a compound of the word Purab (or Parva in Sanskrit), with the word guru, indicating a festival or celebration.

• According to the controversial Bhai Bala Janamsakhi, Guru Nanak was born on the Full Moon (Pooranmashi) of the Kartik Indian Lunar Month.

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• For this reason, the Sikhs celebrated Guru Nanak's Gurpurab around November and it was introduced into Sikh rituals.
• For all Sikhs, the festival is normally similar; only the hymns are distinct.
• The festivities typically start with Prabhat Pheris.
• Prabhat Pheris are early morning processions that begin singing hymns at the Gurudwaras and continue across the cities.

Q84. Answer: (d) Secondary Storage

The correct answer is Secondary storage.

Key Points

• Secondary storage, also referred to as auxiliary storage, is non-volatile and is used for later retrieval to store data and programs.
• There are several forms of secondary storage, each with benefits and drawbacks.
• Either magnetic or optical storage media are used for most storage systems.
• The hard disk is an example of secondary storage and magnetic media, which is used for storing data and programs in bulk.
• In the case of the computer, they are normally in-built and therefore are not portable.
• Some hard drives are reversible, so between machines, they provide easy portable storage.
• In general, they are efficient and stable, with easy access to stored data.
• This allows the disk to rotate at even greater speeds than it would otherwise do without distorting the disk surface.

Q85. Answer: (b) Michael Debabrata Patra

The correct answer is Michael Debabrata Patra.

Key Points

• Michael Patra is an economist and central banker from India.
• He is presently a retired Reserve Bank of India officer, acting as one of its four deputy governors.
• Patra, who joined the Reserve Bank of India (RBI) in 1985, is a career central bank officer.
• Patra served as the executive director of the RBI Monetary Policy Department prior to his appointment as deputy governor, where he relocated in 2006 and was an internal member of the influential Monetary Policy Committee as well.

Additional Information

• Earlier, Patra worked in the economic research department of RBI as an advisor in charge of international finance, currency, and banking.
• In January 2020, Patra was appointed by the Cabinet Appointments Committee as Deputy Governor of the Reserve Bank of India on the advice of the Cabinet Secretary-headed Financial Sector Regulatory Selection Search Committee, replacing Viral Acharya, who resigned in July 2019, for a term of three years.
• Patra became the first RBI career economist to be promoted to the position with his appointment as Deputy Governor.
• On 15 January 2020, Patra took over as Deputy Governor and was appointed to oversee RBI's Department of Monetary Policy, Department of Capital Markets Activities, Department of Financial Markets Supervision, International Department, Department of Economic and Policy Analysis, Department of Statistics and Information Processing, Department of Business Planning and Budget and Financial Stability.
• Patra is an ex officio member of the Monetary Policy Committee as the Deputy Governor in charge of the Monetary Policy Branch.

Q86. Answer: (c) Ben Stokes

The correct answer is Ben Stokes.

Key Points

• Sir Garfield Sobers Trophy is given annually by ICC to the chosen world player of the year.
• It is one of the prestigious awards given by ICC.
• In 2019, England all-around player Ben Stokes won this prestigious award.
• This award is named after former West Indies Captain Sir Garfield Sobers.
• A committee of 56 individuals selects the player to be awarded this prize.
• It was first started in 2004 and Rahul Dravid was selected as the winner.

Additional Information

• Other Award Winners in 2019 –
• Pat Cummins (Australia): Test Player of the Year
• Rohit Sharma (India): ODI Player of the Year
• Virat Kohli (India): Spirit of Cricket Award
• Richard Illingworth (England): David Shephard Trophy for Umpire of the Year

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• Deepak Chahar (India): T20 Performance of the Year
• Marnus Labuschangne (Australia): Emerging Cricketer of the Year
• Kyle Coetzer (Scotland): Associate Cricketer of the Year
• Indians who have won this award –
• Rahul Dravid (2004)
• Sachin Ramesh Tendulkar (2010)
• Ravichandran Ashwin (2016)
• Virat Kohli (2017 & 2018)

Q87. Answer: (a) Pradhan Mantri MUDRA Yojana

The correct answer is Pradhan Mantri MUDRA Yojana.

Key Points

• The Government of India launched MUDRA Yojana in 2015 to boost the micro sector by setting up institutions for development and refinancing.
• Under this scheme, a loan of up to Rs. 10 lakhs is provided to non-corporate, micro-enterprises.
• There are three products under this scheme –
• Shishu: Loan up to Rs. 50,000
• Kishore: Loan from Rs. 50,000 to Rs. 5 lakh
• Tarun: Loan from Rs. 5 lakh to Rs. 10 lakh
• Purpose of MUDRA loan:
• Commercial transport vehicle loan
• Loans for the agriculture and food sector
• Equipment finance loan for micro-units
• Business loans for Traders and shopkeepers
• Development & Promotional Support (Sectoral Development, Financial Literacy, Institution Development)

Additional Information

• Pradhan Mantri MNREGA Yojana:
• Launched to provide a legal guarantee to the employability of a member of a family in a rural household for 100 days in every financial year at the minimum wage of Rs. 120 per day.
• Pradhan Mantri Gram Sadak Yojana:
• Launched to provide road connectivity to the unconnected part of the country to eradicate poverty.
• Under this yojana, 3.71 lakh km road will be constructed to connect 1.67 lakh unconnected habitations and 3.68 lakh km roads will be upgraded.
• National Credit Guarantee Trustee Company Limited offers the credit guarantee for the MUDRA loan.

Important Points

• The Economic Survey 2023-24 highlights several important points about India's economy, including:
• India's real GDP grew by 8.2% in 2023-24, which was above 8% in three quarters of the year. This was the third consecutive year of growth over 7%.
• The unemployment rate for people aged 15 and above has been declining since the pandemic.
• The labor force participation rate has increased, along with the worker-to-population ratio.
• The female labor force participation rate has been increasing for six years, rising from 23.3% in 2017-18 to 37% in 2022-23.
• The global economy grew by 3.2% in 2023, according to the International Monetary Fund's World Economic Outlook.
• The Economic Survey projects real GDP growth of 6.5–7% in 2024-25.

Q88. Answer: (d) Pisciculture

The correct answer is Pisciculture.

Key Points

• Fish farming or raising the fishes in tanks or ponds is called Pisciculture.
• The most important species which are being raised worldwide are Tilapia, Salmon, Carp, and Catfish.
• Pisciculture provides more than 50% of seafood in the world.
• It helps in development by means of generating employment in the fishing community.
• Freshwater Cultivable Fishes: Catla, Rohu, Mrigal, Catfishes, Murrels, and Tilapia
• Marine water cultivable fishes: Sea bass, Grey mullet, and Milk Fish

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• Fishery By-products: Fish Oil (comprises of liver and body oil), Fish meal

Additional Information

• Viticulture: A branch of Horticulture which deals with the cultivation and harvesting of grapes

• Agriculture: The science of soil cultivation, crop production, and livestock raising aimed at preparing plant and animal products.

• Horticulture: Form of agriculture of plants for food and decoration purposes.

• Pisciculture is a form of Aquaculture not of Mariculture.

• Viniculture: Cultivation and harvesting of grapes specifically for wine production.

• Unlike Agriculture, Horticulture does not include large scale crop production and animal husbandry.

Q89. Answer: (d) The Governor has the power to grant pardon in case of a death sentence.

The correct answer is The Governor has the power to grant a pardon in case of a death sentence.

Key Points

• A Governor is an official who has the power of governing the executive branch of the sub-national level of government i.e. State or Union Territory.

• They have similar power and functions as that of the President at the Union level.

• In case of a decision granted/announced by the Court of a district/state, the Governor has the power to grant pardon to the accused.

• The Governor, as well as the President, has the power to alter the decision announced by the court to grant pardon, suspend, remit, and commute a death sentence.

Additional Information

Important Articles related to the Governor:

• Article 155: Appointment

• Article 157 and 158: Eligibility of Governor

• Article 161: Pardoning power

• Article 200: Assent to Bills passed by the state legislature to be amended

• Article 201: Bills reserved by Governor for President's consideration

• Article 213: Power to promulgate Ordinance

• Article 233: Appointment of District Judges

• The Governor cannot pardon the Death sentence which only can be pardoned by the President.

• The Governor has the power to suspend, remit or commute a sentence of death.

• For a pardon, the accused has to file a mercy petition to the Governor or President.

Q90. Answer: (b) 1858

The correct answer is 1858.

Key Points

• The 'Crown Rule' or the 'Direct Rule' by the British on the Indian subcontinent remained from 1858 to 1947.

• The area under British control was called British India and the area under indigenous rulers was known as Princely states.

• After the Indian rebellion of 1857, the control of the British India Company was transferred to the Crown of Queen Victoria.

• In 1858, lower Burma was part of British India while upper Burma became a part of it in 1886.

• Imperial Entities of India – British India (1612 – 1947)

• East India Company (1612 – 1757)

• Company Rule in India (1757 – 1858)

• British Raj (1858 – 1947)

• Princely States (1721 – 1949)

• Partition of India (1947)

Key Points

History of British Raj (Crown Rule)

• 1858: Direct Rule of the British Crown came into force

• 1860 – 1890: Rise of INC

• 1905 – 1911: Bengal Partition and Rise of Muslim League

• 1914 – 1918: 1^(st) World War and Lucknow Pact

• 1915 – 1918: Return of Gandhiji to India from South Africa

• 1916 – 1919: Montagu-Chelmsford Reforms

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• 1917 – 1919: Rowlatt Act
• 1919 – 1939: Jalliawala Bagh Massacre, Non-Cooperation movement and Government of India Act
• 1939 – 1945: 2^(nd) World War
• 1946 – 1947: Independence and Partition into India and Pakistan

Q91. Answer: (d) 1024 MB

The solution is in Hindi. Read it online.

Q92. Answer: (a) Alfred Nobel

The correct answer is Alfred Nobel.

Important Points

• Swedish scientist, Alfred Bernhard Nobel who also founded the Nobel Prize invented Dynamite in 1867.
• Dynamite is based on Nitro-glycerine in which wood pulp is used as absorbent and sodium nitrate is added to increase the strength of explosive.
• Use of Dynamite:
• Construction, Mining, and Demolition
• Underwater Blasting
• Dynamite is generally sold as a cylindrical stick that produces 1 Mega Joule of energy.
• The maximum shelf life of Dynamite is 1 year.

Additional Information

Inventions by –

• Thomas Alva Edison: Bulb, Gramophone, Electric Pen, etc.
• Rudolf Diesel: Diesel Engine
• Benjamin Franklin: Lightning rod, Bifocals, Glass Harmonica

Mistake Points

• Dynamite and TNT (2, 4, 6 – Trinitrotoluene) are not the same things.
• Earlier, TNT was used as a chemical inside dynamite.
• Nitro-glycerine can be detonated easily which is not the case with TNT.
• Chemical Formula –
• Nitro-glycerine: C3H5(ONO2)-3
• TNT: C7H5N3O_(6)

Q93. Answer: (c) five

The correct answer is Five.

Important Points

• Kathakali is a classical Indian dance form which is a story play genre of art is the folk dance form of Kerala.
• It is a combination of 5 forms of fine art which are –
• Natyam (expressions)
• Nritham (dance)
• Nrithyam (enactment)
• Sangeetam (music)
• Vadya (instruments)
• Various costumes of characters of Kathakali –
• Sathwika (Hero)
• Katti (Villain)
• Minukku (females)
• Thathi (other characters)
• Types of Drums used in Kathakali – Maddalam, Chenda, and Idakka
• Kathakali is the most difficult style of the traditional dance form in which actors speak ‘sign language’ where hand gestures are used to dictate word part of the character and facial and eye movements express emotions and mood.
• Kathakali is based on the epics of Ramayana and Mahabharata.

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Q94. Answer: (d) Fourth

The correct answer is Fourth.

Key Points

• The 23rd edition of the Asian Athletics Championship was held in Doha, Qatar in 2019 in which 595 athletes from 43 nations participated.

• It was a 4-day long event.

• India secured 4th position in the medals tally (3 Gold, 7 Silver, and 7 Bronze) which was topped by Bahrain followed by China and Japan.

• Gold medals won by Indians –

• Tejinder Pal Singh Toor (Shot Put)

• Gomathi Marimuthu (800 m)

• PU Chitra (1500 m)

Additional Information

• India hosted the 20^(th) and 22^(nd) editions of the Asian Athletics Championship.

• The 24^(th) edition scheduled in 2021 will be hosted by China.

• In the 22^(nd) edition, India topped the tally for the very first time in the history of the Championship by winning 29 medals – 12 Gold, 5 Silver, and 12 Bronze.

• Indian Gold Winners in 23^(rd) edition: Tejinder Pal Singh Toor, PU Chitra, Gomathi Marimuthu

Q95. Answer: (c) BR Ambedkar

The correct answer is BR Ambedkar.

Key Points

• Dr. Bhim Rao Ambedkar was the Chairman of the Drafting Committee set up by the Constituent Assembly to prepare a draft of the Constitution of India in 1947.

• Other members of the Drafting Committee: Alladi Krishnaswamy Ayyar, N Gopalaswami, KM Munshi, Md. Saadulla, BL Mitter, DP Khaitan

• Dr. BR Ambedkar is known as the ‘Father of Constitution of India’.

• Facts about Constituent Assembly –

• President: Dr Rajendra Prasad

• Vice President: Harendra Coomar Mookerjee (later appointed as Governor of West Bengal)

• Constitutional Advisor: BN Rau (later appointed as Judge in ICJ, The Hague)

• The Constituent Assembly formed 22 committees of which 10 were on procedural affairs and 12 were on substantive affairs.

Q96. Answer: (c) Koneru Humpy

The correct answer is Koneru Humpy.

Key Points

• Koneru Humpy, India's young woman Grandmaster, has won the World Rapid Championship 2019 title.

• She defeated Lei Tingjie of China in the Women's World Rapid Chess Championship in the tiebreaker series (Armageddon game) and won the title.

• Koneru Humpy was born on 31 March 1987 in Vijayawada, Andhra Pradesh.

• She is India's youngest woman chess grandmaster player.

• In the year 2003, she was awarded Arjuna Award while in 2007, she was awarded Padma Shri.

• In the year 2009-2011, 2011-12, 2013-14, and 2015-16 Koneru Humpy finished runner-up in the FIDE Women's Grand Prix series.

Koneru Humpy won the Women's World Rapid Chess Championship 2019

Q97. Answer: (c) Guwahati

The correct answer is Guwahati.

Key Points

• The 3rd edition of Khelo India Youth Games was held from 10 January- 22 January 2020 in Guwahati, Assam.

• Khelo India Youth Games (KIYG), formerly Khelo India School Games (KISG), means Play India Youth Games, held annually in January or February, are the national level multidisciplinary grassroots games in India held for two categories, namely under-17 years school students and under-21 college students.

• Every year best 1000 kids will be given an annual scholarship of Rs. 5 lakh for 8 years to prepare them for the international

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sporting events.

• Prime Minister, Narendra Modi, inaugurated Khelo India School Games on 31 January 2018 at the opening ceremony based on Guru–shishya tradition held at Indira Gandhi Arena.

Sports Minister Kiren Rijiju launches 3rd Khelo India Youth Games

Q98. Answer: (c) Kala azar

The correct answer is Kala Azar.

Key Points

• A chronic and potentially fatal parasitic disease of the viscera (the internal organs, particularly the liver, spleen, bone marrow, and lymph nodes) due to infection by the parasite called Leishmania Donovani.

• The Indian name for this disease is “black fever,” which is a reference to the characteristic darkening of the skin that is seen in patients with this condition.

• Visceral leishmaniasis (also known as VL or kala-azar) affects internal organs such as the liver and spleen.

• It is fatal if not treated.

• A condition called post-kala-azar dermal leishmaniasis (PKDL) may arise six months or more after apparent cure from VL.

Microscopic view of Leishmania Donovani

Q99. Answer: (c) Article 360

The correct answer is Article 360.

Key Points

• Article 360 of the Constitution of India empowers the president to proclaim a financial emergency on the following ground:

• If the president is satisfied that a situation has arisen due to which the financial stability or credibility of India is threatened or in danger.

• The 38th Constitutional Amendment Act 1975 made the satisfaction of the president in declaring a financial emergency final and conclusive.

• The satisfaction of the president is held up in any court on any ground.

• However 44th Constitutional Amendment Act 1978 deleted this provision.

• This means the satisfaction of the president is under Judicial review.

• The President may issue directions for the reduction of salaries and allowances to the judges of the Supreme Court and the High Courts and of all or any class of persons serving the Union.

• Till now, the Financial Emergency has never been invoked in India.

Additional Information

• Article 356: Article 356 of the Constitution confers a power upon the President to be exercised only where he is satisfied that a situation has arisen where the government of a State cannot be carried on in accordance with the provisions of the Constitution. Article 356 upon the President is a conditioned power.

• Article 352: The President can declare such an emergency only on the basis of a written request by the Cabinet headed by the Prime Minister. During a national emergency, many Fundamental Rights of Indian citizens can be suspended.

Q100. Answer: (a) Amitabh Bachchan

The correct answer is Amitabh Bachchan.

Key Points

• Amitabh Bachchan to be honoured with Dada Saheb Phalke Award 2019.

• The Dadasaheb Phalke Award is India's highest award in cinema. It is presented annually at the National Film Awards ceremony by the Directorate of Film Festivals, an organization set up by the Ministry of Information and Broadcasting.

• The recipient is honoured for their "outstanding contribution to the growth and development of Indian cinema" and is selected by a committee consisting of eminent personalities from the Indian film industry.

• As of 2017, the award comprises a Swarna Kamal (Golden Lotus) medallion, a shawl, and a cash prize of Rs. 1,000,000.

Additional Information

• The first recipient of the award was actress Devika Rani, who was honoured at the 17th National Film Awards.

Amitabh Bacchan honoured with 50th Dadasaheb Phalke award

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