SSC CHSL Tier-1 2021: Official Paper (Held On: 25 May 2022 Shift 3) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2021 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. Select the most appropriate meaning of the given idiom.

A storm in a teacup

(a) Tasty tea
(b) The tea in which spices are added
(c) A lot of anger and worries about trivial things
(d) To enjoy tea during a storm

Q2. Select the option that will improve the underlined part of the given sentence.

I was look forward to helping you complete the project.

(a) look forward helping
(b) look forward to helping
(c) look forwarding to helps
(d) look forwarding to helping

Q3. Select the INCORRECTLY spelt word.

(a) Leverage
(b) Oscilate
(c) Bonfire
(d) Ensue

Q4. Select the denotation of the highlighted word.

The tie complements the shirt he is wearing.

(a) Disarrays
(b) Relegates
(c) Matches
(d) Drains

Q5. Select the option that expresses the given sentence in indirect speech.

He said, "It's been raining since last night."

(a) He said that it had rained since last night.
(b) He said that it had been raining since the night before.
(c) He's said that it had been raining since yesterday.
(d) He said that it's raining since last night.

Q6. Select the denotation of the highlighted word.

His finicky attitude was the main cause of the conflict.

(a) Fussy
(b) Indolent
(c) Hasty

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(d) Nervous

Q7. Select the option that will improve the underlined part of the given sentence.

She bought the fine cloth in the store.

(a) more fine
(b) finest
(c) most fine
(d) finer

Q8. Select the most appropriate ANTONYM of the given word.

Primitive

(a) Technical
(b) Racial
(c) Sophisticated
(d) Agricultural

Q9. Select the most appropriate option to fill in the blank.

One day, I was handed a few volumes of new literature, unlike anything I had ever read before and so _____ as to make me utterly forget my hopeless state.

(a) repelling
(b) captivating
(c) boring
(d) unrealistic

Q10. Select the most appropriate meaning of the given idiom.

Tell upon

(a) To strike hard
(b) to advise someone
(c) To affect adversely
(d) To write down

Q11. Select the most appropriate ANTONYM of the highlighted word.

They bestow upon him whatever he wishes.

(a) intensify
(b) gift
(c) deny
(d) classify

Q12. Select the option that can be used as a one-word substitute for the given group of words.

The study of population and its dynamics

(a) Democracy
(b) Demography
(c) Dysgraphia
(d) Dermatology

Q13. Select the most appropriate option to fill in the blank.

The roof _____ the weight of the snow.

(a) collapsed under
(b) collapsed to
(c) collapsed with
(d) collapsed for

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Q14. Select the INCORRECTLY spelt word.

(a) Ministry
(b) Attention
(c) Attitude
(d) Mimikry

Q15. Select the option that expresses the given sentence in active voice.

'Don Quixote' was written by Miguel Cervantes.

(a) Miguel Cervantes was writing 'Don Quixote'.
(b) Miguel Cervantes wrote 'Don Quixote'.
(c) Miguel Cervantes had written 'Don Quixote'.
(d) Miguel Cervantes has written 'Don Quixote'.

Q16. In the following questions a statement has been given with highlighted text. Select the options that can replace the text correct idiom or phrase.

The trainee performed the task with extreme ease.

(a) At the eleventh hour
(b) Call it a day
(c) Swan song
(d) A piece of cake

Q17. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

He has been / excused by the teacher / by the time a formal complaint / for bullying was made.

(a) excused by the teacher
(b) for bullying was made
(c) by the time a formal complaint
(d) He has been

Q18. The following sentence has been split into four segments. Identify the segment that contains an INCORRECTLY spelt word.

The mother's tired and overrought mind could not process / the information of the demise of her only son / and she sat like a statue even when her / tormentors passed several obnoxious comments.

(a) her tormentors passed several obnoxious comments
(b) The mother's tired and overrought mind could not process
(c) the information of the demise of her only son
(d) and she sat like a statue even when her

Q19. Select the most appropriate option that can substitute the underlined segment in the given sentence. If there is no need to substitute it, select ‘No substitution required’.

Manoj was living in the city since 1993.

(a) has been living
(b) No substitution required
(c) is living
(d) will be living

Q20. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the correct order to form a meaningful and coherent paragraph.

A. His mother, whose name no one knows, is found on the street, and dies just after Oliver’s birth.

B. After the other boys bully Oliver into asking for more gruel at the end of a meal, Mr. Bumble offers five pounds to anyone who will take the boy away from the workhouse.

C. Oliver Twist is born in a workhouse in 1830s England.

D. Oliver spends the first nine years of his life in a badly run home for young orphans and then is transferred to a workhouse for adults.

(a) CBDA

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(b) CDAB
(c) BDCA
(d) CADB

Directions

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

In terms of education, children must receive proper care, (1)____ and schooling. By (2)__ child marriage, the best possible future for children can be (3)__. When there is an economic crisis, many programs must be held so that they can (4)__ how to fight for themselves (5)____ and efficiently.

Q21. Select the most appropriate option to fill in blank No.1.
(a) Guidance
(b) Dress
(c) Food
(d) Help

Q22. Select the most appropriate option to fill in blank No.2.
(a) Violating
(b) Allowing
(c) Ignoring
(d) Outlawing

Q23. Select the most appropriate option to fill in blank No.3.
(a) Envisioned
(b) Navigated
(c) Awaited
(d) Scheduled

Q24. Select the most appropriate option to fill in blank No.4.
(a) Learn
(b) Plan
(c) Educate
(d) Teach

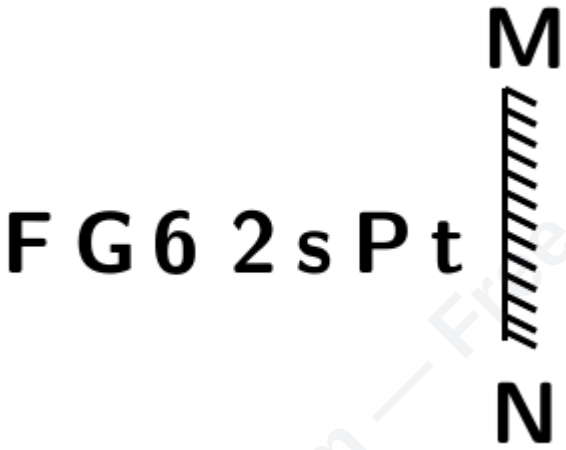
Q25. Select the most appropriate option to fill in blank No.5.
(a) Eloquently
(b) Effectively
(c) Abruptly
(d) Affectively

GENERAL INTELLIGENCE

Q26. In a certain code language, ‘GOLD’ is written as ‘HPME’, and ‘FAKE’ is written as ‘GBLF’. How will ‘SOAP’ be written in that language?
(a) TPQB
(b) TBPQ
(c) PTBQ
(d) TPBQ

Q27. Select the correct mirror image of the given combination when the mirror is placed at MN as shown.

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(a)



(b)



(c)



(d)



Q28. Select the correct combination of mathematical signs to replace the * signs and to balance the given equation.

64*4*3*71*19*5*43

(a) -, +, ×, =, -, ×

(b) +, =, ×, ÷, -, +

(c) ×, +, =, -, ×, -

(d) ÷, +, =, −, ×, +

Q29. Pointing to a woman in a picture, Taran said, “She is the mother of the father-in-law of my husband”. How is Taran related to that woman?

(a) Mother

(b) Granddaughter

(c) Sister

(d) Daughter

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Q30. The second number in the given number pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) are followed in all the number pairs, except one. Find that odd number pair.

(a) 3 : 7
(b) 5 : 21
(c) 4 : 13
(d) 23 : 123

Q31. Which of the following numbers will replace the question mark (?) in the given series?

4, 9, 17, 30, 50, 81, 125, ?

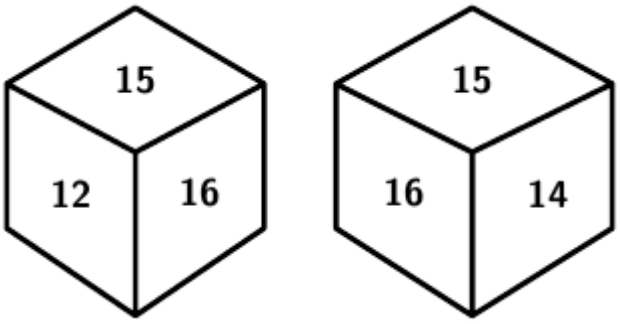
(a) 186
(b) 166
(c) 168
(d) 163

Q32. Select the option that is related to the third word in the same way as the second word is related to the first word. (The words must be considered as meaningful English words and must NOT be related to each other based on the number of letters/number of consonants/vowels in the word)

Cow : Bull :: Mice : ?

(a) Cat
(b) Fox
(c) Mouse
(d) Dog

Q33. Two different positions of the same dice are shown, the six faces of which are numbered from 11 to 16. Select the number that will be on the face opposite to the one showing '12'.



(a) 13
(b) 16
(c) 14
(d) 11

Q34. If 'A' denotes '+', 'B' denotes '×', 'C' denotes '-' and 'D' denotes '÷', then what will come in place of '?' in the following equation?

41 C 29 A (38 B 3) D 19 A 61 C 17 = ?

(a) 70
(b) 66
(c) 58
(d) 62

Q35. Select the option that is related to the third term in the same way as the second term is related to the first term and the sixth term is related to the fifth term.

25 : 4 :: 64 : ? :: 225 : 14

(a) 8
(b) 10
(c) 7
(d) 9

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Q36. Which of the following numbers will replace the question mark (?) in the given series?

569, 526, 483, 440, 397, ?

(a) 369
(b) 340
(c) 326
(d) 354

Q37. In a certain code language, 'FLEECE' is written as 'EFCLEE' and ‘OVERCOAT’ is written as ‘TOAVOECR’. How will 'MITTEN' be written in that language?

(a) NMIETT
(b) NMEITT
(c) NMETIT
(d) NEMITT

Q38. Select the correct combination of mathematical signs to replace the * signs and to balance the given equation.

31*29*43*85*5

(a) +, ×, =, -
(b) +, -, =, ÷
(c) +, +, =, ×
(d) =, +, -, ÷

Q39. Which letter-cluster will replace the question mark (?) to complete the given series?

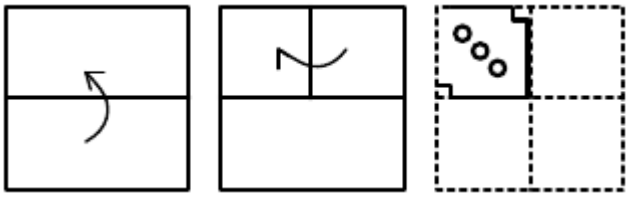
ZFOE, PYUA, FRAW, VKES, ?

(a) KDIO
(b) KCIO
(c) LDIO
(d) LCIO

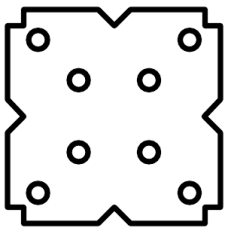
Q40. The second number in the given number pairs is obtained by performing certain mathematical operation(s) on the first number. The same operation(s) are followed in all the number pairs EXCEPT one. Find that odd number pair.

(a) 33 - 24
(b) 54 - 36
(c) 45 - 30
(d) 48 - 32

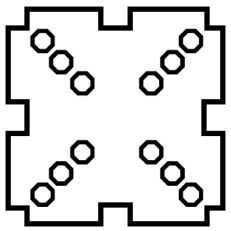
Q41. A paper is folded and cut as shown. How will it appear when unfolded?



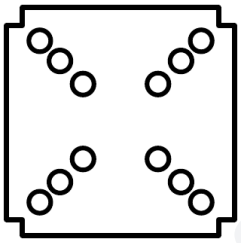
(a)



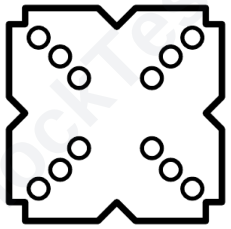
(b)



(c)



(d)

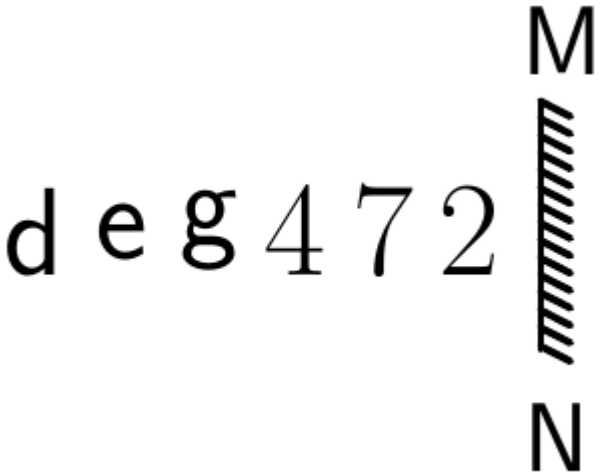


Q42. Select the option that is related to the fifth term in the same way as the second term is related to the first term and fourth term related to third term.

9 : 270 :: 15 : 450 :: 13 : ?

(a) 390
(b) 385
(c) 380
(d) 395

Q43. Select the correct mirror image of the given combination when the mirror is placed at MN as shown.



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(a)



(b)



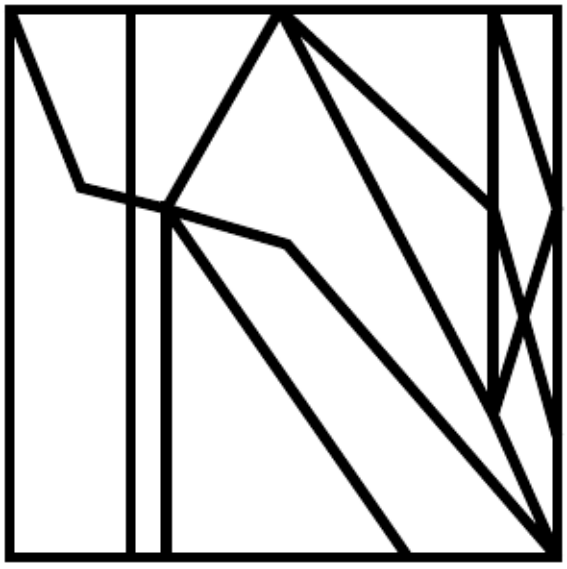
(c)



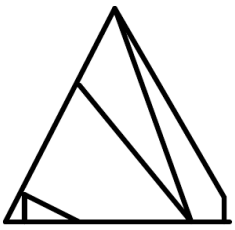
(d)



Q44. Select the option figure which is embedded in the given figure as its part (rotation is NOT allowed).



(a)



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(b)



(c)



(d)

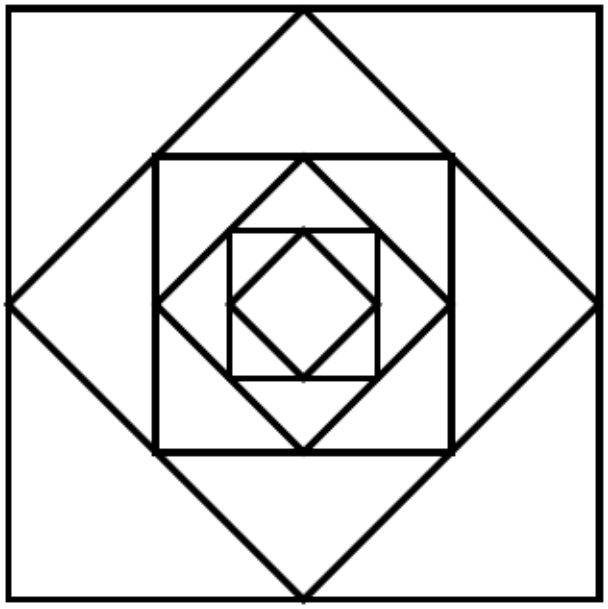


Q45. Which letter-cluster will replace the question mark (?) to complete the given series?

ERKV, HYVK, ?, NMRO, QTCD

(a) KFGZ
(b) KSEV
(c) FNQI
(d) KXGW

Q46. How many triangles are there in the given figure?



(a) 28
(b) 26
(c) 22

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(d) 24

Q47. Select the option that represents the correct order of the given words as they would appear in an English dictionary.

1. Vantage
2. Wherefore
3. Uplift
4. Various
5. Variety
6. Valor

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

Q48. In a certain code language, 'COMPUTER' is written as 'RETUCOMP' and 'LAPTOP' is written as 'POTLAP'. How will 'BOTTLE' be written in that language?

(a) ELTBOT
(b) ELTBTO
(c) ETLBOT
(d) ELTTOB

Q49. Which of the following numbers will replace the question mark (?) in the given series?

14, 14, 12, 36, 32, 160, ?

(a) 150
(b) 166
(c) 154
(d) 145

Q50. Three Statements are given followed by Three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

Statements:

All books are copies.

No copy is a pen.

Some erasers are books.

Conclusions:

I. Some copies are erasers.

II. Some pens are books.

III. No eraser is a pen.

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

QUANTITATIVE APTITUDE

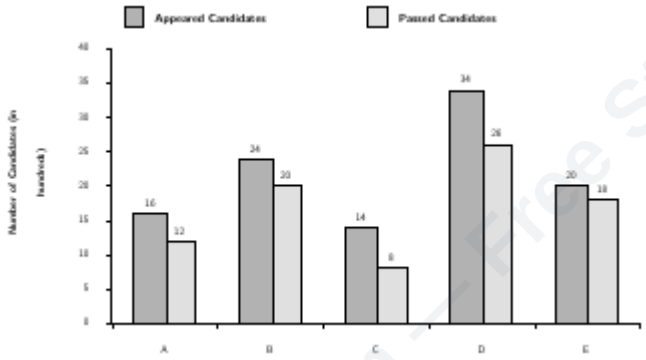
Q51. If the average of n quantities is P and the average of m quantities is Q, then the average of (m + n) quantities is:

(a) (nP+mQ)/(m-n)
(b) (mP+nQ)/(m+n)
(c) (nP+mQ)/(P+Q)
(d) (nP+mQ)/(m+n)

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Q52. Study the given graph and answer the question that follows.

The graph shows the number of appeared candidates and passed candidates (in hundreds) in a test from 5 different institutions.



What is the average number (in hundreds) of candidates to have passed per institution?

(a) 14.60
(b) 12.80
(c) 15.00
(d) 16.80

Q53. A software company has only 3 divisions that have 20, 30 and 40 employees, respectively. If the working percentage of this during a weekend were 20%, 30% and 40%, respectively, then the working percentage of the entire company during that weekend was approximately:

(a) 0.0032
(b) 3.2
(c) 0.032
(d) 32

Q54. If r + 64/r = 16, then the value of r^4 + 1/(r^3) is _____.

(a) 4096 1/512
(b) 512
(c) 512 1/4096
(d) 4096

Q55. There are two types of milk. The price of one type of milk is Rs. 70/litre and the price of other type of milk is Rs. 50/litre. If the two types of milk are mixed, the price of new mixture will be Rs. 55/litre. Find the ratio of the two types of milk in this new mixture.

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

Q56. A man completes a journey in ten hours. He travels at a speed of 21 km/h for the first half of the journey and at a speed of 24 km/h for the second half. Calculate the total distance travelled (in kilometers).

(a) 212
(b) 224
(c) 235
(d) 230

Q57. The radius of two circles are 4 cm and 7 cm and the distance between their centres is 12 cm. Find the length of the direct common tangent to the circles.

(a) 3 √6 cm
(b) 2 √6 cm
(c) 2 √15 cm
(d) 3 √15 cm

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Q58. If p = 11, then the value of $p(p^2 + 3p + 3)$ is:

(a) 1629
(b) 1225
(c) 1727
(d) 1111

Q59. 24 - [52 - {4 + 10 × (-3)}] = ?

(a) 54
(b) -54
(c) -44
(d) 44

Q60. The ratio of income of A to that of B is 4 : 3. The expenditure of A is 5/12 of his income and the expenditure of B is 7/15 of his income. The difference between their expenditures is Rs. 4,500. Find the income of B.

(a) Rs. 49,625
(b) Rs. 48,625
(c) Rs. 51,625
(d) Rs. 50,625

Q61. The value of (1 + tan 10°)(1 + tan 35°) is :

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

Q62. The volume of a sphere is 288π cm^3. Find its surface area.

(a) 114π cm^2
(b) 124π cm^2
(c) 134π cm^2
(d) 144π cm^2

Q63. In an election, the winning candidate received 15744 votes, which are 48% of the electorate. The only other candidate received 22% of the electorate. What is the number of members who did NOT vote?

(a) 9860
(b) 9870
(c) 9840
(d) 9850

Q64. Study the given table and answer the question that follows.

The table shows loans disbursed by five banks (in Rs. crore) from 1982 to 1986.

Bank	1982	1983	1984	1985	1986
A	18	23	45	30	70
B	27	33	18	41	37
C	29	28	22	17	11
D	31	16	28	32	43
E	13	19	27	34	42
Total	118	119	140	154	203

In which of the following banks did the disbursement of loans continuously decrease over the years?

(a) C
(b) D
(c) A

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(d) B

Q65. The price of a certain laptop is discounted by 20% and the reduced price is then discounted by 20%. This series of successive discounts is equivalent to a single discount of:

(a) 20%
(b) 26%
(c) 30%
(d) 36%

Q66. A man sells goods at 4% loss on cost price but he gives 20 g instead of 40 g. What is his profit or loss percentage?

(a) 84% profit
(b) 92% profit
(c) 82% loss
(d) 92% loss

Q67. A can do a piece of work in 12 days and B can do it in 30 days. They work on alternate days; starting with A. In how many days will the work be completed?

(a) 16 4/5
(b) 17 1/7
(c) 16 4/7
(d) 17 2/5

Q68. Two trains each 200 m long are moving in opposite directions. They cross each other in 10 seconds. If the speed of one train is 90 km/h, find the speed of the other train.

(a) 90 km/h
(b) 45 km/h
(c) 54 km/h
(d) 36 km/h

Q69. The distance travelled by a person varies directly with the duration of the journey. If the person travels 378 km in 7 hour, in how many hours will the person cover 918 km?

(a) 16
(b) 15
(c) 18
(d) 17

Q70. A sum of Rs. 16,875, when invested at r% interest per year compounded annually, amounts to Rs. 19,683 after 2 years. What is the value of r?

(a) 8
(b) 7
(c) 6
(d) 9

Q71. The lengths of the three sides of a triangle are 3 cm, 4 cm and 5 cm respectively. Find the area of this triangle.

(a) 6 cm^2
(b) 12 cm^2
(c) 8 cm^2
(d) 10 cm^2

Q72. What is the least positive value of A in the number 34278A2597, which is divisible by 9?

(a) 7
(b) 2
(c) 1
(d) 8

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Q73. Study the given table and answer the question that follows.

The table shows the number of runs scored by a cricket player in different countries in different years.

Year/ Country	Country A	Country B	Country C	Country D
2018	30	45	50	38
2019	25	32	40	50
2020	25	35	38	50
2021	52	29	45	62

In which country did the player score the maximum number of runs in aggregate during these four years, taken together?

(a) D
(b) A
(c) B
(d) C

Q74. A shopkeeper offers 25% discount on all table lamps. He offers a further discount of 8% on the reduced price to those customers who pay cash. What does a customer have to pay in cash for a table lamp of Rs. 2,500?

(a) Rs. 1,725
(b) Rs. 1,865
(c) Rs. 2,220
(d) Rs. 1,780

Q75. A rectangular water tank is 1.5 m high, 3 m long and 3.5 m wide. How much water (in litres) can it hold?

(a) 13520
(b) 14510
(c) 15750
(d) 11780

GENERAL AWARENESS

Q76. Due to the service done by the poet _____, the Kathakali dance form received a new impetus and today, many innovations are also being made to suit the needs of a changing society.

(a) Purandara Dasa
(b) Vallathol Narayan Menon
(c) Satchidanandan
(d) Gopal Bhatta

Q77. How do the red algae reproduce vegetatively?

(a) Fission
(b) Spore formation
(c) Cutting
(d) Fragmentation

Q78. How many players were honoured with the Major Dhyan Chand Khel Ratna Award in 2021?

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

Q79. Which of the following is a type of large, brown seaweed that grows in shallow, nutrient-rich salt water near coastal fronts around the world?

(a) Alpina
(b) Kelp
(c) Seagrass

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(d) Corals

Q80. Pritam Rani Siwach who received the prestigious 2021 Dronacharya Award contributed to the field of:

(a) para shooting
(b) athletics
(c) hockey
(d) boxing

Q81. Padma Shri awardee Guru Gangadhar Pradhan is an accomplished dancer of which of the following dance forms?

(a) Manipuri
(b) Kathakali
(c) Odissi
(d) Kathak

Q82. Who among the following is a famous violinist?

(a) Sajjad Hussain
(b) Anoushka Shankar
(c) Krishna R Chaudhary
(d) Nagai R Muralidharan

Q83. When the government resorts to borrowing only to clear the backlog of interest payments, it is referred to as _____.

(a) zero revenue deficit
(b) zero primary deficit
(c) zero fiscal deficit
(d) excess budget deficit

Q84. The term 'header' is associated to which of the following sports?

(a) Football
(b) Cricket
(c) Hockey
(d) Basketball

Q85. Identify the wrong pair with respect to different motions and their examples.

(a) Periodic motion - Earth rotating on its axis
(b) Rectilinear motion - A stone thrown up in the air at an angle
(c) Rotational motion - Blades of a windmill
(d) Oscillatory motion - A boat tossing up and down a river

Q86. ‘The Great Indian Novel’, a satirical novel that recreates the Hindu epic Mahabharata within the context of the Indian National Movement, is written by which of the following writers who is a member of the Indian Parliament?

(a) Shashi Tharoor
(b) Arun Shourie
(c) Abhijeet Banerjee
(d) Amiya Kumar Bagchi

Q87. Identify the group of the periodic table to which cobalt belongs

(a) Group 6
(b) Group 9
(c) Group 5
(d) Group 17

Q88. Which of the following mountains is formed as a result of the compression of tectonic plates, leading to the formation of large fold-like structures on the Earth's crust?

(a) Ural mountain in Russia
(b) Vosges mountain in Europe

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(c) Mt.Kilimanjaro in Africa
(d) Harz mountains in Germany

Q89. B Herambanathan who was awarded with the 'Sangeet Natak Akademi Award' in 2013 is a _____ dancer.
(a) Odissi
(b) Kuchipudi
(c) Bharatanatyam
(d) Kathak

Q90. Which Article of the Indian Constitution states that "Supreme Court to be a court of record"?
(a) Article 135
(b) Article 126
(c) Article 129
(d) Article 131

Q91. Hariprasad Chaurasia is associated with which of the following instruments?
(a) Shehnai
(b) Bansuri
(c) Sarod
(d) Tabla

Q92. In July 2021, Kiren Rijiju was made the Cabinet Minister and given the charge of which of the following ministries?
(a) Ministry of Communication and Electronics and Information Technology
(b) Ministry of Civil Aviation
(c) Ministry of Ports and Shipping
(d) Ministry of Law and Justice

Q93. How is tuberculosis spread in humans?
(a) Inoculation into skin
(b) Droplet infection
(c) Direct touching
(d) Contact with soil

Q94. 'Moon Walk' is an autobiography of _____.
(a) Oscar Wilde
(b) Marlon Brando
(c) Michael Jackson
(d) Anne Frank

Q95. Who among the following personalities is associated with the Mohiniattam dance?
(a) Yamini Krishnamurthy
(b) Jayaprabha Menon
(c) Prerana Shrimali
(d) Vyjayanthi Kashi

Q96. What is the name of the autobiography written by Mr Abhinav Bindra, the Olympic medallist from India?
(a) An Autobiography
(b) A shot at History
(c) Courage and Conviction
(d) All from Memory

Q97. WINTER Olympics 2026 will be hosted by which of the following countries?
(a) Spain
(b) Brazil
(c) The US

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(d) Italy

Q98. In which year did Hindustani Classical vocalist Rashid Khan receive the Padma Bhushan award?

(a) 2019
(b) 2020
(c) 2021
(d) 2022

Q99. Who among the following founded Odissi dance school ‘SRJAN’ in 1993?

(a) Kumkum Mohanty
(b) Ratikant Mohapatra
(c) Madhavi Mudgal
(d) Kelucharan Mohapatra

Q100. The Ganga plain extend between which two rivers?

(a) Yamuna and Teesta
(b) Ghaggar and Teesta
(c) Ghaggar and Bhagirathi
(d) Ganga and Teesta

ANSWER KEY

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

SOLUTIONS

Q1. Answer: (c) A lot of anger and worries about trivial things

The correct answer is: A lot of anger and worries about trivial things

Key Points

• The idiom "A storm in a teacup" means a situation in which people are very angry or upset about something that is not important.

• Example - This matter is a storm in a teacup; it is an argument about nothing.

• So, it is clear that the most appropriate meaning of the given idiom "A storm in a tea cup" is "A lot of anger and worries about trivial things"

Hence, the correct answer is option 3.

Q2. Answer: (b) look forward to helping

The correct answer is: look forward to helping

Key Points

• Remove "was" to make the sentence correct.

• "Look forward to something" is used to say that you are happy that something is going to happen.

• "I was look forward" is grammatically incorrect.

• If we want to put "was" in this sentence then we have to say "I was looking forward" but it is not given in the options.

• So, we have to convert the sentence into the present tense.
• "Look forward to" is a phrasal verb, which means to await something eagerly.
• The implied meaning of the sentence is: I'm eager to assist you in doing the task.
• So, "I look forward to helping..." is the best choice for the given sentence.
Therefore, the correct answer is option 2.
Corrected sentence: I look forward to helping you complete the project.

Q3. Answer: (b) Oscilate

The solution is in Hindi. Read it online.

Q4. Answer: (c) Matches

The solution is in Hindi. Read it online.

Q5. Answer: (b) He said that it had been raining since the night before.

The correct answer is: He said that it had been raining since the night before.
Key Points
• In Direct-Indirect speech, If the reporting speech is in the present perfect continuous tense then the reported speech will be changed into the past perfect continuous tense.
• In this question, the reporting speech is written in the present perfect continuous tense.
• The structure is: subject + is/has/have + been + verb (ing) + object.
• So, the reported speech must be in the past perfect continuous tense.
• The structure is: subject + had + been + verb (ing) + object.
• Example -
• He said, "I have been living in Delhi." (Direct)
• He said that he had been living in Delhi. (Indirect)
• Therefore, except option 2, no other options are fulfilling the exact rules for Direct-Indirect speech.
Hence, the correct answer is option 2.
The correct indirect speech is: He said that it had been raining since the night before.

Q6. Answer: (a) Fussy

The solution is in Hindi. Read it online.

Q7. Answer: (b) finest

The correct answer is: finest
Key Points
• Replace "fine" with "finest" to correct the sentence.
• We know that the definite article "the" is used before a noun to indicate that the identity of the noun is known to the reader.
• Fine means of very high quality; very good of its kind.
• Finest is the superlative degree of "fine" which means the best example of its type.
• In the given question "the" is used to specify the object.
• Therefore, the superlative form should be used.
Hence, the correct answer is option 2, which will improve the underlined part of the given sentence.
Improved sentence: She bought the finest cloth in the store.

Q8. Answer: (c) Sophisticated

The solution is in Hindi. Read it online.

Q9. Answer: (b) captivating

The solution is in Hindi. Read it online.

Q10. Answer: (c) To affect adversely

The correct answer is: To affect adversely
Key Points
• The idiom "Tell upon" means to have an effect on someone or something, usually in a negative or detrimental way..
• Example - This over-working of the brain began to tell upon his mental health.
• So, it is clear that the most appropriate meaning of the given idiom "Tell upon" is "To affect adversely"

Hence, the correct answer is option 3.

Q11. Answer: (c) deny

The solution is in Hindi. Read it online.

Q12. Answer: (b) Demography

The solution is in Hindi. Read it online.

Q13. Answer: (a) collapsed under

The solution is in Hindi. Read it online.

Q14. Answer: (d) Mimikry

The solution is in Hindi. Read it online.

Q15. Answer: (b) Miguel Cervantes wrote 'Don Quixote'.

The correct answer is: Miguel Cervantes wrote 'Don Quixote'.

Key Points

• The given sentence is in the passive form of the Past Simple tense.

• The Simple past tense in the passive voice has the following form: Object+ was/were + V3+ by + subject

• The Simple past tense in the active voice has the following form: Subject + V2+ object

• Passive: The floor was cleaned by Raju.

• Active: Raju cleaned the floor.

• In the active voice of Past Simple, we have to change the structure, so the subject in the passive voice becomes the object in the active voice.

Therefore, the correct answer is option 2.

Correct Active Voice: Miguel Cervantes wrote 'Don Quixote'.

Q16. Answer: (d) A piece of cake

The solution is in Hindi. Read it online.

Q17. Answer: (d) He has been

The erroneous part of the given sentence is: He has been

Key Points

• Replace "has" with "had" to correct the sentence.

• As a main verb, we use "has" for the present tense and "had" for the past tense.

• The given sentence tells that when a formal bullying complaint was submitted, the instructor had already excused him.

• We use "has + been + v3" to form the passive form of the present perfect tense.

• Present perfect tense: An action that happened in the past that is directly related to the present, such as actions that are still continuing or that indicate a change over time.

• We use "had + been + v3" to form the passive form of the past perfect tense.

• Past perfect tense: Refers to a time earlier than before now. It is used to make it clear that one event happened before another in the past.

• So, it is clear that according to the meaning of the given sentence, Past perfect tense should be used.

Therefore, the correct answer is option 4, which contains an error in it.

Corrected sentence: He had been excused by the teacher by the time a formal complaint for bullying was made.

Q18. Answer: (b) The mother's tired and overrought mind could not process

The solution is in Hindi. Read it online.

Q19. Answer: (a) has been living

The correct answer is: has been living

Key Points

• Replace "was living" with "has been living" to correct the sentence.

• In this sentence "since" is mentioned and it is acting as a preposition.

• Since: In the intervening period between the time mentioned and the time under consideration, typically the present.

• "Since" as a preposition is used to introduce a date or a specific time in the past, it is normally used with present perfect and past perfect tenses.

• So, according to options "has been living" should be used here, which is following the formula of present perfect continuous tense.

• Present perfect continuous: Something started in the past and is continuing at the present time.

• Structure: Subject + has/have + been + verb (ing) + Object

Therefore, the correct answer is option 1, which can substitute the underlined segment in the given sentence.

Corrected sentence: Manoj has been living in the city since 1993.

Q20. Answer: (d) CADB

The correct answer is "CADB"

Key Points

• Let's look at the correct sequence of the passage.

• Statement C is the opening sentence of the passage which explains the introduction of Oliver twist, which year and where he was born. So, this sentence should come at first.

• Statement A is the second sentence of the passage which explains Oliver's mother, whose identity was unknown, and discovered on the street and passed away very soon after Oliver was born.

• Statement D is the third sentence of the passage which explains that Oliver was sent to an adult workhouse after spending the first nine years of his life in a poorly operated institution for young orphans.

• Statement B is the last sentence of the passage which shows that Oliver was taken away from the workhouse by Mr. Bumble for five pounds after being forced by the other lads to ask for extra gruel at the conclusion of a meal.

Hence, the correct sequence is C, A, D, B

The correct answer is option 4.

The correct passage is: C. Oliver Twist is born in a workhouse in 1830s England. A. His mother, whose name no one knows, is found on the street, and dies just after Oliver's birth. D. Oliver spends the first nine years of his life in a badly run home for young orphans and then is transferred to a workhouse for adults. B. After the other boys bully Oliver into asking for more gruel at the end of a meal, Mr. Bumble offers five pounds to anyone who will take the boy away from the workhouse.

Q21. Answer: (a) Guidance

The solution is in Hindi. Read it online.

Q22. Answer: (d) Outlawing

The solution is in Hindi. Read it online.

Q23. Answer: (a) Envisioned

The solution is in Hindi. Read it online.

Q24. Answer: (a) Learn

The solution is in Hindi. Read it online.

Q25. Answer: (b) Effectively

The solution is in Hindi. Read it online.

Q26. Answer: (d) TPBQ

According to the English alphabets and their positional values:

The pattern given is:

'GOLD' is written as 'HPME'

And,

'FAKE' is written as 'GBLF'

Similarly,

'SOAP' be written as '?'

Hence, the correct answer is TPBQ.

Q27. Answer: (a) [figure]

The mirror image of the given combination is:

We compare each option with the mirror image, and we get:

Option 1:

The combination matches completely.

Option 2:

The combination is not complete.

Option 3:

The combination is in the wrong order.

Option 4:

Letter 'F' is missing in the combination.

Hence, the correct answer is "option 1"

Q28. Answer: (d) ÷, +, =, −, ×, +

We use the BODMAS rule to solve the equation:

The given equation:

64*4*3*71*19*5*43

We apply each option to the given equation:

Option 1) -, +, ×, =, -, ×

64 - 4 + 3 × 71 = 19 - 5 × 43

64 - 4 + 213 = 19 - 215

277 - 4 = 19 - 215

273 ≠ -196

LHS ≠ RHS

Option 2) +, =, ×, ÷, -, +

64 + 4 = 3 × 71 ÷ 19 - 5 + 43

64 + 4 = 3 × 3.7 - 5 + 43

64 + 4 = 11.2 - 5 + 43

68 = 54.2 - 5

68 ≠ 49.2

LHS ≠ RHS

Option 3) ×, +, =, -, ×, -

64 × 4 + 3 = 71 - 19 × 5 - 43

256 + 3 = 71 - 95 - 43

259 = 71 - 95 - 43

259 ≠ - 67

LHS ≠ RHS

Option 4) ÷, +, =, −, ×, +

64 ÷ 4 + 3 = 71 - 19 × 5 + 43

16 + 3 = 71 - 19 × 5 + 43

16 + 3 = 71 - 95 + 43

19 = 114 - 95

19 = 19

LHS = RHS,

Hence the correct answer is option 4)

Q29. Answer: (b) Granddaughter

We draw a diagram according to the table, to get the answer:

From the given information, we get:

• Father-in-law of my husband = My father

• Mother of the father-in-law of my husband = Mother of my father

Mother of Taran's father = Grandmother of Taran

Hence, the correct answer is Granddaughter.

Q30. Answer: (d) 23 : 123

The pattern in the given pairs is:

First number × (First number - 1) + 1 = Second number

Let's apply the pattern to the given options:

Option 1) 3 : 7

First number × (First number - 1) + 1 = Second number
3 × (3-1) + 1 = 7
3 × 2 + 1 = 7
6 + 1 = 7
7 = 7
LHS = RHS
Option 2) 5 : 21
First number × (First number - 1) + 1 = Second number
5 × (5-1) + 1 = 21
5 × 4 + 1 = 21
20 + 1 = 21
21 = 21
LHS = RHS
Option 3) 4 : 13
First number × (First number - 1) + 1 = Second number
4 × (4-1) + 1 = 13
4 × 3 + 1 = 13
12 + 1 = 13
13 = 13
LHS = RHS
Option 4) 23 : 123
First number × (First number - 1) + 1 = Second number
23 × (23-1) + 1 = 123
23 × 22 + 1 = 123
506 + 1 = 123
507 ≠ 123
LHS ≠ RHS
Option 4) does not follow the pattern, it is the odd pair.
Hence the correct answer is "option 4"

Q31. Answer: (a) 186

The pattern followed in the given series is:
Hence, the correct answer is "186".

Q32. Answer: (c) Mouse

Given series:
Cow: Bull:: Mice:?
Explanation:
These are the animals of the same breed but different gender,
• Cow -- Female
• Bull -- Male
Similarly,
• Mice -- Female
• Mouse -- Male
All the other animals are of different breeds and only mouse matches.
Hence, the correct answer is "Mouse".

Q33. Answer: (c) 14

In the given figure:
We can see two sides of dice with faces '15' and '16' present on both sides.
• On the left side of faces '15' and '16' we have faces '12'.
• On the right side of faces '15' and '16' we have faces '14'.
In a standard dice, the left and right sides of two same faces are opposite to each other.

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In this case, '12' is left and '14' is right of '15' and '16'.
Therefore 12 and 14 are opposite each other.
Hence, the correct answer is "14".

Q34. Answer: (d) 62

Given equation:
41 C 29 A (38 B 3) D 19 A 61 C 17 = ?
Given information:

Alphabet	Denotation
A	•
B	×
C	•
D	÷

We use the BODMAS rule to solve the equation:
On substituting the values in the equation, we get:
41 - 29 + (38 × 3) ÷ 19 + 61 - 17 = ?
41 - 29 + 114 ÷ 19 + 61 - 17 = ?
41 - 29 + 6 + 61 - 17 = ?
108 - 29 - 17 = ?
108 - 46 = ?
62 = Answer
Hence the correct answer is "62".

Q35. Answer: (c) 7

The pattern followed in the given series is:
We follow the pattern and get:
Hence, the correct answer is "7".

Q36. Answer: (d) 354

The pattern followed in the given series is:
Hence, the correct answer is "354".

Q37. Answer: (b) NMEITT

The pattern followed is:
• 1 shifts to 2
• 2 shifts to 4
• 3 shifts to 6
• 4 shifts to 5
• 5 shifts to 3
• 6 shifts to 1
FLEECE becomes EFCLEE
And,
OVERCOAT becomes TOAVOECR
Similarly,
MITTEN becomes NMEITT
Hence, the correct answer is "Option 2"

Q38. Answer: (b) +, -, =, ÷

We use the BODMAS rule to solve the equation:
The given equation:
31*29*43*85*5
We apply each option on the given equation:

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Option 1) +, ×, =, -
31 + 29 × 43 = 85 - 5
31 + 1247 = 85 - 5
1278 = 85 - 5
1278 ≠ 80
LHS ≠ RHS
Option 2) +, -, =, ÷
31 + 29 - 43 = 85 ÷ 5
31 + 29 - 43 = 17
60 - 43 = 17
17 = 17
LHS = RHS
Option 3) +, +, =, ×
31 + 29 + 43 = 85 × 5
31 + 29 + 43 = 425
103 ≠ 425
LHS ≠ RHS
Option 4) =, +, -, ÷
31 = 29 + 43 - 85 ÷ 5
31 = 29 + 43 - 17
31 = 72 -17
31 ≠ 55
LHS ≠ RHS
Hence option 2) is the correct answer.

Q39. Answer: (c) LDIO

According to the English alphabets and their positional values:
The pattern in the given series is:
• First alphabet is decreased to 10 positional values.
• Second alphabet is decreased to 7 positional values.
• Third alphabet is a vowel so it is replaced with the next vowel in the order, A, E, I, O, U.
• Fourth alphabet is decreased to 4 positional values.
Hence the correct answer is LDIO.

Q40. Answer: (a) 33 - 24

The pattern followed is:
(First number ÷ 6) × 4 = Second number
Let's apply each option:
Option 1) 33 - 24
(First number ÷ 6) × 4 = Second number
(33 ÷ 6) × 4 = 24
5.5 × 4 = 24
22 ≠ 24
LHS ≠ RHS
Option 2) 54 - 36
(First number ÷ 6) × 4 = Second number
(54 ÷ 6) × 4 = 36
9 × 4 = 36
36 = 36
LHS = RHS
Option 3) 45 - 30
(First number ÷ 6) × 4 = Second number

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(45 ÷ 6) × 4 = 30

7.5 × 4 = 30

30 = 30

LHS = RHS

Option 4) 48 - 32

(First number ÷ 6) × 4 = Second number

(48 ÷ 6) × 4 = 32

8 × 4 = 32

32 = 32

LHS = RHS

Only option 1) does not follow the same pattern. Thus it is the odd pair.

Hence the correct answer is "Option 1".

Q41. Answer: (b) [figure]

Lets see the figure given in the question,

If you see carefully in the first figure the paper is folded from centre which will divide the paper into two symmetrical equal parts,

Now, again the paper is folded, which will divide the paper into four equal symmetrical squares when you unfold the paper.,

Thus if you see in the third figure, the representation of the first square is given, which contains a particular pattern at the three ends but at the centre there is no pattern and each square has three circles aligned in a particular fashion,

thus all squares will have the same pattern.

As mentioned above all the given points hold true for only figure given in option2)

Hence, the correct answer is "Option 2".

Q42. Answer: (a) 390

The logic followed here is:

Logic: (First number × 30) = Second Number

Lets each pair:

1) 9 : 270

=> 9 × 30 = 270

And,

2) 15 : 450

=> 15 × 30 = 450

Similarly,

3) 13:?

=> 13 × 30 = 390

Hence, the correct answer is "390".

Q43. Answer: (c) [figure]

The mirror image of the given pattern is:

Now we consider the given options:

Option 1) Numbers 4 and 7 are inverted so this pattern is wrong.

Option 2) The pattern is incorrect.

Option 3) The pattern matches completely.

Option 4) The pattern is partially correct, the alphabets are inverted.

Hence the correct answer is option 3)

Q44. Answer: (d) [figure]

Option 4 is correct.

Given figure is,

Now, in option 1, we get,

The given figure is not embedded in the figure in question. Thus, option 1 is incorrect.

Now, in option 2, we get,

The given figure is not embedded in the figure in question. Thus, option 2 is incorrect.

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Now, in option 3, we get,

The given figure is not embedded in the figure in question. Thus, option 3 is incorrect.

In option 4,

which has the figure embedded in it.

Thus, option 4 is correct.

Q45. Answer: (a) KFGZ

The position of letters according to the English alphabet series:

The pattern followed here is:

Hence, the correct answer is "KFGZ".

Q46. Answer: (d) 24

The triangles can be counted as,

Hence, the correct answer is "24".

Q47. Answer: (a) 3, 6, 1, 5, 4, 2

The order of the given words according to how it will be present in the dictionary is:

3) Uplift

6) Valor

1) Vantage

5) Variety

4) Various

2) Wherefore

Thus, the order is 3, 6, 1, 5, 4, 2.

Hence, option 1 is correct.

Q48. Answer: (a) ELTBOT

LOGIC:

1) Word is divided into half.

2) First half of the word becomes the second half of the word.

3) Letters of the second half of the word are reversed to make the first half of the new word.

Option 1:

'COMPUTER' is written as 'RETUCOMP'

Again, 'LAPTOP' is written as 'POTLAP'.

Thus, in a similar manner, for the word BOTTLE, we get,

Thus, option 1 is correct.

Q49. Answer: (c) 154

The pattern followed here is:

14 × 1 =14.

14 - 2 = 12

12 × 3 = 36.

36 - 4 = 32

32 × 5 = 160

160 - 6 = 154

Hence, the correct answer is "154".

Q50. Answer: (d) Only conclusion I follows.

Here, it is given that all books are copies.

I. Some copies are erasers → Follow → (As all books are copies and some eraser are books. So, some copies are erasers is followed)

II. Some pens are books → Does not follow → (As no copy is pen and all books are copies. So, some pens are books is not definite followed)

III. No eraser is a pen → Does not follow → (As some erasers are copies but no copy is a pen. So. no eraser is pen is not definite followed)

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Only, Conclusion I follow.

Hence, the correct answer is "Option 4".

Q51. Answer: (d) (nP+mQ)/(m+n)

Given:

The average of n quantities = P

The average of m quantities = Q

Concept used:

Average = Sum of all the values/Total no. of values

Calculation:

According to the question,

The average of n quantities = P

Sum of the n quantities = nP

The average of m quantities = Q

Sum of m quantities = Qm

Now Average of (m + n) = (nP + Qm)/(m + n)

Therefore The average of (m + n) quantities is (nP+mQ)/(m+n).

Q52. Answer: (d) 16.80

Concept used:

Average = Sum of all the values/Total no. of values

Calculation:

According to the question,

Candidate passed = A + B + C + D + E

The values are given in hundreds:

Candidate passed = 1200 + 2000 + 800 + 2600 + 1800 = 8400

Average = 8400/5 = 1680

Therefore The average number (in hundreds) of candidates to have passed per institution is 16.80.

Q53. Answer: (d) 32

Shortcut Trick

Weighted Average = (n1w1 + n2w2 + n3w3) ÷ (n1 + n2 + n3)

Ratio of employees = 20 : 30 : 40 = 2 : 3 : 4

Working % = (2 × 20 + 3 × 30 + 4 × 40) ÷ (2 + 3 + 4)

Working % = (40 + 90 + 160) ÷ 9 = 290 ÷ 9 ≈ 32.22%

Therefore The correct answer is 32%.

Alternate Method

Given:

Employees in Division 1 = 20, Working = 20%

Employees in Division 2 = 30, Working = 30%

Employees in Division 3 = 40, Working = 40%

Calculations:

=> Total employees = 20 + 30 + 40 = 90

=> Working employees in Div 1 = 20% of 20 = 4

=> Working employees in Div 2 = 30% of 30 = 9

=> Working employees in Div 3 = 40% of 40 = 16

=> Total working employees = 4 + 9 + 16 = 29

=> Working percentage = (29 ÷ 90) × 100

=> Working percentage = 290 ÷ 9 ≈ 32.22%

Therefore The correct answer is 32%.

Additional Information

Weighted Average Formula

Used when different groups have different sizes: Average = (Σ $n_i x_i$) ÷ Σ n_i.

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Percentage Change

Percentage change = (Final Value − Initial Value) ÷ Initial Value × 100.

Base Value in Percentage

Always ensure the base (denominator) represents the total population when calculating overall percentages.

Q54. Answer: (a) 4096 1/512

Given:

r + 64/r = 16

Calculations:

r + 64/r = 16

=> r^2 + 64 = 16r

=> r2 - 16r + 64 = 0

=> r2 - 8r - 8r + 64 = 0

=> r(r - 8) - 8(r - 8) = 0

=> (r - 8)(r - 8) = 0

=> r = 8

Now, the value of

=> r4 + 1/(r^3)

=> (8)^4 + 1/(8^3)

=> 4096 + 1/512

=> 40961/512

Therefore The Required value is 40961/512.

Q55. Answer: (d) 1 : 3

Given:

Price of the mixture per liter = Rs. 55

Price per liter of first type of milk = Rs. 70

Price per liter of second type of milk = Rs. 50

Calculation:

Let the quantity of first type of milk be x

Let the quantity of second type of milk be y

(70 × x) + (50 × y) = 55 × (x + y)

=> 70x + 50y = 55x + 55y

=> 15x = 5y

=> x : y = 1 : 3

Therefore The ratio of the two types of milk in this new mixture is x : y = 1 : 3.

Shortcut Trick

So, the required ratio = 5 : 15 = 1 : 3

Q56. Answer: (b) 224

Shortcut Trick

When a journey is covered in two equal halves at different speeds, the average speed = 2xy / (x + y)

=> Average speed = (2 × 21 × 24) / (21 + 24)

=> Average speed = 1008 / 45 = 22.4 km/h

Total distance = Average speed × Total time

=> Total distance = 22.4 × 10 = 224 km

Therefore The correct answer is 224 km.

Alternate Method

Given:

Speed for the first half (v1) = 21 km/h

Speed for the second half (v2) = 24 km/h

Total time taken (T) = 10 hours

Formula Used:

Time = Distance ÷ Speed

Calculation:

Let the total distance be 2d km. Therefore, each half of the journey is d km.

=> Total Time = (Time for 1st half) + (Time for 2nd half)

=> d / 21 + d / 24 = 10

=> d(1 / 21 + 1 / 24) = 10

Take LCM of 21 and 24, which is 168.

=> d × (8 + 7) / 168 = 10

=> 15d / 168 = 10

=> d = (168 × 10) / 15

=> d = 1680 / 15

=> d = 112 km

The total distance is 2d.

=> Total distance = 2 × 112

=> Total distance = 224 km

Therefore The correct answer is 224 km.

Additional Information

Average Speed for Equal Distances

When a person travels two equal distances at speeds x and y, the average speed is given by 2xy / (x + y).

Average Speed for Equal Time Intervals

When a person travels at speeds x and y for equal intervals of time, the average speed is the arithmetic mean, given by (x + y) / 2.

Relative Speed

When two objects move in opposite directions, their relative speed is the sum of their individual speeds (x + y). If they move in the same direction, the relative speed is the difference of their speeds (x − y).

Q57. Answer: (d) 3 √15 cm

Given:

Radii are 7 cm and 4 cm

Distance between centres = 12 cm

Formula used:

Length of direct common tangent = $\sqrt{(d^2 - (r1 - r2)^2)}$

Where d = distance between their centers

r1 and r2 are radii of circles

Calculation:

Length of direct common tangent = $\sqrt{(12^2 - (7 - 4)^2}$

=> $\sqrt{144 - 3^2}$

=> $\sqrt{144 - 9}$

=> $\sqrt{135}$

=> $\sqrt{(9 \times 15)} = 3\sqrt{15}$cm

Therefore The length of the direct common tangent to the circles is $3\sqrt{15}$cm.

Q58. Answer: (c) 1727

Given:

p = 11

Calculation:

According to the question,

p(p2 + 3p + 3)

=> 11(112 + 3 × 11 + 3)

=> 11(121 + 33 + 3)

=> 11(157) = 1727

Therefore The value of given equation is 1727.

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Q59. Answer: (b) -54

Given:

24 - [52 - {4 + 10 × (-3)}]

Concept used:

Calculations:

24 - [52 - {4 + 10 × (-3)}]

=> 24 - [52 - {4 + - 30}]

=> 24 - [52 - {- 26}]

=> 24 - [52 + 26]

=> 24 - 78 = - 54

Therefore The value of the given equation is - 54.

Q60. Answer: (d) Rs. 50,625

Given:

The ratio of income of A to that of B is 4 : 3.

The expenditure of A is 5/12 of his income

The expenditure of B is 7/15 of his income.

The difference between their expenditures is Rs. 4,500.

Calculations:

Let the ratio of income of A and B = 4x : 3x

According to the question,

4500 = 4x(5/12) - 3x(7/15)

=> 4500 = 5x/3 - 7x/5

=> 4500 = (25x-21x)/15

=> 67500 = 4x

=> x = 67500/4 = Rs. 16875

The salary of B = 3x = 16875 × 3 = Rs. 50,625

Therefore The income of B is Rs. 50,625.

Q61. Answer: (d) 2

Given:

(1 + tan 10°)(1 + tan 35°)

Concept used:

If A + B = 45° then (1+ tanA) (1 + tanB) = 2

Calculation:

According to the concept,

(1 + tan 10°)(1 + tan 35°) = 2

Here, 10° + 35° = 45°

Therefore The value of the given equation is 2.

Alternate Method (1 + tan 10°)(1 + tan 35°)

We can see that

10° + 35° = 45° = A + B

Therefore Let A = 0° and B = 45°

We know that, tan 0° = 0

tan 45° = 1

Therefore (1+ tanA) (1 + tanB) = 2 = (1 + tan 10°)(1 + tan 35°)

Therefore (1 + tan 10°)(1 + tan 35°) = 2

Q62. Answer: (d) 144π cm²

Given:

The volume of a sphere is 288π cm3.

Formula used:

Volume = (4/3)π r³

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Surface area = 4 π r²

Calculations:

According to the question,

288π = (4/3)π r3

=> 72 × 3 = r3

=> r = 6

Surface area = 4 π (6)2

=> Surface area = 4π × 36

=> Surface area = 144π cm²

Therefore The surface area of sphere 144π cm2.

Q63. Answer: (c) 9840

Shortcut Trick

Winner's share = 48% → 15744 votes

Runner-up share = 22%

Non-voters % = 100% − (48% + 22%) = 30%

Since 48% ≡ 15744, then 1% ≡ 328

Non-voters = 30% ≡ 30 × 328 = 9840

Therefore The correct answer is 9840.

Alternate Method

Winner (48%)

15744

Other (22%)

Non-voters (30%)

Total Electorate = 100%

Calculation: (15744 ÷ 48) × 30 = 9840

Given:

Winner's votes = 48% of Total Electorate

Winner's votes = 15744

Other candidate's votes = 22% of Total Electorate

Let the total electorate be E.

=> 48% of E = 15744

=> E = (15744 × 100) ÷ 48

=> E = 32800

=> Voted percentage = Winner% + Other% = 48% + 22% = 70%

=> Non-voter percentage = 100% − 70% = 30%

=> Number of non-voters = 30% of E

=> Non-voters = 0.30 × 32800

=> Non-voters = 9840

Therefore The correct answer is 9840.

Additional Information

Election Majority Concept

Majority is the difference between the winner's votes and the runner-up's votes. Margin % = (Winner% − Runner-up%).

Valid and Invalid Votes

Total Polled Votes = Valid Votes + Invalid Votes. Usually, candidates receive percentages of the Valid Votes unless stated as Percentage of Electorate.

Percentage Base Change

If A is x% of Total, then Value of A ÷ x gives 1% of the total base, which can then be multiplied to find any other percentage of the same base.

Q64. Answer: (a) C

Given:

The table shows loans disbursed by five banks (in Rs. crore) from 1982 to 1986.

Bank	1982	1983	1984	1985	1986
A	18	23	45	30	70
B	27	33	18	41	37
C	29	28	22	17	11
D	31	16	28	32	43
E	13	19	27	34	42
Total	118	119	140	154	203

Calculations:

According to the question,

Total no. of money disbursed from 1982 - 1986

For Bank A = 18 + 23 + 45 + 30 + 70 = 186 (in Rs. crore)

For Bank B = 27 + 33 + 18 + 41 + 37 = 156 (in Rs. crore)

For Bank C = 29 + 28 + 22 + 17 + 11 = 107 (in Rs. crore)

For Bank D = 31 + 16 + 28 + 32 + 43 = 150 (in Rs. crore)

For Bank E = 13 + 19 + 27 + 34 + 42 = 135 (in Rs. crore)

Therefore The disbursement of loans continuously decreases over the years for bank C.

Q65. Answer: (d) 36%

Given:

The price of a certain laptop is discounted by 20%

The reduced price is then discounted by 20%.

Concept used:

Successive formula = (A + B) - (AB/100)

Calculations:

According to the question,

=> 20 + 20 - 400/100

=> 40 - 4 = 36%

Therefore This series of successive discounts is equivalent to a single discount of 36%.

Q66. Answer: (b) 92% profit

Given:

Loss% = 4%,

b = 20 g and c = 40 g

Concept used:

Required profit = [(100 - a) × (c/b) -100] %

Calculations:

[(100 - 4) × (40/20) - 100] %

=> [96 × 2 - 100]%

=> [192 - 100]% = 92% Gain

Therefore Here (+ve) sign shows that profit is earned of 92%.

Q67. Answer: (a) 16 4/5

Given:

A can do a piece of work in 12 days

B can do it in 30 days.

Calculations:

A can complete work in 12 days

B complete work in 30 days

LCM of (12, 30) is 60 then total work is 60 parts

A can do in day 60/12 parts = 5 parts

B can do in 1 day 60/30 parts = 2 parts
Their 2 days of work are 7 parts
Then they do 56 parts of work in 16 days
The remaining part is done by A is 4/5 parts
The total no of days is 16 + 4/5 = 16 4/5
Therefore The work will be completed in 16 4/5.

Q68. Answer: (c) 54 km/h

Given:
Two trains each 200 m long are moving in opposite directions.
They cross each other in 10 seconds or 1/360 hours
The speed of one train is 90 km/h
Concept used:
Relative speed (while moving in opp. direction) = x + y
Calculations:
Total length = 200 + 200 = 400 m or 0.4 km
Let the speed of the other train be x
When crossed each other (moving in opp. direction)
Distance traveled = 400 m
x + 90 = 0.4/(1/360)
=> x = (0.4 × 360) - 90
=> x = 144 - 90 = 54 km/h
Therefore The speed of the other train is 54 km/h.

Q69. Answer: (d) 17

Given:
D1 = 378 km
T1 = 7 hour
D2 = 918 km
Concept used:
Speed = Distance/Time
Calculations:
According to the question,
Speed of 1st journey = Speed of the second journey
378/7 = 918/T2
=> T2 = (918 × 7)/378
=> T2 = 6426/378 = 17 hours
Therefore The person covers 918 km in 17 hours.

Q70. Answer: (a) 8

Given:
Principle = Rs. 16875
Time = 2 years
Amount = Rs. 19683
Formula used:
Amount = P(1 + r%)^T
Calculations:
According to the question,
19683 = 16875(1 + r%)2
=> 19683/16875 = (1 + r%)2
=> (1 + r%)2 = 1.1664
=> r% = 1.08 - 1 = 0.08
=> r = 8%

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Therefore The value of r is 8%.

Q71. Answer: (a) 6 cm²

Given:

The lengths of the three sides of a triangle are 3 cm, 4 cm, and 5 cm respectively

Formula used:

A = √[s(s-a)(s-b)(s-c)]

s = (a + b + c)/2

here, (a,b,c) are sides of triangle

Calculations:

According to the question,

s = (3 + 4 + 5)/2

s = 12/2 = 6

Now Area of the triangle by herons formula

A = √[6(6-3)(6-4)(6-5)]

=> A = √[6(3)(2)(1)]

=> A = √(6 × 6)

=> A = √36 = 6 cm²

Therefore The area of this triangle is 6 cm2.

Shortcut TrickHere 3, 4 and 5 forms a triplet

So, 3, 4 and 5 is a right-angled triangle.

Area of a triangle = 1/2 × 3 × 4 = 6cm²

Q72. Answer: (a) 7

Given:

The number is 34278A2597

Concept used:

A number is divisible by 9 if the sum of all digits is divisible by 9.

Calculation:

Number = 34278A2597

The sum of all digit = 3 + 4 + 2 + 7 + 8 + A + 2 + 5 + 9 + 7 = 47 + A

In the above equation, if 7 is placed in the place of A it becomes 54, which is divisible by 9.

Therefore The least value is 7.

Q73. Answer: (a) D

Given:

The table shows the number of runs scored by a cricket player in different countries in different years.

Year/ Country	Country A	Country B	Country C	Country D
2018	30	45	50	38
2019	25	32	40	50
2020	25	35	38	50
2021	52	29	45	62

Calculations:

For country A = 30 + 25 + 25 + 52 = 132

For country B = 45 + 32 + 35 + 29 = 141

For country C = 50 + 40 + 38 + 45 = 173

For country D = 38 + 50 + 50 + 62 = 200

Therefore The maximum number of runs in aggregate during these four years are of Country D.

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Q74. Answer: (a) Rs. 1,725

Given:

A shopkeeper offers 25% discount on all table lamps. He offers a further discount of 8%

Marked price = Rs. 2500

Concept used:

Final Discount% = (A + B) - (AB/100)

Selling Price = MP(1 - D%)

Calculations:

According to the question,

Final Discount% = (25 + 8) - [(25 × 8)/100]

=> D% = 33 - (200/100)

=> D% = 33 - 2 = 31%

Now SP

SP = 2500(1 - 31%)

=> SP = 2500(1 - 0.31)

=> SP = 2500 × 0.69 = Rs. 1725

Therefore The selling Price of the lamp will be Rs. 1725.

Q75. Answer: (c) 15750

Given:

Length (l) = 3 m

Breadth (b) = 3.5 m

Height (h) = 1.5 m

Formula used:

Volume of Cuboid = l × b × h

Calculations:

According to the question,

Vol. = 3 × 3.5 × 1.5 = 15.75 m^3

Now Volume in litres

1 m^3 = 1000 liters

=> 15.75 m3 = 1000 × 15.75 = 15750 liters

Therefore It can hold 15750 litres of water.

Q76. Answer: (b) Vallathol Narayan Menon

The correct answer is Vallathol Narayan Menon.

Key Points

• Vallathol Narayana Menon was a poet in the Malayalam language.

• He was one of the triumvirate poets of modern Malayalam, along with Kumaran Asan and Ulloor S. Parameswara Iyer.

• He was a nationalist poet and wrote a series of poems on various aspects of the Indian freedom movement.

• He also wrote against caste restriction, tyrannies and orthodoxies.

• He founded the Kerala Kalamandalam.

• He is credited with revitalizing the traditional Keralite dance form known as Kathakali.

Additional Information

• Kathakali is a major form of classical Indian dance.

• It is a "story play" genre of art.

• It is native to the Malayalam-speaking southwestern region of Kerala.

• It is entirely practiced and appreciated by Malayali people.

• The famous dancers of Kathakali include Kalamandalam Gopi, Kalamandalam Krishna Prasad, Kottakal Sivaraman, Kalamandalam Ramankutty Nair, Kalamandalam Vasu Pisharody, Kavungal Chathunni Panicker.

Q77. Answer: (d) Fragmentation

The correct answer is Fragmentation.

Key Points

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• Red algae reproduce through Fragmentation.
• Red algae is the numerous algae that constitute the phylum Rhodophyta.
• It contains a red pigment in addition to chlorophyll.
• The group includes carrageen, dulse, and laver also called red seaweed.
• It reproduces sexually as well as asexually.
• Asexual reproduction can occur through the production of spores and by vegetative means.
• It includes fragmentation, cell division or propagules production.
• Fragmentation is a method where one fragment from an organism's body is broken due to external physical causes.
• Each fragment then grows into different individuals.

Additional Information

• Fission
• The type of asexual reproduction in which a microorganism splits in two equal halves is called as binary fission.
• Binary fission occurs in Amoeba.
• The cells which split during binary fission have the potential to grow to the size of the original one.
• Spore Formation
• Spore formation is a method of asexual reproduction.
• Plants like ferns, moss, and fungi reproduce by this method.
• Spores are unicellular reproductive bodies present in sacs called sporangia.
• When spores mature sporangia burst and spores are carried to a different location by air, wind, and water.
• Cutting
• Cutting is a type of asexual reproduction.
• A cutting is a vegetative plant part.
• It is severed from the parent plant in order to regenerate itself, thereby forming a whole new plant.

Q78. Answer: (d) 12

The correct answer is 12.

Key Points

• Major Dhyan Chand Khel Ratna Award are given every year to recognize and reward excellence in sports.
• 12 players were honored with the Major Dhyan Chand Khel Ratna Award in 2021.
• The full list of sportspersons to win the award are:
• Neeraj Chopra for Athletics
• Ravi Kumar for Wrestling
• Lovlina Borgohain for Boxing
• Sreejesh P.R for Hockey
• Avani Lekhara for Para Shooting
• Sumit Antil for Para-Athletics
• Pramod Bhagat for Para-Badminton
• Krishna Nagar for Para-Badminton
• Manish Narwal for Para-Shooting
• Mithali Raj for Cricket
• Sunil Chhetri for Football
• Manpreet Singh for Hockey

Additional Information

• Major Dhyan Chand Khel Ratna
• The Major Dhyan Chand Khel Ratna Award is formerly known as the Rajiv Gandhi Khel Ratna Award in Sports and Games.
• It is the highest sporting honor in India.
• It is awarded annually by the Ministry of Youth Affairs and Sports.
• The first recipient of the award was Chess Grandmaster Viswanathan Anand.
• The award comprises a medallion, a certificate, and a cash prize of Rs. 25 lakh.

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Q79. Answer: (b) Kelp

The correct answer is Kelp.

Key Points

• Kelp

• Kelp are large brown algae that live in cool, relatively shallow waters close to the shore.

• They grow in dense groupings much like a forest on land.

• These underwater towers of kelp provide food and shelter for thousands of marine species.

• Kelp can grow to be one hundred feet tall.

• They are food for abalones such as the California Red Abalone.

• Kelp forests make tons of oxygen for nearby waters.

Additional Information

• Seagrass

• Seagrasses are underwater plants that evolved from land plants.

• They are like terrestrial plants in that they have leaves, flowers, seeds, and roots.

• They are a very important food source and habitat for wildlife.

• They have been called “the lungs of the sea” because they release oxygen into the water through the process of photosynthesis.

• Corals

• Corals are small marine animals.

• The “hard” type of coral grows with the help of algae, which gives it color and nutrients that help it form a sturdy, stony skeleton.

• Reefs, which form through the accumulation of hard coral are a vital ecosystem.

• It supports an estimated 25% of ocean species.

Q80. Answer: (c) hockey

The correct answer is hockey.

Key Points

• Pritam Rani Siwach is a former captain of the Indian women's hockey team.

• She received an Arjuna Award in 1998.

• She received Dronacharya Award 2021 from President Ram Nath Kovind.

• She last played with the team when it won the Gold at the 2002 Commonwealth Games.

• She is now Coach with the Indian Women's Hockey team for World Cup and Commonwealth Games.

Additional Information

• The Dronacharya Award is given to coaches as recognition for their contribution to a particular sport.

• It is officially called the Dronacharya Award for Outstanding Coaches in Sports and Games.

• It is also given to motivate coaches to dedicate themselves to raising the performance of their athletes.

• It is handed out on National Sports Day – celebrated on August 29.

• The Dronacharya award is named after the mythical character Drona – who taught the art of warfare to the Kauravas and Pandavas.

Q81. Answer: (c) Odissi

The correct answer is Odissi.

Key Points

• Padma Shri awardee Guru Gangadhar Pradhan

• Guru Gangadhar Pradhan was an eminent Odissi exponent, choreographer, and teacher.

• He founded both the prestigious Orissa Dance Academy as well as Konark Natya Mandap.

• He was a member of the Central Sangeet Natak Akademi.

• He served as the President of the Odissa Sangeet Natak Akademi.

• Guruji was awarded the Sanjukta Panigrahi Memorial National Award (2002).

• He was awarded the Sanskruti Bharatee Award from the National Council of Asian Indian Associations (2002).

• Guruji was awarded the Sangeet Natak Akademi Award in 1998.

• He was awarded the Padma Shri in 2008 which is India's fourth highest civilian award.

Additional Information

• List of Padma Shri awardees in 2022

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• Durga Bai Vyam was honored for her outstanding work in art.
• Kaajee Singh 'Vidyaarthee' was accorded in the art field for his work towards the promotion of cultural music.
• Konsam Ibomcha Singh was honored for his distinguished work in preserving the century-old art of doll making.
• Filmmaker Chandraprakash Dwivedi was awarded for his work in television.
• Khalil Dhantejvi was honored for championing the ascent of the Gujarati language in Ghazal literature.
• Dr. Shyamamani Devi was honored for contributing to the systematic development of Odishi music.
• Pandit S Ballesh Bhajanti was awarded for carrying forward the legacy of Benares Gharana style.

Q82. Answer: (d) Nagai R Muralidharan

The correct answer is Nagai R Muralidharan.

Key Points

• Nagai Anoushka Shankar Muralidharan
• Nagai Muralidharan is a Carnatic violinist from India.
• He is a top-ranking violin artist, who is sought by leading lights of Carnatic music.
• In 1985, he performed 26 hours non-stop marathon violin concert held at Sri Rangam Temple at Tamil Nadu.
• He was awarded several awards.
• Kalaimamani by the State Government of Tamil Nadu in 2003.
• Sahrudaya Seva Rathna – Shi-Ba Sangeetha Sabha Chennai (2009)
• Vani Kala Sudhakra – Sri Thyaga Brahma Gana Sabha (2010)
• Sangeet Natak Academi Award – Government of India (2010)
• Sangeetha Rathnakara - Bhairavi Fine Arts, Cleveland, Ohio, USA (2015)

Additional Information

• Sajjad Hussain
• Sajjad Hussain was an Indian film score composer.
• He was also an accomplished mandolinist, playing the mandolin as a "Top Grade" player for the Indian film industry.
• He is reputed to have played more than 22,000 songs.
• He was known to play Indian classical music as well as Arabic music and Sufi music.
• Anoushka Shankar
• Anoushka Shankar is a British-Indian-American sitar player, producer, film composer and activist.
• She was the youngest and first woman to receive a British House of Commons Shield.
• She has had 7 Grammy Awards nominations.
• She performs across multiple genres and styles - classical and contemporary, acoustic and electronic.
• Krishna R Chaudhary
• Sri Krishna Ram Choudhary is a popular and excellent Shehnai Player.
• He has received wide acclaim for truly representing pure Hindustani Classical and Semi-Classical Music.
• He was awarded Padma Shri by the President of India in the year 2017.

Q83. Answer: (b) zero primary deficit

The correct answer is zero primary deficit.

Key Points

• Zero primary deficit
• Zero primary deficit means the government resorts to borrowing only to clear the existing backlog of interest payments.
• It is not adding to the existing loans for any purpose other than meeting its existing obligations of interest payment.
• It is a sign of fiscal discipline or fiscal responsibility on the part of the government.
• A high primary deficit, on the other hand, reflects the fiscal irresponsibility of the government.

Additional Information

• Zero revenue deficit
• The shortfall of total revenue receipts compared to total revenue expenditure is defined as a revenue deficit.
• It is related to only revenue expenditure and revenue receipts of the government.
• It signifies that the government's own earnings are insufficient to meet the normal functioning of government departments.
• Revenue deficit results in borrowing.
• Zero fiscal deficit

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• A fiscal deficit is estimated as the difference between total expenditure and total receipts.
• The Gross fiscal deficit is also estimated as the sum total of borrowing from RBI.
• The fiscal deficit in the economy will be zero if there is no provision for borrowings in the budget.
• Excess budget deficit
• A budget deficit occurs when expenses exceed revenue.
• The government generally uses the term budget deficit when referring to spending rather than businesses or individuals.
• Countries can counter budget deficits by raising taxes and cutting spending.

Q84. Answer: (a) Football

The correct answer is Football.

Key Points

• A header is a technique that is used in association football to control the ball using the head to pass, shoot or clear.
• This can be done by standing, jumping, or diving position.
• The header is a common technique and is used by players in almost every match.
• A forward uses a header to score a goal.
• A defender uses a header to prevent the scoring of a goal by the opponent.
• A header is the only option when the ball is in the air, because of the rule that a player can't make contact with the ball using their hands.
• Most header goals are scored as a result of a cross or a corner.
• Tim Cahill, Marco van Basten, and Cristiano Ronaldo are some players who are notable for their quality headers.

Additional Information

• The aim of football is to score more goals than the opponent in a 90-minute playing time frame.
• The match is split up into two halves of 45 minutes.
• After the first 45 minutes, players will take a 15-minute rest period called half time.
• The second 45 minutes will resume.
• Two teams of eleven players each compete to get the ball into the other team's goal.
• The team that has scored more goals at the end of the game is the winner.
• If both teams have scored an equal number of goals then the game is a draw.

Q85. Answer: (b) Rectilinear motion - A stone thrown up in the air at an angle

The correct answer is Rectilinear motion - A stone thrown up in the air at an angle.

Key Points

• Rectilinear motion
• A linear motion in which the direction of the velocity remains constant and the path is a straight line.
• Following are the rectilinear motion examples:
• The use of elevators in public places
• The motion of planes in the sky
• There are three types of rectilinear motion:
• Rectilinear movement with non-uniform acceleration
• Uniformly accelerated rectilinear motion
• Uniform rectilinear motion

Additional Information

• Periodic motion
• Periodic motion is a motion repeated in equal intervals of time.
• Examples are:
• A rocking chair
• A bouncing ball
• Earth rotating on its axis
• Rotational motion
• Rotational motion can be defined as the motion of an object around a circular path, in a fixed orbit.
• Examples are:
• A spinning wheel.

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• Blades of a windmill
• Oscillatory motion
• Oscillatory motion is defined as the to and fro motion of an object from its mean position.
• An example is: Movement of a spring.

Q86. Answer: (a) Shashi Tharoor

The correct answer is Shashi Tharoor.

Key Points

• The Great Indian Novel is a satirical novel by Shashi Tharoor.
• It is first published by Viking Press in 1989.
• It is a fictional work that takes the story of the Mahabharata, the Indian epic.
• Figures from Indian history are transformed into characters from mythology, and the mythical story of India is retold as a history of Indian independence.
• The work includes numerous puns and allusions to famous works about India.
• The phrase "great Indian novel" is an allusion to the long-standing idea of the "Great American Novel".

Additional Information

• Shashi Tharoor is an Indian former international diplomat, politician, writer and public intellectual.
• He has been serving as a Member of Parliament for Thiruvananthapuram, Kerala, since 2009.
• He was formerly Under-Secretary-General of the United Nations and ran for the post of Secretary-General in 2006.
• He also serves as Chairman of the Parliamentary Standing Committee on Information Technology and All India Professionals Congress.
• He formerly served as Chairman of the Parliamentary Standing Committee on External Affairs.

Q87. Answer: (b) Group 9

The correct answer is Group 9.

Key Points

• Group 9
• Group 9 is a group of chemical elements in the periodic table.
• Members are cobalt, rhodium, iridium and meitnerium.
• These are all transition metals in the d-block.
• All the elements in Period 9 are speculative; except for Ust and Usq.
• Cobalt was first discovered in 1735 by George Brandt in Stockholm Sweden.
• It is used in many places today, such as magnets materials, paint pigments, glasses, and even cancer therapy.
• The word cobalt is from the German word kobold, which means "goblin" or "evil spirit".

Additional Information

• Group 6
• This period contains the lanthanides, also known as the rare earths.
• Many lanthanides are known for their magnetic properties, such as neodymium.
• Many group 6 transition metals are very valuable, such as gold.
• However group 6 other metals are incredibly toxic, such as thallium.
• Group 5
• Group 5A (or VA) of the periodic table are the pnictogens.
• The nonmetals nitrogen (N), and phosphorus (P), the metalloids arsenic (As) and antimony (Sb), and the metal bismuth (Bi).
• Compounds made from elements in Group 5 of the periodic table can help athletes increase endurance and build muscle.
• They're involved in making chemical weapons used in war.
• Group 7
• The elements in group 7 are d block elements.
• The three common Group 7 elements are They are manganese (Mn), technetium (Tc), rhenium (Re), and bohrium (Bh)
• Group 7 elements are also called transition metals as they come under d block elements.

Q88. Answer: (a) Ural mountain in Russia

The correct answer is Ural mountain in Russia.

Key Points

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• The Urals are among the world's oldest extant mountain ranges.

• For its age of 250 to 300 million years, the elevation of the mountains is unusually high.

• They are formed as a result of the compression of tectonic plates, leading to the formation of large fold-like structures on the Earth's crust.

• They formed during the Uralian orogeny.

• The formation occurred due to the collision of the eastern edge of the supercontinent Laurasia with the young and rheologically weak continent of Kazakhstania.

Additional Information

• They have rich resources, including metal ores, coal, and precious and semi-precious stones.

• It contains more than 1,000 different types of valuable minerals.

• Since the 18th century, the mountains have contributed significantly to the mineral sector of the Russian economy.

• The region is one of the largest producers of metallurgy and heavy industry production in the country.

• The Urals are divided, from north to south, into the Polar (or Arctic), Nether-Polar (or Sub-Arctic), Northern, Central and Southern parts.

Q89. Answer: (c) Bharatanatyam

The correct answer is Bharatanatyam.

Key Points

• B. Herambanathan is a Bharatanatyam artist and dance director.

• He founded "Thanjavur Bhavupillai Bharatanatyam School" in Thanjavur.

• He composed dance dramas like Shakunthalam in Marathi, Rukmini Kalyanam in Telugu, Harishchandra, Andal Kalyanam in Tamil.

• He has written articles on many subjects like Bharatanatyam, Bhagavata Melam, Rasapandaram, Thanjavur dance tradition.

• He runs Thanjavur Heritage Arts and Cultural Academy.

• Tamil Isai Sangam awarded him titles like "Natyakalai Arasu", "Nattuva Mamani".

• Tamil Aiyal Isai Nataka Manram honored him with theKalaimamaniaward.

• He was awarded with Sangeet Natak Akademi Award in Bharatanatyam in 2013.

Additional Information

• Bharatanatyam is a major form of Indian classical dance that originated in Tamil Nadu.

• The dance form is also briefly mentioned in Kannada text Manasollasa written by Someshwara III.

• It has flourished in the temples and courts of southern India since ancient times.

• It is one of the eight widely recognized Indian classical dance forms.

• Savitha Sastry is an Indian dancer and choreographer best known as an exponent of Bharatanatyam.

Q90. Answer: (c) Article 129

The correct answer is Article 129.

Key Points

• Article 129

• Article 129 of the Indian Constitution empowers the Supreme Court to be a court of record.

• The Supreme Court shall have all the powers of such a court, including the power to punish for contempt of itself.

• Court of Record is defined as

• a court whereof the acts and judicial proceedings are enrolled for a perpetual memorial and testimony

• which has the power to fine and imprison for contempt of its authority

• Contempt of court signifies not only a willful disregard or disobedience of its orders, but such conduct as tends to bring the authority of the court.

Additional Information

• Article 135 was included in the Constitution to enable the Supreme Court to exercise jurisdiction in cases.

• Article 126 Appointment of acting Chief Justice – Constitution Of India

• When the office of Chief Justice of India is vacant, the duties of the office shall be performed by such one of the other Judges of the Court as the President may appoint for the purpose.

• The purpose behind Article 131 of the Indian Constitution is to uphold the spirit of cooperative federalism between the organs of the government.

• Under this Article, the Supreme Court has the original jurisdiction to adjudicate upon the matters of dispute between the states or between the center and state.

Q91. Answer: (b) Bansuri

The correct option is Bansuri.

Key Points

• Hariprasad Chaurasia was born on 1 July 1938. He is an Indian music director and classical flautist, who plays the Bansuri in the Hindustani classical tradition.

• He was born in Pryagraj, Uttar Pradesh.

• The 2013 documentary film Bansuri Guru features the life and legacy of Chaurasia.

• He won Gansamradni Lata Mangeshkar Award - 2021-22, Padma Bhushan(1992), Padma Vibhushan(2000) etc.

• Official Biography 'Breath of Gold' by Sathya Saran- 2019 and 'Bansuri Samrat: Hariprasad Chaurasia' by Surjit Singh are some of the biographies of Chaurasia.

Additional Information

• Some major albums released by Hariprasad Chaurasia:

• Pt. Hariprasad Chaurasia - Flute, 1981.

• Morning to Midnight Ragas - Morning Ragas, 1987.

• Call of the Valley, 1988.

• Flute Deity Hariprasad Chaurasia and Sounds of Silence, 2003.

• Ajanma - Hariprasad Chaurasia, 2015.

• Bismillah Khan (21 March 1916 – 21 August 2006), often referred to by the title Ustad, was an Indian musician associated with the instrument Shehnai.

• Amjad Ali Khan is a famous Indian musician associated with the instrument Sarod.

• Zakkir Hussain, is a famous Indian musician associated with Tabla.

Q92. Answer: (d) Ministry of Law and Justice

The correct option is Ministry of Law and Justice.

Key Points

• Kiren Rijiju is an Indian politician from Arunachal Pradesh.

• Rijiju was born on 19 November 1971 at Nakhu, Arunachal Pradesh.

• In July 2021, he was appointed as minister of Law and Justice in the cabinet of ministers.

• In his political career he had worked as:

• Minister of State for Youth Affairs and Sports from 30 May 2019 – 7 July 2021.

• Minister of State for Minority Affairs from 30 May 2019 – 7 July 2021.

• Minister of State for Home Affairs from 26 May 2014 – 30 May 2019.

• Member of Parliament, Lok Sabha.

Additional Information

• Shri Jyotiraditya M. Scindia serves as the minister of Civil Aviation.

• Sarbanada Sonowal Ji serves as the minister of Ports and Shipping.

• Ashwini Vaishnaw serves as the Cabinet Minister of Communication and Electronics and Information Technology.

Q93. Answer: (b) Droplet infection

The correct option is Droplet Infection.

Key Points

• Tuberculosis (TB) is an infectious disease usually caused by the Bacterium Mycobacterium tuberculosis.

• Robert Koch received Nobel Prize in Physiology or Medicine in 1905 for the discover of the bacteria causing TB.

• The only available vaccine as of 2021 is Bacillus Calmette-Guérin commonly known as BCG.

• Intradermal MVA85A vaccine in addition to BCG injection is not effective in preventing tuberculosis.

• The World Health Organization (WHO) declared TB a "global health emergency" in 1993.

Additional Information

• TB is an airborne disease (diseases that spread through air). Another example of such disease is Covid-19.

• In 2020, an estimated 10 million people developed active TB, resulting in 1.5 million deaths, making TB the second leading cause of death from an infectious disease after COVID-19.

• More than 50% of cases being diagnosed in seven countries:

• India (27%)

• China (9%)

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• Indonesia (8%)
• Philippines (6%)
• Pakistan (6%)
• Nigeria (4%)
• Bangladesh (4%)
• Dr. Harshvardhan, Union Minister for Health and Family Welfare launched the new TB Harega Desh Jeetega Campaign.

Q94. Answer: (c) Michael Jackson

The correct option is Michael Jackson.

Key Points

• ‘Moon Walk’ is an autobiography of Michael Joseph Jackson.
• He was born on August 29, 1958 died on June 25, 2009.
• Jackson was an American singer, songwriter, dancer, and philanthropist.
• He is known as "The King of Pop" and regarded as one of the most significant cultural figures of the 20th century.
• Some honors given to Jackson includes:
• "Presidential Public Safety Commendation" award by Ronald Reagan in 1984.
• "Artist of the Decade" by George H. W. Bush in 1990.
• "Point of Light Ambassador" by Bush in 1992.
• The RIAA regards him as the biggest-selling music artist of all time worldwide.
• Jackson has 13 Grammy Awards, Grammy Legend Award, Grammy Legend Award and many more awards.
• In 2021, he was among the inaugural inductees into the Black Music & Entertainment Walk of Fame.

Additional Information

• Oscar Wilde
• Oscar Fingal O'Flahertie Wills Wilde was an Irish poet and playwright.
• Oscar Wilde: His Life and Confessions (1916) was one his biographies written by Frank Harris.
• Marlon Brando
• He as an American actor born on April 3, 1924 and died on July 1, 2004.
• He won many awards including two Golden Globe Awards and two Academy Awards and three British Academy Film Awards.
• "The Godfather" is one of his remarkable work in film industry.
• Anne Frank
• Annelies Marie "Anne" Frank, was a German-Dutch diarist of Jewish heritage.
• "The Story of a Young Girl" was her diary which gained popularity after her death.

Q95. Answer: (b) Jayaprabha Menon

The correct option is Jayaprabha Menon.

Key Points

• Jayaprabha Menon is one of the most accomplished dancers of Mohiniattam from Kerala.
• Jayaprabha Menon is a disciple of guru Bharathi Shivaji.
• Mohiniyattam, is an Indian classical dance form of Kerala.
• Mohiniyattam includes music in the Carnatic style, singing and acting a play through the dance.
• Sunanda Nair,Kalamandalam Kalyanikutty Amma, Pallavi Krishnan, Gopika Varma some famous personalities related to Mohiniattam.

Additional Information

• Yamini Krishnamurthy
• She is related to Bharatnattyam.
• She had been awarded by Padma Bhushan Award in 2001 and Sangeet Natak Akademi Award.
• Prerana Shrimali
• She is a senior dancer of Jaipur Gharana of Kathak
• Shrimali has been awarded the Rajasthan Sangeet Natak Akademi Award and the Rashtriya Ekta Award.
• Vyjayanthi Kashi
• Vyjayanthi Kashi is an Indian classical Kuchipudi dancer.
• She is the present member of Central Sangeet Natak Akademi.

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Q96. Answer: (b) A shot at History

The correct option is A shot at History.

Key Points

• Abhinav Apjit Bindra is an Indian Olympic gold medallist, retired sports shooter, and businessman.

• He is the first Indian to win an Individual Olympic Gold Medal in the 2008 Summer Olympics.

• He is the recipient of the Padma Bhushan from the Government of India and is one of the top influencers of sports policy in the country.

• In 2018, Abhinav was bestowed with the prestigious Blue Cross, the ISSF's highest honor.

• In the 2016 Summer Olympics in Rio de Janeiro, Bindra finished fourth in the finals of the 10-meter air rifle event.

• On September 5, 2016, he announced his retirement.

Additional Information

• Courage and Conviction

• It is an autobiographical book by Indian General Vijay Kumar Singh written with Shiv Kunal Verma.

• It was first published by Aleph Book Company in 2013.

• All from Memory

• This autobiography is by a Senior - Advocate Acharya B.V, with more than 57 years of practice at the Bar.

• The Book part from recalling his childhood and student days provides a glimpse of life in his early days where there was poverty, illiteracy, and backwardness in all spheres.

• The Autobiography

• This is the autobiography of Bertrand Russel.

• He was a British philosopher, logician, and public intellectual

Q97. Answer: (d) Italy

The correct option is Italy.

Key Points

• The first Winter Olympic Games, the 1924 Winter Olympics, were held in Chamonix, France.

• The Games were held every four years from 1924 to 1936, interrupted in 1940 and 1944 by World War II, and resumed in 1948.

• Five main sports Bobsleigh, Curling, Ice Hockey, Nordic skiing, and Skating are played in Winter Olympics.

• The 2026 Winter Olympics will be hosted by Italy.

• The Winter Olympic Games have been hosted on three continents by thirteen countries.

• The USA has hosted the Winter Olympics four times in 1932, 1960, 1980, and 2002.

Additional Information

• Baron Pierre de Coubertin founded the International Olympic Committee (IOC) in 1894.

• The first modern Summer Olympic Games were held in Athens, Greece in 1896.

• The ancient Olympic Games were held in Olympia, Greece, from the 8th century BC to the 4th century AD.

• Japan was the host nation of the 2020 Summer Olympics in Tokyo,

• The Summer Olympics 2024 is organized in Paris.

• The last Summer Olympics was organized in Tokyo, Japan.

• Organizers of the 2024 Paris Olympics unveiled “Games Wide Open” as their official slogan on 25 July 2022.

• Having previously hosted in 1900 and 1924, Paris will be hosting the Summer Olympics third time in 2024.

• The 2024 Summer Olympics are scheduled to take place from July 26 to August 11, 2024.

• Athletes will compete in a total of 329 events in 32 sports.

• Norway was at the top in the medal tally in the 2022 Winter Olympics.

Q98. Answer: (d) 2022

The correct option is 2022.

Key Points

• Rashid Khan was born on 1 July 1968 in Badayun, Uttar Pradesh.

• He is an Indian classical musician in the Hindustani music tradition and belongs to the Rampur-Sahaswan gharana.

• He was awarded the Padma Shri, as well as the Sangeet Natak Akademi Award in 2006.

• In 2022, he was awarded the Padma Bhushan Award, India's third highest civilian award, in the field of Art.

• He also won Global Indian Music Academy Awards (GIMA) in 2010 and Maha Sangeet Samman Award in 2012.

Additional Information

• List of various awards given in the field of music:
• Harivarasanam Award
• Kalidas Samman
• Lata Mangeshkar Award
• Kumar Gandharva Samman
• Mirchi Music Awards
• MTV Immies
• Tagore Ratna and Tagore Puraskar
• Sanatan Sangeet Sanskriti
• Swaralaya Kairali Yesudas Award etc.

Q99. Answer: (d) Kelucharan Mohapatra

The correct option is Kelucharan Mohapatra.

Key Points

• Kelucharan Mohapatra was a legendary Indian classical dancer, guru, and exponent of Odissi dance.
• He was born on 8 January 1926 and died on 7 April 2004.
• He was the first person to receive the Padma Vibhushan from Odisha.
• Kelucharan Mohapatra along with his wife, Laxmipriya Mohapatra, and their son Ratikant Mohapatra built SRJAN in 1993.
• Kelucharan Mohapatra received many awards including Sangeet Natak Akademi Award (1966), Padma Shri (1974), and Padma Bhushan(1988).

Additional Information

Indian Classic Dances	States
Bharatanatyam	Tamil Nadu
Kathak	North India
Kathakali	Kerala
Kuchipudi	Andhra Pradesh
Manipuri	Manipur
Mohiniyattam	Kerala
Odissi	Odisha
Sattriya	Assam

Q100. Answer: (b) Ghaggar and Teesta

The correct answer is Ghaggar and Teesta.

Key Points

• The Ganga Plain which lies between Ghaggar and Teesta rivers is characterized by quaternary alluvia with combinations of clay, silt, sand, and gravel.
• The states, of Haryana, Delhi, UP, Bihar, part of Jharkhand, and West Bengal lie in the Ganga plains.
• This plain covers most of the part of Northern Plains.
• The Ganga plain stretches from Delhi to Kolkata covering about 3.7 lakh sq km.
• The peninsular rivers like Ken, Chambal, Betwa, Son, etc. joining the Ganga river system contributed to the formation of this plain.

Additional Information

• India is divided into six main parts that are The Great Mountain Range, Northern Plains, Desert Region, Peninsular Plateaus, Coastal Plains, and Island group.
• The total geographical area of India is 3.28 million square km.
• The longest river in India is Ganga which is 2,525 km long.
• India has the 18th largest Exclusive Economic Zone of 2,305,143 km2 (890,021 sq mi).
• India has 7,516 km long coastline. Canada has the longest coastline in the world.

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