# SSC CHSL Tier-1 2021: Official Paper (Held On : 8 June 2022 Shift 2) (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 synonym of the given word.

Deception

**(a)** Cruelty
**(b)** Cunning
**(c)** Reliability
**(d)** Exception

**Q2.** Select the most appropriate ANTONYM of the given word.

Frivolous

**(a)** Popular
**(b)** Reputed
**(c)** Nervous
**(d)** Serious

**Q3.** Select the option that will improve the underlined part of the given sentence.

Don’t provoke Harsha, otherwise, she will give you a slap.

**(a)** Do not vacillate Harsha
**(b)** Do not exasperate Harsha
**(c)** Do not hesitate Harsha
**(d)** Do not equivocate Harsha

**Q4.** Select the most appropriate option to fill in the blank.

We're asking them to _____ the deadline.

**(a)** increase
**(b)** enlarge
**(c)** broaden
**(d)** extend

**Q5.** Select the most appropriate ANTONYM of the highlighted word.

His action doesn’t warrant such a punishment.

**(a)** triumph
**(b)** support
**(c)** captivate
**(d)** breach

**Q6.** Select the sentence which has no spelling error.

**(a)** When Reema saw her mother, she was in ecstasy.
**(b)** Students got in acstasy during inter college baseball match.
**(c)** Sandeep was in ektasy when his son won a scholarship.

**(d)** My cousin closed his eyes in extasy at the thought of coffee.

**Q7.** Select the option that can be used as a one-word substitute for the given group of words.

One who makes an active effort to promote human welfare

**(a)** Philanthropist
**(b)** Philosopher
**(c)** Philanderer
**(d)** Physicist

**Q8.** Select the option that expresses the given sentence in passive voice.

I am training a new batch of officers now.

**(a)** A new batch of officers are trained now.
**(b)** A new batch of officers were being trained by me now.
**(c)** A new batch of officers are training me now.
**(d)** A new batch of officers is being trained by me.

**Q9.** 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'. We are waiting for the minister for the last two hours.

**(a)** We have been waiting
**(b)** No substitution required
**(c)** We were waiting
**(d)** We would be waiting

**Q10.** Select the option that expresses the given sentence in passive voice.

Teachers love their students.

**(a)** Students are being loved by their teachers.
**(b)** Students are loved by their teachers.
**(c)** Students have been loved by their teachers
**(d)** Students will be loved by their teachers.

**Q11.** Select the most appropriate synonym of the given word.

Benign

**(a)** Beneficiary
**(b)** Boisterous
**(c)** Benevolent
**(d)** Boring

**Q12.** Select the option that will improve the underlined part of the given sentence.

I find playing chess to be difficult than playing poker.

**(a)** to be more difficult
**(b)** to be lesser difficult
**(c)** to be most difficult
**(d)** to be same difficult

**Q13.** Select the most appropriate meaning of the given idiom.

In your birthday suit

**(a)** Not wearing any clothes
**(b)** A suit which covers one's entire body
**(c)** Birthday celebrations
**(d)** A suit which is designed for only birthday functions

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**Q14.** Select the option that can be used as a one-word substitute for the given group of words.

A person who loves and collects books

**(a)** Booker
**(b)** Bibliophile
**(c)** Bookworm
**(d)** Biographer

**Q15.** Select the most appropriate meaning of the highlighted idiom.

The coach was trying to twist the player's arm by asking him to practice throughout the day.

**(a)** To try to force someone to do something
**(b)** To refrain from resting
**(c)** To train someone in warfare
**(d)** To console the weak

**Q16.** Select the option that expresses the given sentence in passive voice.

I need to evaluate all the options available by the end of this month.

**(a)** All the options available will be needed to evaluate by the end of this month.
**(b)** I needed to evaluate all the options by the end of this month.
**(c)** All the options will be needing evaluation with the end of this month.
**(d)** All the options available need to be evaluated by me by the end of this month.

**Q17.** Select the most appropriate ANTONYM of the given word.

Fanatic

**(a)** Extremist
**(b)** Tolerant
**(c)** Lunatic
**(d)** Fantastic

**Q18.** Select the INCORRECTLY spelt word.

**(a)** Occesion
**(b)** Humorous
**(c)** Mysterious
**(d)** Scissors

**Q19.** Select the most appropriate meaning of the given idiom.

Cast aside

**(a)** To blow up
**(b)** To bear with
**(c)** To display
**(d)** To reject

**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. People post images of their cuisine, daily cosmetic routines, shopping videos, and dance videos.

B. Uploading photos to social networking sites has grown popular in today's society.

C. Because of the rising influence of social media on people, they want to constantly appear their best.

D. Therefore people have become more image sensors and begun to prioritise personal care.

**(a)** ABCD
**(b)** BCAD
**(c)** ACBD
**(d)** BACD

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**Directions**

In the following passage, some words have been deleted. Read the passage carefully and select the most appropriate option to fill in each blank.

Conservation of water is not the (1)____ of only the government. Common citizens can also make a significant (2)__ in this field. To begin with, we must be conscious that water is life, that it is a precious natural resource and needs to be used (3)_. Being conscious will help us to avoid (4)__. There are a few simple things that all of us can do. We must not use (5)____ water to clean our car or house.

**Q21.** Select the most appropriate option to fill in blank number 5.

**(a)** sewage
**(b)** stored
**(c)** cold
**(d)** drinking

**Q22.** Select the most appropriate option to fill in blank number 4.

**(a)** extraction
**(b)** greed
**(c)** wastage
**(d)** storage

**Q23.** Select the most appropriate option to fill in blank number 3.

**(a)** effectively
**(b)** hopefully
**(c)** carelessly
**(d)** judiciously

**Q24.** Select the most appropriate option to fill in blank number 2.

**(a)** Summation
**(b)** Indication
**(c)** Connection
**(d)** Contribution

**Q25.** Select the most appropriate option to fill in blank number 1.

**(a)** Responsibility
**(b)** Facility
**(c)** Complexity
**(d)** Opportunity

## GENERAL INTELLIGENCE

**Q26.** Select the correct combination of mathematical signs to sequentially replace the * signs and balance the given equation.

57 * 35 * 7 * 14 * 2 * 71

**(a)** ×, +, ÷, –, =
**(b)** –, ÷, +, ×, =
**(c)** +, ÷, –, ×, =
**(d)** –, +, ×, ÷, =

**Q27.** 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)** 169 : 10
**(b)** 196 : 11
**(c)** 64 : 5
**(d)** 36 : 2

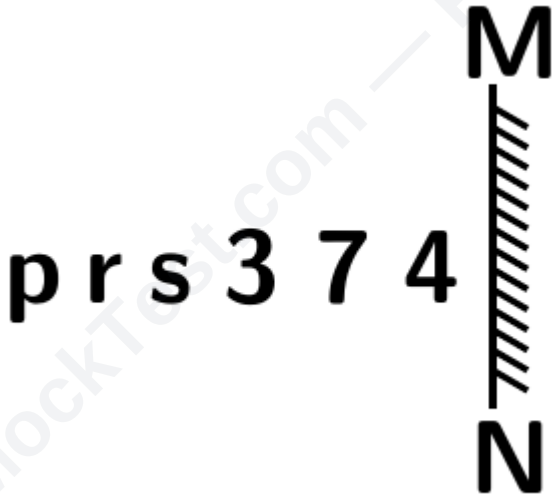
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**Q28.** Select the option that is related to the fifth term in the same way as the second term is related to the first term and the fourth term is related to the third term.

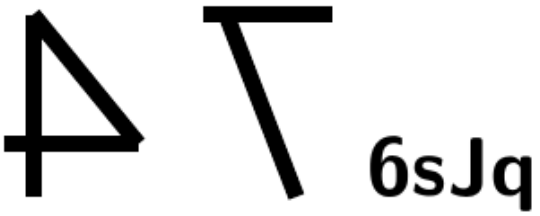
REMOVAL : MEROLAV :: TYPICAL : PYTILAC :: NUCLEAR : ?

**(a)** CUNRLAE
**(b)** CUNLREA
**(c)** CUNRAEL
**(d)** CUNLRAE

**Q29.** Select the correct mirror image of the given combination when the mirror is placed at MN as shown.




**(a)**




**(b)**

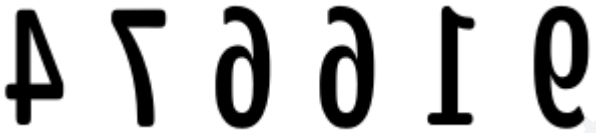


**(c)**

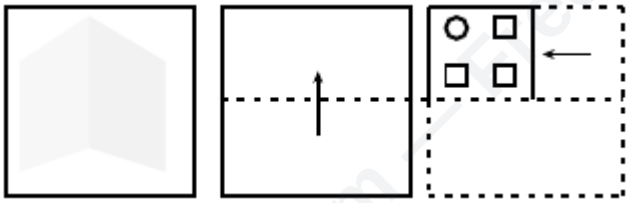


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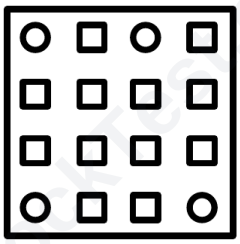
**(d)**



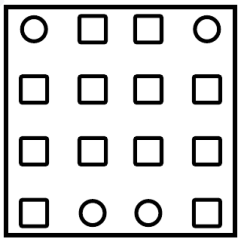
**Q30.** A paper is folded and cut as shown. How will it appear when unfolded ?



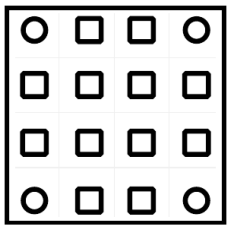
**(a)**



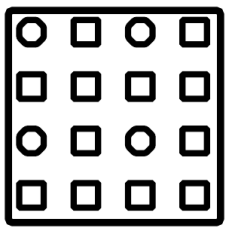
**(b)**



**(c)**

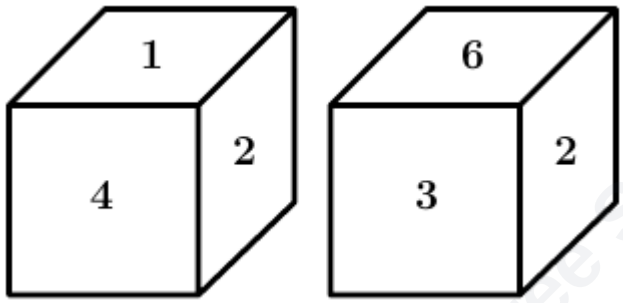


**(d)**



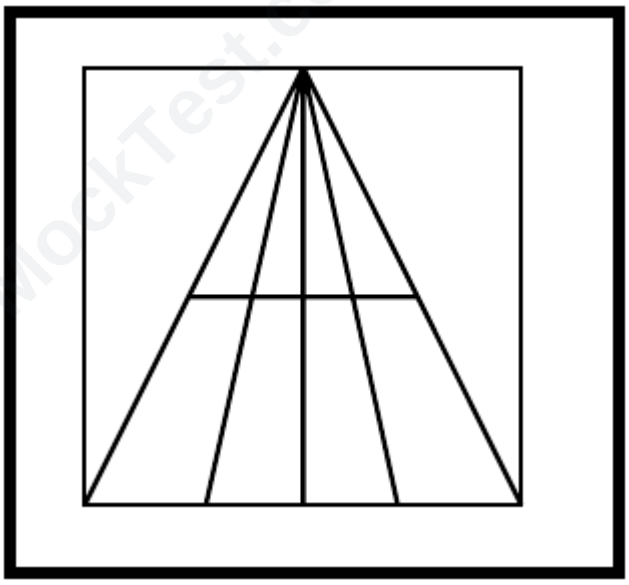
**Q31.** Two different positions of the same dice are shown, the six faces of which are numbered from 1 to 6. Select the number that will be the result of the sum of 2 and the number appearing opposite to '2'.

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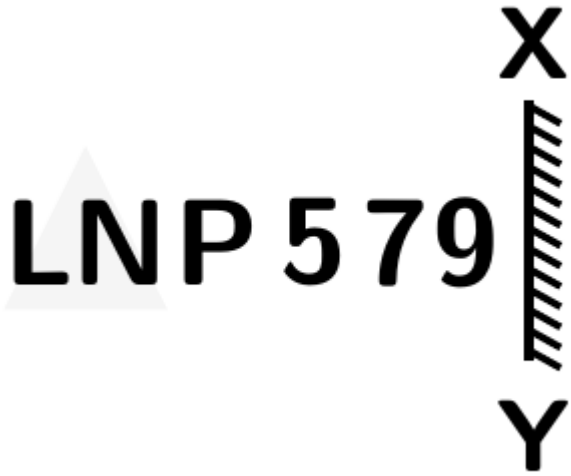

**(a)** 10
**(b)** 7
**(c)** 9
**(d)** 8

**Q32.** How many triangles are there in the given figure ?



**(a)** 19
**(b)** 20
**(c)** 21
**(d)** 22

**Q33.** Select the correct mirror image of the given combination when the mirror is placed at XY as shown.




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**(a)**



**(b)**



**(c)**



**(d)**



**Q34.** Select the option that represents the letters that, when placed from left to right in the given blanks, will complete the letter series.

J _ M K L J J _ K L J J _ K L _ J P _ L

**(a)** J N O J K
**(b)** J N J K O
**(c)** N J K J O
**(d)** N J J O K

**Q35.** Select the set in which the numbers are related in the same way as are the numbers of the following set.

(25,19,14)

(50, 28, 30)

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is NOT allowed)

**(a)** (41, 24, 36)
**(b)** (31, 20, 25)
**(c)** (24, 17, 21)
**(d)** (35, 22, 21)

**Q36.** If 1^(st) August 2009 was a Saturday, then what was the day of the week on 1^(st) August 2013?

**(a)** Saturday
**(b)** Thursday
**(c)** Friday
**(d)** Sunday

**Q37.** Which of the following numbers will replace the question mark (?) in the given series?

7, 19, 4, ?, 1, 25

**(a)** 15
**(b)** 22

**(c)** 18
**(d)** 21

**Q38.** In a certain code language, 'GREEN' is written as 'HTHIS' and 'SAFFRON' is written as 'TCIJWUU'. How will 'WHITE' be written in that language?
**(a)** XJLXJ
**(b)** XJLWJ
**(c)** XLLXJ
**(d)** XJLVJ

**Q39.** In a certain code language, 'I know you' is written as 'Ha Hi He', 'I like French' is written as 'Ho Hu Ha' and 'you like me' is written as 'He Ho Haa'. How will 'me' be written in that language?
**(a)** Haa
**(b)** Hu
**(c)** Ha
**(d)** Hi

**Q40.** Select the option that is related to the fifth number in the same way as the second number is related to the first number and the fourth number is related to the third number.
13 : 195 :: 7 : 63 :: 18 : ?
**(a)** 360
**(b)** 330
**(c)** 378
**(d)** 342

**Q41.** 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)** 9 : 125
**(b)** 11 : 49
**(c)** 13 : 343
**(d)** 7 : 64

**Q42.** If 15 August 2001 was Wednesday, then what was the day of the week on 2 October 2001?
**(a)** Sunday
**(b)** Monday
**(c)** Tuesday
**(d)** Wednesday

**Q43.** Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation.
16 * 2 * 4 * 8 * 10 * 30
**(a)** ÷, ×, +, –, =
**(b)** ÷, ×, –, +, =
**(c)** ×, ÷, –, +, =
**(d)** –, +, ×, ÷, =

**Q44.** 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 ices are blues.
No ice is yellow.
Some pinks are ices.
Conclusions:
I. Some yellows are blues.

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II. No pink is blue.

III. No yellow is blue.

**(a)** None of the conclusions follow.

**(b)** Both conclusions I and II follow.

**(c)** Both conclusions I and III follow.

**(d)** Only conclusion II follows.

**Q45.** Select the correct combination of mathematical signs to replace the * signs and to balance the given equation.

14 * 18 * 7 * 79 * 33

**(a)** +, ×, =, −

**(b)** +, −, =, ×

**(c)** =, ×, −, −

**(d)** −, =, ×, +

**Q46.** Select the correct combination of mathematical signs to sequentially replace the * signs and to balance the given equation

60 * 6 * 3 * 18 * 49 * 5

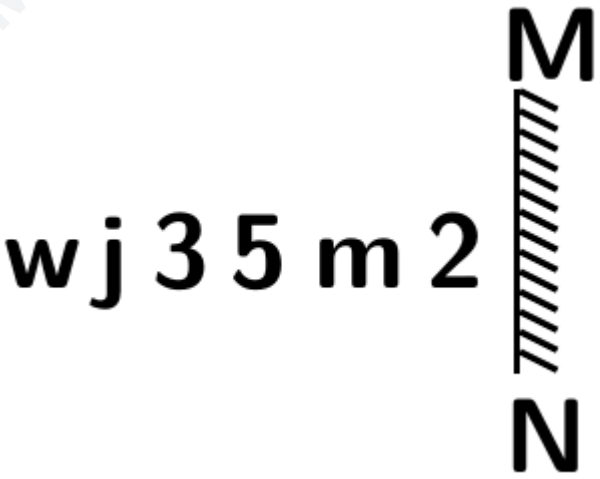
**(a)** ×, +, ÷, –, =

**(b)** ÷, +, –, ×, =

**(c)** ×, +, –, ÷, =

**(d)** ÷, –, ×, +, =

**Q47.** Select the correct mirror image of the given combination when the mirror is placed at MN as shown.




**(a)**




**(b)**



**(c)**



**(d)**



**Q48.** In a certain code language, 'PENCIL' is written as '1771771418' and 'ERASER' is written as '6204231024'. How will 'SHARPNER' be written in that language?

**(a)** 201042221201226
**(b)** 201042221201227
**(c)** 201042221201224
**(d)** 201042221201223

**Q49.** Which letter-cluster will replace the question mark (?) to complete the given series?

HSDA, IZQT, ?, KNQF, LUDY

**(a)** JUEW
**(b)** JGDM
**(c)** JKDS
**(d)** JBCR

**Q50.** Study the given pattern carefully and select the number that can replace the question mark (?) in it.

First row - 67, 25, 101

Second row - 55, 17, 97

Third row - 45, 19, ?

(NOTE : Operations should be performed on the whole numbers, without breaking down the numbers into its constituent digits. E.g. 13 – Operations on 13 such as adding /deleting /multiplying etc. to 13 can be performed. Breaking down 13 into 1 and 3 and then performing mathematical operations on 1 and 3 is not allowed)

**(a)** 67
**(b)** 72
**(c)** 92
**(d)** 59

## QUANTITATIVE APTITUDE

**Q51.** If $\sin\theta = 12/13$, $0 < \theta < 90°$, then $(\sin^2\theta - \cos^2\theta)/(2\sin\theta.\cos\theta) \times 1/(\tan^2\theta)$ = _____.

**(a)** 295/3456
**(b)** 590/3542
**(c)** 695/3542
**(d)** 595/3456

**Q52.** What is the value of the following expression ?

$2^2$ ((x^a)/(x^b))^((a+b)) × $3^2$ ((x^b)/(x^c))^((b+c)) × 6^(-2) ((x^c)/(x^a))^((a+c))

**(a)** 1
**(b)** 0
**(c)** 4
**(d)** 9

**Q53.** What value must be given to '*' to make 6347*25 exactly divisible by 11?

**(a)** 1
**(b)** 2
**(c)** 8
**(d)** 0

**Q54.** The average weight of each box in a consignment of 20 boxes of mangoes and 15 boxes of apples is 30 kg. If the average weight of a box of mangoes is 35 kg, then what is the average weight of a box of apples?

**(a)** 70/3 kg
**(b)** 75/2 kg
**(c)** 70/5 kg
**(d)** 26/5 kg

**Q55.** The average runs of a cricket player in 20 matches is 30. If the average of the first 12 matches is 40, find the average of the last 8 matches.

**(a)** 14
**(b)** 15
**(c)** 16
**(d)** 18

**Q56.** The following table shows the number of students of seven colleges participating in extra-curricular activities. Study the table and answer the question that follows.

| **Extra Curricular Activities** | **College** | | | | | | |
|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | |
| I | 150 | 250 | 450 | 50 | 350 | 250 | 150 |
| II | 50 | 150 | 150 | 50 | 50 | 50 | 50 |
| III | 100 | 50 | 400 | 125 | 100 | 500 | 150 |
| IV | 250 | 125 | 350 | 275 | 250 | 150 | 150 |

The colleges in which the minimum number of students participate in extra-curricular activities are :

**(a)** E and G
**(b)** A and E
**(c)** D and G
**(d)** B and D

**Q57.** If $x-1/x = 11$ and $x > 0$, what is the value of $(x^2-1/(x^2))$ ?

**(a)** $-11\sqrt{123}$
**(b)** $55\sqrt{5}$
**(c)** $11\sqrt{123}$
**(d)** $-55\sqrt{5}$

**Q58.** The ratio of the cost price to the marked price of an article is 4 : 7. A discount of 25% is given on the marked price and the shopkeeper made a profit of Rs. 50. Find the cost price of the article.

**(a)** Rs. 160
**(b)** Rs. 165
**(c)** Rs. 150
**(d)** Rs. 155

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**Q59.** A shopkeeper claims that he is selling rice at Rs.27/kg which cost him Rs.30/kg, but he gives 750 grams instead of 1000 grams. What is his profit or loss percentage?

**(a)** 10% loss
**(b)** 7.5% profit
**(c)** 2.5 %loss
**(d)** 20% profit

**Q60.** Two trains having lengths of 230 m and 240 m are 130 m apart. They start moving towards each other on parallel tracks, at speeds of 160 km/h and 200 km/h, respectively. In how much time will the trains cross each other?

**(a)** 5 sec
**(b)** 6 sec
**(c)** 8 sec
**(d)** 7 sec

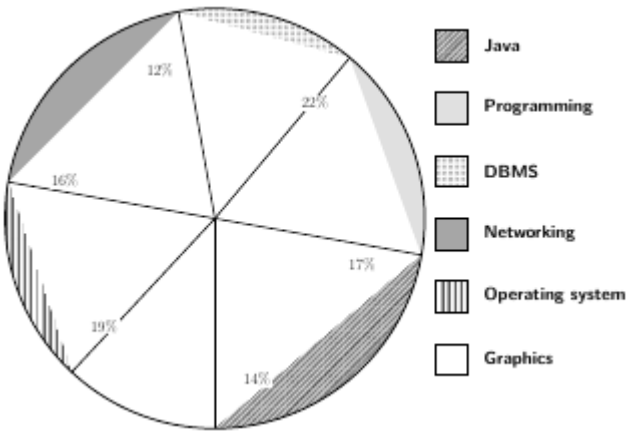
**Q61.** 40% of the cost price of an article is equal to 30% of its selling price. The approximate percentage of profit or loss on the cost price is:

**(a)** 44.44% profit
**(b)** 42.22% loss
**(c)** 35.55% loss
**(d)** 33.33% profit

**Q62.** Find the radius of the circle $x^2 + y^2 - 4x + 6y = 12$.

**(a)** 4 cm
**(b)** 3 cm
**(c)** 5 cm
**(d)** 2 cm

**Q63.** The pie chart shows the percentage-wise break up of students in terms of specialisation in Engineering.
Total number of students = 8000




What is the total number of students having specialisation in Operating System, Java and DBMS ?

**(a)** 4640
**(b)** 5260
**(c)** 4008
**(d)** 4160

**Q64.** In what time will Rs. 3,90,625 amount to Rs. 4,56,976 at 8 % per annum, interest being compounded half-yearly?

**(a)** 2 years
**(b)** 11/2 years
**(c)** 21/2 years
**(d)** 1 year

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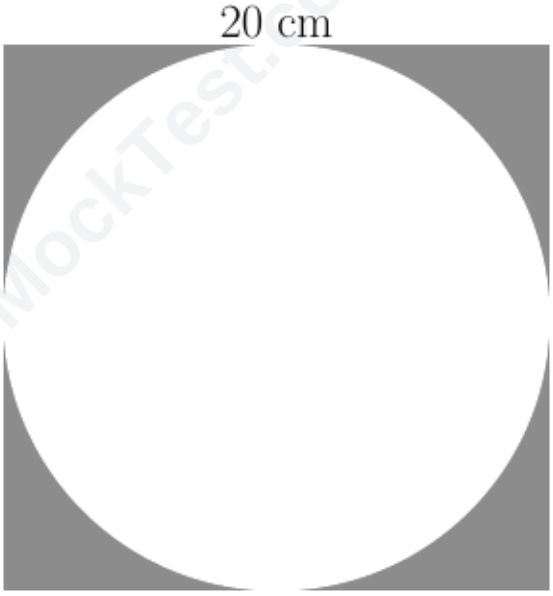
**Q65.** Find the compound interest on Rs. 1,60,000 at 10% per annum for 2 years if the interest is compounded half-yearly.

**(a)** Rs. 32,282
**(b)** Rs. 34,481
**(c)** Rs. 33,458
**(d)** Rs. 35,550

**Q66.** A, B and C can do a work in 5 days,6 days and 10 days, respectively. Working together, in how many days will they finish the same work?

**(a)** 21/7
**(b)** 41/7
**(c)** 31/7
**(d)** 11/7

**Q67.** Each edge of the following square is 20 cm long, and a circle is inscribed in the square as shown. What is the area of the shaded region? [Use π = 3.14.]




**(a)** 88 $cm^2$
**(b)** 85 cm2
**(c)** 86 cm2
**(d)** 84 cm2

**Q68.** The diameter of the base of a right-circular cylinder is 12 cm and the height of the cylinder is 2.45 times the radius of its base. Find the volume of the cylinder. [Use π = 22/7]

**(a)** 1636.2 $cm^3$
**(b)** 1666.2 $cm^3$
**(c)** 1663.2 $cm^3$
**(d)** 1665.2 $cm^3$

**Q69.** If y varies directly with x, and y = 61 when x = 42, find y when x = 54 (consider integral value).

**(a)** 86
**(b)** 78
**(c)** 82
**(d)** 72

**Q70.** What is the area of an equilateral triangle whose each sides is 12 cm?

**(a)** $36\sqrt{3}$ $cm^2$
**(b)** $38\sqrt{3}$ $cm^2$
**(c)** $34\sqrt{3}$ $cm^2$

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**(d)** 40√3 cm²

**Q71.** Simplify the following expression.

$(17.46^2-4.46^2)/(17.46 + 4.46)$

**(a)** 13
**(b)** 17
**(c)** 21.92
**(d)** 4

**Q72.** The salaries of X, Y and Z are in the ratio 2 : 3 : 5. By what percentage is the salary of Z more than that of X?

**(a)** 100
**(b)** 200
**(c)** 120
**(d)** 150

**Q73.** The average of two numbers is 96. If 2 is added to the smaller number, the ratio between the numbers becomes 2 : 3. The smaller number is _____.

**(a)** 116.4
**(b)** 132.4
**(c)** 75.6
**(d)** 59.6

**Q74.** What is the value of [1/5 + {1/7 of (25/42 ÷ 35/6) -(4/7× 6/5 ÷ 54/63)} + 28/40]

**(a)** 403/3430
**(b)** 99/490
**(c)** 383/3430
**(d)** 393/3430

**Q75.** Study the given table carefully to answer the question that follows.

The following table gives the information about the population of five different cities in the year 2020.

| City | Total Population | % of Men | % of Women | % of Children |
|---|---|---|---|---|
| P | 46800 | 45% | 35% | 20% |
| Q | 45400 | 35% | 50% | 15% |
| R | 42000 | 48% | 42% | 10% |
| S | 39250 | 42% | 42% | 16% |
| T | 46200 | 40% | 45% | 15% |

The number of children in city S is:

**(a)** 6130
**(b)** 6820
**(c)** 6310
**(d)** 6280

## GENERAL AWARENESS

**Q76.** Which of the following is the debut novel of Indian novelist Chetan Bhagat, who received the Society Young Achievers Award and the Publisher's Recognition award for his works?

**(a)** The Three Mistakes of My Life
**(b)** Five Point Someone
**(c)** Revolution 2020
**(d)** What Young India Wants

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**Q77.** Identify the disease caused by a monkey bite.

**(a)** Malaria
**(b)** Typhoid
**(c)** Influenza
**(d)** Rabies

**Q78.** Which dancer was awarded in 1968 with a gold medal by the Mexican Government for her choreography for the Ballet Folklorico of Mexico?

**(a)** Sonal Mansingh
**(b)** Shovana Narayan
**(c)** Mrinalini Sarabhai
**(d)** Rukmani Arundale

**Q79.** Padma Bhushan awardee Vikku Vinayakaram is a _____ player.

**(a)** Pakhawaj
**(b)** Dholak
**(c)** Tabla
**(d)** Ghatam

**Q80.** Who among the following won Arjuna Award 2021 in athletics discipline?

**(a)** Satish Kumar
**(b)** Arpinder Singh
**(c)** Lakha Singh
**(d)** G S Sandhu

**Q81.** Which water body is the world's third largest ocean spread over an area of 70,560,000 km² on the earth's surface?

**(a)** Atlantic Ocean
**(b)** Pacific Ocean
**(c)** Southern Ocean
**(d)** Indian Ocean

**Q82.** Microfinance Institutions Network (MFIN) and Sa-Dhan along with FIDC (Finance Industry Development Council) have jointly launched the _____ for the micro credit industry in the year 2019.

**(a)** Industry Codes and Principles
**(b)** Code for Responsible Lending
**(c)** Micro Finance Code
**(d)** Code for Micro Lending

**Q83.** Ustad Zakir Hussain is the son of _____, an Indian tabla player.

**(a)** Amjad Ali Khan
**(b)** Imrat Khan
**(c)** Fayaz Khan
**(d)** Ustad Alla Rakha

**Q84.** Malaria is a deadly disease caused by parasites that are transmitted to people through the bite of _____.

**(a)** Anopheles mosquito
**(b)** Culex mosquito
**(c)** Aedes mosquito
**(d)** fleas

**Q85.** Who won Major Dhyan Chand Khel Ratna Award 2021 in football?

**(a)** Gurpreet Singh Sandhu
**(b)** Subrata Pal
**(c)** Bhaichung Bhutia
**(d)** Sunil Chhetri

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**Q86.** Which ministry launched the ‘Start-up India Seed Fund Scheme?

**(a)** Ministry of Commerce and Industry
**(b)** Ministry of Finance
**(c)** Ministry of Skill Development and Entrepreneurship
**(d)** Ministry of Textiles

**Q87.** Death Valley is a desert valley in the _____ that is the hottest and driest place with a world record highest air temperature of 134°F.

**(a)** Mojave Desert of California
**(b)** Atacama Desert of Chile
**(c)** Lut Desert of Iran
**(d)** Sahara Desert of Africa

**Q88.** Lakshmi Shankar was a Hindustani classical vocalist of the _____ Gharana.

**(a)** Gwalior
**(b)** Rangeela
**(c)** Kirana
**(d)** Patiala

**Q89.** Whose autobiography is titled ‘An Unsuitable Boy’?

**(a)** Sanjay Leela Bhansali
**(b)** Aditya Chopra
**(c)** Karan Johar
**(d)** Vikram Bhatt

**Q90.** Who among the following Indian classical musicians was known as ‘The Queen of Thumri’, who was bestowed the Padma Vibhushan in 2016 for her contribution to music?

**(a)** Girija Devi
**(b)** Shubha Mudgal
**(c)** Gayatri Sankaran
**(d)** Rita Dev

**Q91.** Who among the following is the author of the book ‘Narcopolis’?

**(a)** Jeet Thayil
**(b)** Shashi Tharoor
**(c)** David Davidar
**(d)** Anees Salim

**Q92.** Name a common ingredient made from the starchy part of corn kernels used as a thickening agent for gravies, marinades, sauces, soups and casseroles.

**(a)** Corn starch
**(b)** Gelatine
**(c)** Potato starch
**(d)** Pectin

**Q93.** The first linguistic state in India got established in:

**(a)** 1957
**(b)** 1951
**(c)** 1952
**(d)** 1953

**Q94.** Held in the month of _____, the Ellora Ajanta Dance Festival is an interface between the culture and history of India.

**(a)** April
**(b)** February

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**(c)** January
**(d)** March

**Q95.** What disease in adults means ‘soft bones’ that usually develops due to a deficiency of vitamin D (often from not getting enough sunlight), or less often, digestive or kidney disease?
**(a)** Osteopenia
**(b)** Osteomyelitis
**(c)** Osteomalacia
**(d)** Osteoporosis

**Q96.** Bala Saraswati was a prominent exponent of which classical dance form?
**(a)** Kuchipudi
**(b)** Bharatanatyam
**(c)** Odissi
**(d)** Mohiniyattam

**Q97.** The 7^(th) ICC T20 World Cup Cricket was jointly organised by _____.
**(a)** India and Sri Lanka
**(b)** India and Bangladesh
**(c)** UAE and Qatar
**(d)** UAE and Oman

**Q98.** In which of the following sports is 'Bishop' used?
**(a)** Snooker
**(b)** Baseball
**(c)** Billiards
**(d)** Chess

**Q99.** Padma Bhushan Kumudini Lakhia is a _____ dancer.
**(a)** Kathak
**(b)** Bharatanatyam
**(c)** Odissi
**(d)** Manipuri

**Q100.** Which mountain range is the source of Krishna River?
**(a)** Satpura Range
**(b)** Sahyadri Range
**(c)** Vindhya Range
**(d)** Eastern Ghats

## ANSWER KEY

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

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## SOLUTIONS

**Q1. Answer: (b) Cunning**

The solution is in Hindi. Read it online.

**Q2. Answer: (d) Serious**

The solution is in Hindi. Read it online.

**Q3. Answer: (b) Do not exasperate Harsha**

The solution is in Hindi. Read it online.

**Q4. Answer: (d) extend**

The solution is in Hindi. Read it online.

**Q5. Answer: (d) breach**

The solution is in Hindi. Read it online.

**Q6. Answer: (a) When Reema saw her mother, she was in ecstasy.**

The solution is When Reema saw her mother, she was in ecstasy.

Key Points

• The sentence which has no spelling error is " When Reema saw her mother, she was in ecstasy."

• Here in this sentence there is no spelling mistake and grammatically correct.

• The word ecstasy is defined as an overwhelming feeling of great happiness or joyful excitement.

• For example : "There was a look of ecstasy on her face."

• Therefore option 1 is the correct option.

Additional Information

• Let's discuss information about other options:

• In the second option the sentence contains a spelling mistake acstasy, the correct spelling is ecstasy.

• In the third option the sentence contains a spelling mistake ektasy, the correct spelling is ecstasy.

• In the fourth option the sentence contains a spelling mistake extasy, the correct spelling is ecstasy.

**Q7. Answer: (a) Philanthropist**

The solution is Philanthropist.

Key Points

• The option that can be used as a one-word substitute for " One who makes an active effort to promote human welfare." is Philanthropist.

• Philanthropist - A person who seeks to promote the welfare of others, especially by the generous donation of money to good causes.

• For example : "The trust was founded by an American philanthropist."

• Therefore option 1 is the correct option.

Additional Information

• Let's discuss information about other options :

• Philosopher - A person engaged or learned in philosophy, especially as an academic discipline.

• For example : " Sam was a philosopher."

• Philanderer - A man who readily or frequently enters into casual sexual relationships with women; a womanizer.

• For example : "He was known as a philanderer."

• Physicist - An expert in or student of physics.

• For example : "Ram choose to become a physicist."

**Q8. Answer: (d) A new batch of officers is being trained by me.**

The solution is A new batch of officers is being trained by me.

Key Points

• The option that expresses the " I am training a new batch of officers now." in passive voice is

• Passive voice - If the subject is having the action done to it, then the verb is called passive voice.

• Active voice : I am training a new batch of officers now.

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• Passive voice : A new batch of officers is being trained by me.

• Therefore option 4 is a correct option.

Additional Information

• Let's discuss information about voices :

• Passive voice - If the subject is having the action done to it, then the verb is called passive voice.

• Active voice - If the subject is performing the action, then the verb is called active voice.

• For example: Active voice - Aditi cut a tree. Passive voice - A tree was cut by aditi.

**Q9. Answer: (a) We have been waiting**

The solution is We have been waiting.

Key Points

• The most appropriate option that can substitute the underlined segment in " We are waiting for the minister for the last two hours." is We have been waiting.

• We are waiting for the minister for the last two hours.

• Here the tense of underlined word is incorrect.

• The given sentence tense is Present continuous tense.

• The tense of the sentence should be Present perfect continuous tense.

• Present continuous tense - It is a present continuous tense when the verb form used for action or event that are happening or developing now in present.

• Present perfect continuous tense - It is a present perfect continuous tense when starting in the past and occurring until now with an adverb modifier that indicates the approximate duration or an action occurring until lately or recently with some relevant effect continuing into the present.

• Therefore option 1 is the correct option.

Additional Information

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**Q10. Answer: (b) Students are loved by their teachers.**

The solution is Students are loved by their teachers.

Key Points

• The option that expresses the "Teachers love their students." in passive voice is

• Passive voice - If the subject is having the action done to it, then the verb is called passive voice.

• Therefore option 2 is the correct option.

Additional Information

• Let's discuss information about voices :

• Passive voice - If the subject is having the action done to it, then the verb is called passive voice.

• Active voice - If the subject is performing the action, then the verb is called active voice.

• For example: Active voice - Aditi cut a tree. Passive voice - A tree was cut by aditi.

**Q11. Answer: (c) Benevolent**

The solution is Benevolent.

Key Points

• The most appropriate synonym of " Benign " is Benevolent.

• Benevolent - Well meaning and kindly.

• For example : "A benevolent smile."

• Benign - Gentle and kindly.

• For example : "Her face was calm and benign."

• Therefore option 3 is the correct option.

Additional Information

• Let's discuss information about other options :

• Beneficiary - A person who derives advantage from something, especially a trust, will, or life insurance policy.

• For example : "They took the beneficiary of his father after he died."

• Boisterous - Noisy, energetic, and cheerful.

• For example : "A group of boisterous girls."

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• Boring - Not interesting or tedious.
• For example : "He has got a boring job in an office."

**Q12. Answer: (a) to be more difficult**

The solution is to be more difficult.

Key Points

• The option that will improve the underlined part of "I find playing chess to be difficult than playing poker." is to be more difficult.
• I find playing chess to be more difficult than playing poker.
• Here the word "more" is added to the sentence because here the game chess is compared with poker.
• Hence, to show the difficulty level of playing the game we used more.
• Therefore option 1 is the correct option.

Additional Information

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**Q13. Answer: (a) Not wearing any clothes**

The solution is in Hindi. Read it online.

**Q14. Answer: (b) Bibliophile**

The correct answer is "Bibliophile".

Key Points

• The appropriate answer which means "a person who loves and collects books" is "Bibliophile".
• A bibliophile is a person who loves books and has deep knowledge about them.
• Example: Dane has his personal library. He is a bibliophile.
• Therefore, this proves that the correct answer is Option 2.

Additional Information

• Booker - a person who hires performance companies.
• Example: We can ask that booker to know about today's performances.
• Bookworm - a person who loves reading books.
• Example: Gina always tops the class because she is a bookworm.
• Biographer - a person who writes about another's life.
• Example: Isa will become a biographer if she writes about the President's life.

**Q15. Answer: (a) To try to force someone to do something**

The correct answer is "to try to force someone to do something".

Key Points

• The appropriate option which means "to twist the player's arm" is "to try to force someone to do something".
• "Twist someone's arm" means to persuade a person to do an action that they do not want to do.
• Example: Jake's mother twisted his arm by asking him to clean his room.
• Therefore, the correct answer is Option 1.

Additional Information

• Let's see some other idioms with "twist".

| Idiom | Meaning | Example |
|---|---|---|
| drive (someone) around the twist | make someone crazy | Tim drove me around the twist with his tantrums. |
| be bitter and twisted | be miserable | My brother is bitter and twisted because he was dismissed from his job. |
| twist the knife | deliberately making the situation worst | Jane twisted the knife by beating her crying sister. |

**Q16. Answer: (d) All the options available need to be evaluated by me by the end of this month.**

The correct answer is "All the options available need to be evaluated by me by the end of this month".

Key Points

• Lets's look into the sentence "I need to evaluate all the options available by the end of this month".

• Here, "by the end of the month" is the adjunct. Let us keep it aside for some time.
• The remaining part of the sentence is "I need to evaluate all the options available".
• This is in the format "Subject - Predicate - Object".
• In order to change it to the passive form, we need to interchange it as "Object - Predicate - Subject",
• Therefore, the passive form of "I need to evaluate all the options available" is "All the options available need to be evaluated by me".
• If we add the adjunct with this sentence, the appropriate answer is "All the options available need to be evaluated by me by the end of this month".

Additional Information

• Let's see the basic difference between active and passive voice.

| Active Voice | Passive Voice |
|---|---|
| Talks about what the person or thing did. | Talks about what happened to someone or something. |
| The subject is the doer of the action and the object is the sufferer of the action. | The subject is being acted upon. |
| Example: Jeff speaks English. | Example: English is spoken by Jeff. |

**Q17. Answer: (b) Tolerant**

The correct answer is "Tolerant".

Key Points

• A fanatic means a person whose enthusiasm for something is beyond normal.
• Example: Joey was a fanatic when it was to food.
• Tolerant means a person with a lot of patience.
• Example: Nathan becomes tolerant when he is experimenting.
• Therefore, the antonym of "Fanatic" is "Tolerant".

Additional Information

• Extremist - the state of being extreme.
• Example: Harry looks like an extremist because of his decision.
• Lunatic - a person who has lost his mental stability.
• Example: Losing his loved ones made Lee a lunatic.
• Fantastic - Very good.
• Example: You will look fantastic in this attire.

**Q18. Answer: (a) Occesion**

The correct answer is "Occesion".

Key Points

• The correct spelling of the word is "Occasion".
• Occasion means a special event.
• Example: The family were colour-coordinated for the occasion.
• Therefore, the appropriate answer is "Occesion".

Additional Information

• Humorous - funny
• Example: The show was humourous.
• Mysterious - suspicious
• Example: The man over there looks mysterious.
• Scissors - a tool that helps to cut things, mostly paper.
• Example: Open this parcel using scissors.

**Q19. Answer: (d) To reject**

The correct answer is "to reject".

Key Points

• The appropriate meaning of "Cast aside" is "to reject".
• Cast aside: get rid of someone or something.

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• Example: Mary cast aside her neighbours by rising the fence.
• Therefore, the correct answer is Option 4.

Additional Information

• Let's see some idioms starting with "all".

| Idioms | Meaning | Example |
|---|---|---|
| All bark and no bite | when a person is threatening but does not fight. | The new Principal is all bark and no bite. |
| All Greek to me | incomprehensible | This Math problem is all Greek to me. |
| All in the same boat | Everyone faces the same problem | During the COVID time, all were in the same boat. |

**Q20. Answer: (d) BACD**

The correct answer is "BACD".

Key Points

• The given passage is about social media's influence on people.
• Social media is about uploading photos, so "B" will come as its first sentence.
• Next, the type of posts should be discussed and "A" is the next sentence.
• "C" is the next sentence as it contains the matter of the text, that is the influence of social media on people.
• "D" is the final sentence as it gives a conclusion. Moreover, the word "Therefore" also gives a hint that it will be the last sentence of the stanza.

Additional Information

• Certain rules must be followed to arrange sentences in order to frame a meaningful stanza.
• The first step is to read all the sentences and understand their meaning.
• Next, try to find the theme of the stanza.
• There will be a link between each sentence. Try to identify them.
• Connecting words like "although", "therefore", etc will help in ordering them.
• Understanding the opening sentence and closing sentence will make this process easier.

**Q21. Answer: (d) drinking**

The correct answer is "drinking".

Key Points

• Drinking means the act of consuming liquids.
• Example: Rina is drinking fruit juice.
• As drinking water is pure and is decreasing constantly, it cannot be used to clean cars.
• Therefore, the appropriate answer is "Drinking".

Additional Information

• Sewage - drainage
• Example: The sewage water is overflowing.
• Stored - saved
• Example: Let's have the stored food.
• Cold - chill
• Example: The weather is cold today.

**Q22. Answer: (c) wastage**

The correct answer is "wastage".

Key Points

• Wastage means loss by using it carelessly.
• Example: The food wastage after the party was huge.
• Therefore, the appropriate answer is "wastage".

Additional Information

• Extraction - the act of pulling out quickly.
• Example: The tooth extraction was over quickly.

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• Greed - selfish desire.
• Example: Tom is always greedy for chocolates.
• Storage - saving things for the future.
• Example: This food storage will help us ration food.

**Q23. Answer: (d) judiciously**

The correct answer is "judiciously".

Key Points

• "Judiciously" means performing an action wisely and carefully.
• Example: The judge judiciously solved the case.
• Therefore, the appropriate option is "judiciously".

Additional Information

• Effectively - usefully.
• Example: My teacher advised me effectively.
• Hopefully - want something to be true.
• Example: Amy thinks that she would win the prize hopefully.
• Carelessly - without any care.
• Example: Tony lost his stationary carelessly.

**Q24. Answer: (d) Contribution**

The correct answer is "Contribution".

Key Points

• "Contribution" means to give according to the person's ability.
• Example: The pasta is my contribution to the food fest.
• Therefore, the appropriate answer is "Contribution".

Additional Information

• Summation - the act of briefing an incident.
• Example: The summation of the previous meeting was very clear.
• Indication - a signal.
• Example: The cloudy sky is an indication of rain.
• Connection - an association between two or more people or objects.
• Example: The electric connection is not proper.

**Q25. Answer: (a) Responsibility**

The correct answer is "Responsibility".

Key Points

• "Responsibility" means the duty of being answerable.
• Example: Harry's responsibility was to make sure that the costumes were good.
• Therefore, the appropriate answer is "responsibility".

Additional Information

• Facility - amenities
• Example: This apartment has all the required facilities.
• Complexity - difficulty
• Example: The complexity of the exam was high.
• Opportunity - a chance
• Example: Gaby got an opportunity to play for the state.

**Q26. Answer: (d) –, +, ×, ÷, =**

By using BODMAS

and going by the options

Given Equation :- 57 * 35 * 7 * 14 * 2 * 71

Interchanging * with given signs.

Option(1) ×, +, ÷, –, =

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=> 57 × 35 + 7 ÷ 14 - 2 = 71
=> 57 × 35 + 0.5 - 2 = 71
=> 1995 + 0.5 - 2 = 71
=> 1995.5 - 2 = 71
=> 1993.5 ≠ 71
LHS ≠ RHS
Option(2) –, ÷, +, ×, =
=> 57 - 35 ÷ 7 + 14 × 2 = 71
=> 57 - 5 + 14 × 2 = 71
=> 57 - 5 + 28 = 71
=> 85 - 5 = 71
=> 80 ≠ 71
LHS ≠ RHS
Option(3) +, ÷, –, ×, =
=> 57 + 35 ÷ 7 - 14 × 2 = 71
=> 57 + 5 - 14 × 2 = 71
=> 57 + 5 - 28 = 71
=> 62 - 28 = 71
=> 34 ≠ 71
LHS ≠ RHS
Option(4) –, +, ×, ÷, =
=> 57 - 35 + 7 × 14 ÷ 2 = 71
=> 57 - 35 + 7 × 7 = 71
=> 57 - 35 + 49 = 71
=> 106 - 35 = 71
=> 71 = 71
LHS = RHS
Hence, the correct answer option(4)

**Q27. Answer: (d) 36 : 2**

Following logic is followed here,
Logic: Second number = √first number - 3
Option(1)
Second number = √169 - 3 = 13 - 3 = 10
Option(2)
Second number = √196 - 3 = 14 - 3 =11
Option(3)
Second number = √64 - 3 = 8 - 3 = 5
Option(4)
Second number = √36 - 3 = 6 - 3 = 3(not equal to 2)
Hence, the correct answer is option(4)

**Q28. Answer: (d) CUNLRAE**

Following logic is followed here,
REMOVAL : MEROLAV
And,
TYPICAL : PYTILAC
Similarly,
NUCLEAR : ?
Hence, the correct answer is option(4)

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**Q29. Answer: (d) [figure]**

When the mirror is placed vertically to the object, then the image formed will be laterally inverted. In other words, the Left Hand Side and Right Hand Side interchange their positions while top and bottom will remain same.

Hence, the correct answer is option (4)

**Q30. Answer: (c) [figure]**

The pattern followed here is:

From the above figure, only option(3) shows the correct answer

Hence, the correct answer is option(3)

**Q31. Answer: (b) 7**

When a common digit is on the same face of the same dices, then the digits written after the common digit is opposite to each other .(in the same direction)

Therefore, 1 is opposite to 6

4 is opposite to 3

2 is opposite to 5(left one)

So, the sum of 2 and 5 is 7

Hence, the correct answer is option(2)

**Q32. Answer: (d) 22**

Here, we need to count total number of triangle.

First we will count all the small triangles as:

So, we have 10 triangles.

Next, we will combine two or more triangles, we will have,

So, triangles we have are: PQS, PQT, PQU, PRT, PRU, PSU, PVX, PVY, PVZ, PWY, PWZ, PXZ - total of 12 triangles.

Thus, we have a total of 10 + 12 = 22 triangles.

Hence, we have 22 triangles.

**Q33. Answer: (b) [figure]**

When a mirror is placed vertically to the object, the mirror image so formed will be laterally inverted. In other words, the Left Hand Side and Right Hand Side interchange their positions while top and bottom will remain same.

Hence, the correct answer is option(2)

**Q34. Answer: (a) J N O J K**

Here, we will first check all the options one by one

Given equation :- J _ M K L J J _ K L J J _ K L _ J P _ L

Option(1) J N O J K

J J M K L /J J N K L/ J J O K L/ J J P K L

Option(2) J N J K O

J J M K L /J J N K L/ J J J K L/ K J P O L

Option (3) N J K J O

J N M K L /J J J K L/ J J K K L/ J J P O L

Option(4) N J J O K

J N M K L /J J J K L/ J J J K L/ O J P K L

Only option(1) shows the repetition of the series. The middle letter is the next of it in the English Alphabets, while J J and K L is common in all.

Therefore, the correct answer is J N O J K

**Q35. Answer: (d) (35, 22, 21)**

The logic followed here is:

Logic: The sum of second and third number - 8) is equal to first number.

First pair = 19 + 14 - 8 = 33 - 8 = 25

Second pair = 28 + 30 - 8 = 58 - 8 = 50

Option1) (41, 24, 36)

= 24 + 36 - 8 = 52(not equal to first number)

Option2) (31, 20, 25)

= 20 + 25 - 8 = 37(not equal to first number)

Option3) (24, 17, 21)

= 17 + 21 - 8 = 30(not equal to first number)

Option4) = (35, 22, 21)

= 22 + 21 - 8 = 35(equal to first number)

Therefore, the correct pair is (35, 22, 21)

Hence, the correct answer is option(4)

**Q36. Answer: (b) Thursday**

In any two consecutive ordinary years, date of the next year will be one day ahead of the same date of the previous year.

1st August 2009 = Saturday

1st August 2010 = Sunday

1st August 2011 = Monday

If a leap year comes immediately after an ordinary year, then the day on a certain date of the leap year will be 2 days ahead of the same date on the ordinary year from March to December.

1st August 2012 = Wednesday

1st August 2013 = Thursday

Hence, the correct answer is option(2)

**Q37. Answer: (b) 22**

Following logic is used in the above question,

Therefore, '?' will be replaced by 22.

Hence, the correct is option(2)

**Q38. Answer: (a) XJLXJ**

The pattern followed here is:

The logic is as follows

'GREEN' is written as 'HTHIS'

‘SAFFRON’ is written as ‘TCIJWUU'

'WHITE' be written '?'

'WHITE' be written 'XJLXJ'

Hence, the correct answer is option(1)

**Q39. Answer: (a) Haa**

Here, we will look at the code

'I' = 'Ha'

'like' = 'Ho'

'you' = 'He'

Therefore, from "you like me" written as "He, Ho, Haa

you = He

like = Ho

me = Haa

Hence, the correct answer is option(1)

**Q40. Answer: (a) 360**

Following logic is applied in the above question

Second number = (First number )$^2$+ 2(First number)

13 : 195

Second number = (13)$^2$+ 2 (13)

= 169 + 26

= 195

7 : 63

Fourth number = (7)2 + 2 (7)

= 49 + 14

= 63

18 : ?

Sixth number = (18)2 + 2 (18)

= 324+ 36

= 360

= ? = 360

Therefore, ? will be replaced by 360

Hence, the correct answer is option(1)

**Q41. Answer: (b) 11 : 49**

Here the given logic is:

9 ÷ 2 = 4.5 + .5 = 5 => $5^3$= 125

11 ÷ 2 = 5.5 + .5 = 6 => $6^3$ = 216

13 ÷ 2 = 6.5 + .5 = 7 => $7^3$ = 343

7 ÷ 2 = 3.5 + .5 = 4 => $4^3$ = 64

As per the given logic, the correct answer is option 2, as 11 : 49 do not follow the pattern that other options do.

**Q42. Answer: (c) Tuesday**

Here, we have to find out the day of the given date.

So, 15 Aug 2001 was Wednesday.

Next, we will count all the days = 16 (Aug) + 30 (Sep) + 2 (Oct) = 48 ÷ 7 = 6 weeks and 6 odd days

Thus, 2 October 2001 = Wednesday + 6 = Tuesday.

Hence, the day will be 'Tuesday' on 2 October 2001.

**Q43. Answer: (a) ÷, ×, +, –, =**

Here, we need to apply the combination of signs to get the correct equation.

Given: 16 * 2 * 4 * 8 * 10 * 30

First we will check options one by one as below:

1) ÷, ×, +, –, =

=> 16 ÷ 2 × 4 + 8 - 10 = 30

Applying BODMAS rule, we will get,

=> 8 × 4 + 8 - 10 = 30

=> 32 + 8 - 10 = 30

=> 30 = 30, which is possible. This is true.

2) ÷, ×, –, +, =

=> 16 ÷ 2 × 4 - 8 + 10 = 30

Applying BODMAS rule, we will get,

=> 8 × 4 - 8 + 10 = 30

=> 32 - 8 + 10 = 30

=> 34 ≠ 30, which is not possible. This is not true.

3) ×, ÷, –, +, =

=> 16 × 2 ÷ 4 - 8 + 10 = 30

Applying BODMAS rule, we will get,

=> 16 × 0.5 - 8 + 10 = 30

=> 8 - 8 + 10 = 30

=> 10 ≠ 30, which is not possible. This is not true.

4) –, +, ×, ÷, =

=> 16 - 2 + 4 × 8 ÷ 10 = 30

Applying BODMAS rule, we will get,

=> 16 - 2 + 4 × 0.8 = 30

=> 16 - 2 + 3.2 = 30

=> 17.2 ≠ 30, which is not possible. This is not true.

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Hence, the combination of signs ' ÷, ×, +, –, =' is used to get correct balanced equation.

**Q44. Answer: (a) None of the conclusions follow.**

The least possible Venn diagram is given below:

Conclusion:

I) Some yellows are blues → Does not follow → (As there is no relationship between yellow and blues mentioned in the statements. This is not true.

II) No pink is blue → Does not follow → (As Some pinks are ices, so, some pink is blue. Therefore No pink is blue is possible but does not definitely true.)

III) No yellow is blue → Does not follow → (As there is no relationship between yellow and blue mentioned in the statements. This is not true.

Hence, the correct answer is "None of the conclusion follow".

**Q45. Answer: (c) =, ×, −, −**

Here, we need to apply the combination of signs to get the correct equation.

Given: 14 * 18 * 7 * 79 * 33

First we will check options one by one as below:

1) +, ×, =, −

=> 14 + 18 × 7 = 79 - 33

Applying BODMAS rule, we will get,

=> 14 + 126 = 79 - 33

=> 140 ≠ 46, which is not possible. This is not true.

2) +, −, =, ×

=> 14 + 18 - 7 = 79 × 33

Applying BODMAS rule, we will get,

=> 14 + 18 - 7 = 2607

=> 25 ≠ 2607, which is not possible. This is not true.

3) =, ×, −, −

=> 14 = 18 × 7 - 79 - 33

Applying BODMAS rule, we will get,

=> 14 = 126 - 79 - 33

=> 14 = 14, which is possible. This is true.

4) −, =, ×, +

=> 14 - 18 = 7 × 79 + 33

Applying BODMAS rule, we will get,

=> 14 - 18 = 553 + 33

=> -4 ≠ 586, which is not possible. This is not true.

Hence, the combination of signs ' =, ×, −, −' is used to get correct balanced equation.

**Q46. Answer: (d) ÷, –, ×, +, =**

Here, we need to apply the combination of signs to get the correct equation.

Given: 60 * 6 * 3 * 18 * 49 * 5

First we will check options one by one as below:

1) ×, +, ÷, –, =

=> 60 × 6 + 3 ÷ 18 - 49 = 5

Applying BODMAS rule, we will get,

=> 60 × 6 + 0.16 - 49 = 5

=> 360 + 0.16 - 49 = 5

=> 311.16 ≠ 5, which is not possible. This is not true.

2) ÷, +, –, ×, =

=> 60 ÷ 6 + 3 - 18 × 49 = 5

Applying BODMAS rule, we will get,

=> 10 + 3 - 18 × 49 = 5

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=> 10 + 3 - 882 = 5

=> -869 ≠ 5, which is not possible. This is not true.

3) ×, +, –, ÷, =

=> 60 × 6 + 3 - 18 ÷ 49 = 5

Applying BODMAS rule, we will get,

=> 60 × 6 + 3 - 0.36 = 5

=> 360 + 3 - 0.36 = 5

=> 362.64 ≠ 5, which is not possible. This is not true.

4) ÷, –, ×, +, =

=> 60 ÷ 6 - 3 × 18 + 49 = 5

Applying BODMAS rule, we will get,

=> 10 - 3 × 18 + 49 = 5

=> 10 - 54 + 49 = 5

=> 5 = 5, which is possible. This is true.

Hence, the combination of signs ' ÷, –, ×, +, =' is used to get correct balanced equation.

**Q47. Answer: (b) [figure]**

When a mirror is placed vertically to the object, the image so formed will be laterally inverted. In other words, the Left Hand Side and Right Hand Side interchange their positions while top and bottom will remain same.

Therefore, only option(2) shows the correct image.

Hence, the correct answer is option(2).

**Q48. Answer: (a) 201042221201226**

The pattern followed here is:

In the above code, letters are given their positional value in increasing order, (addition of 1 for very next number.)

'PENCIL' is written as '1771771418'

And,

'ERASER' is written as '6204231024'

Similarly,

'SHARPNER'

The code for 'SHARPERNER' is '201042221201226'.

Hence, the correct answer is option(1)

**Q49. Answer: (b) JGDM**

Given series :-

Here, First letter is the very next letter of the previous code, second letter is addition of 7 letters, third letter is addition of 13 letters and fourth letter is addition of 19 letters.

Therefore, '?' will be replaced by 'JGDM'

Hence, the correct answer is option(2)

**Q50. Answer: (d) 59**

The logic followed here is:

(First number × 3) - (Second number × 4) = Third number

First row - 67, 25, 101 → (67 × 3) - (25 × 4) = 201 - 100 = 101

Second row - 55, 17, 97 → (55 × 3) - (17 × 4) = 165 - 68 = 97

Similarly,

Third row - 45, 19, ? → (45 × 3) - (19 × 4) = 135 - 76 = 59

Hence, option 4) is the correct answer.

**Q51. Answer: (d) 595/3456**

Formula used:

sin 2θ=2sin θ.cos θ

Calculation:

It is given that θ is an acute angle, So by trigonometric ratios-

sin θ = Perpendicular/Hypotenuse

Since, sin θ = 12/13 then on comparison,

=> Hypotenuse = 13 unit and Perpendicular = 12 unit

Now, by the Pythagorean theorem,

(Hypotenuse)² = (perpendicular)² + (base)²

=> 13² = 12² + (base)²

=> (base)2 = 25

=> base = 5 unit

=> cos θ=base/hypontenuse = 5/13

=> tan θ = perpendicular/base = 12/5

Substituting the values of sin θ, cos θ and tan θ into the expression,

=> ((12/13)²-(5/13)²)/(2.12/13.5/13)× 1/((12/5)²)

=> (119/169)/(120/169)× 25/144

=> 119×25/120×144 = (119× 5)/(24× 144)

=> 595/3456

The value of the expression is 595/3456

**Q52. Answer: (a) 1**

Concept used:-

Properties of exponents and powers = a2 - b2 = (a + b)(a - b)

Calculation:-

Using the exponent property (aⁿ)/(a^m)=a^(n-m) in the given expression,

=> 2²(x)^((a-b)(a+b))×3²(x)^((b-c)(b+c))×6^(-2)(x)^((c-a)(c+a))

By using the formula, a² - b² = (a + b)(a - b)

=> 2²(x)^((a²-b²))×3²(x)^((b²-c²))×6^(-2)(x)^((c²-a²))

=> 2²(x)^((a²-b²))×3²(x)^((b²-c²))×(3×2)^(-2)(x)^((c²-a²))

By using the exponent property, (a × b)^m = a^m × b^m

=> 2²(x)^((a²-b²))×3²(x)^((b²-c²))×(3)^(-2)×(2)^(-2)(x)^((c²-a²))

By using the property a^m × aⁿ = a^((m + n))

=> 2^((2+(-2)))× 3^((2+(-2))× x^((a²-b²)+(b²-c²)+(c²-a²))

By the property of exponents, i.e a^0 = 1

=> 2^0 × 3^0 × x^0

=> 1 × 1 × 1 = 1

The value of the expression is 1.

**Q53. Answer: (c) 8**

Concept used:

Divisibility of 11 = Number is divisible by 11 when the difference between the sum of odd digits and sum of even digits is either 0 or multiple of 11

Calculation:

Odd digits = 6, 4, *, 5

Even digits = 3, 7, 2

According to the rule,

(Sum of odd digits) - (sum of even digits) = 0 or multiple of 11

=>(6 + 4 + * + 5) - (3 + 7 + 2) = 3 + *

∴.(3 + *) should be 0 or multiple of 11

=>Taking 3 + * = 0

• = - 3 which is Impossible as * will carry only a positive integral value

=>Taking (3 + *) = 11, as 11 is the closest to the (3 + *)

=>(3 + *) = 11

=>* = 8

The value of * is 8 and the number will be 637825.

**Q54. Answer: (a) 70/3 kg**

Given:

Average weight of the mango box = 35,

Number of apple boxes = 15,

Number of mango boxes = 20

Formula used:

Weighted average = (w1× n1+w2× n2)/(n1+n2)

Calculation:

Let the number of boxes of mango and apples be n1 and n2

=> n1 = 20 and n2 = 15

Let the average weight of mango box be w1 and apple box be w2

=> w1 = 35 kg and w2 = ?

By using the formula of weighted average and taking value of weighted average as 30 kg,

=> 30 = (35×20+15× w2)/(15+20)

=> 1050 = 700 + 15 × w2

=> w2 = 350/15 = 70/3

The average weight of a box of apples is 70/3 kg.

Shortcut Trick

As per the question,

The average of Mangoes is increasing by 5 from the common average.

It means that the average of Apple is 5 less than the common average.

So we can say that average weight of the apple box

=> 30(avg) - (5(diff) × 20 (box of mango))/15(box of apples)

=>30 - (100/15) =70/3

**Q55. Answer: (b) 15**

Given:

Total number of matches = 20

Total average runs = 30

Formula used:

Average = (sum of observation)/(total number of observation)

Calculation:

By using the formula of average we can calculate the total runs scored by player in 20 matches

=> Total runs = Average runs × Total number of matches

=> Total runs = 30 × 20

=> Total runs = 600

Similarly, we can calculate the total runs scored by the player in the first 12 matches,

=> R12 = Average runs × Total number of matches

=> R12 = 40 × 12 = 480

The difference between the total runs and total runs in the first 12 matches will give the total runs scored by the player in the last 8 matches,

=> Total runs in last 8 matches = 600 - 480

=> Total runs in last 8 matches = 600 - 480 = 120

By using the formula of average,

=> Average = 120/8

=> Average = 15 runs

The average of the last 8 matches is 15 runs.

Shortcut Trick

Average = 30,

Extra runs in first 12 matches = 12 × 10 =120

This means that the average of the remaining 8 matches will be less by 120 runs, only then the common average will be 30

=> Total runs in last 8 matches = 30 -(120/8) = 30 -15 =15

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**Q56. Answer: (c) D and G**

Given:

| Extra Curricular Activities | College | | | | | | |
|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | |
| I | 150 | 250 | 450 | 50 | 350 | 250 | 150 |
| II | 50 | 150 | 150 | 50 | 50 | 50 | 50 |
| III | 100 | 50 | 400 | 125 | 100 | 500 | 150 |
| IV | 250 | 125 | 350 | 275 | 250 | 150 | 150 |

Calculation:

Total number is students in extra curricular activities in

College A = 150 + 50 + 100 + 250 = 550

College B = 250 + 150 + 50 + 125 = 575

College C = 450 + 150 + 400 + 350 = 1350

College D = 50 + 50 + 125 + 275 = 500

College E = 350 + 50 + 100 + 250 = 750

College F = 250 + 50 + 500 + 150 = 950

College G = 150 + 50 + 150 + 150 = 500

So, the minimum number of students for extra-curricular is from colleges D and G

**Q57. Answer: (b) 55√5**

Shortcut Trick

If $x - 1/x = k$, then $x^2 - 1/x^2 = k \times \sqrt{(k^2 + 4)}$ (for $x > 0$).

Here, k = 11.

$\Rightarrow x^2 - 1/x^2 = 11 \times \sqrt{(11^2 + 4)}$

$\Rightarrow 11 \times \sqrt{(121 + 4)} = 11 \times 5\sqrt{5} = 55\sqrt{5}$

Therefore The correct answer is 55√5.

Alternate Method

Given:

$x - 1/x = 11$ and $x > 0$

Formula Used:

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

$(a + b)^2 = (a - b)^2 + 4ab$

Calculations:

$\Rightarrow x^2 - 1/x^2 = (x - 1/x)(x + 1/x)$

First, we find the value of $(x + 1/x)$:

$\Rightarrow (x + 1/x)^2 = (x - 1/x)^2 + 4$

$\Rightarrow (x + 1/x)^2 = 11^2 + 4 = 121 + 4 = 125$

$\Rightarrow x + 1/x = \sqrt{125} = 5\sqrt{5}$ (Since $x > 0$, $x + 1/x$ is positive)

Now, substituting the values into the formula:

$\Rightarrow x^2 - 1/x^2 = 11 \times 5\sqrt{5} = 55\sqrt{5}$

Therefore The correct answer is 55√5.

Additional Information

Sum and Difference Relation

If $x + 1/x = k$, then $x - 1/x = \pm\sqrt{(k^2 - 4)}$.

Sum of Squares Relation

If $x - 1/x = k$, then $x^2 + 1/x^2 = k^2 + 2$.

Sum of Cubes Relation

If $x - 1/x = k$, then $x^3 - 1/x^3 = k^3 + 3k$.

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**Q58. Answer: (a) Rs. 160**

Given

Cost price : Marked price = 4 : 7

Discount = 25%

Profit = Rs 50

Formula used

C/M=(100-D)/(100+P)

C = cost price

M = marked price

D = discount%

P = profit%

Calculation

C/M=(100-D)/(100+P)=(100-25)/(100+P)=4/7

from this P = 31.25%

31.25% of C = 50Rs

then, C is 100% which is 50/31.25× 100=160Rs

The cost price of the article is Rs 160

**Q59. Answer: (d) 20% profit**

Shortcut Trick

Net multiplier (SP/CP) = (Claimed SP ÷ Actual CP) × (True Weight ÷ Faulty Weight)

Ratio = (27 ÷ 30) × (1000 ÷ 750) = (9/10) × (4/3)

Net Ratio = 36 ÷ 30 = 6 ÷ 5

Profit % = (6 − 5) ÷ 5 × 100 = 20%

Therefore The correct answer is 20% profit.

Alternate Method

Given:

Cost Price (CP) of 1000 g rice = Rs. 30

Selling Price (SP) of 750 g rice (claimed as 1000 g) = Rs. 27

Calculation:

=> Actual Cost Price of 1000 g rice = Rs. 30

=> Actual Cost Price of 750 g rice = (30 ÷ 1000) × 750

=> Actual Cost Price of 750 g rice = Rs. 22.5

=> Given Selling Price of 750 g rice = Rs. 27

=> Total Profit = SP − CP = 27 − 22.5 = Rs. 4.5

=> Profit Percentage = (Profit ÷ CP) × 100

=> Profit Percentage = (4.5 ÷ 22.5) × 100

=> Profit Percentage = (1 ÷ 5) × 100 = 20%

Therefore The correct answer is 20% profit.

Additional Information

Dishonest Dealer Concept

When a dealer sells at a profit/loss on price and also uses a faulty weight, the net gain/loss is calculated by the product of individual multiplication factors.

Profit with Weight Manipulation

Profit % = [(True Value − False Value) ÷ False Value] × 100. In this problem, the dealer also changed the price, so we compare the actual CP of the weight delivered with the actual SP received.

Successive Percentage Change

Net Profit % can be viewed as successive changes: price reduction (10% loss) and weight manipulation (33.33% profit). Net = −10 + 33.33 + (−10 × 33.33)/100 = 20%.

**Q60. Answer: (b) 6 sec**

Given

length of 1^(st)train=230 m

length of 2^(nd) train=240 m
distance between trains=130 m
speed of 1st train=160 km/h
speed of 2^(nd) train=200 km/h
Calculation
relative speed=160+200=360 km/h=100 m/s
Total distance for crossing=length of two trains+ distance between trains=470+130=600m
Time taken= distance/speed=600/100=6 sec
Total time taken for trains to cross each other = 6 sec

**Q61. Answer: (d) 33.33% profit**

Given:
40% Cost price = 30% Selling price
Calculation:
40% Cost price = 30% selling price
Thus reducing the above equation we get,
4C = 3S
S = 4C/3
Profit or loss %= (S-C)/C× 100 = (4C/3-C)/C× 100 =(4-3)/3× 100=33.33%
Approximately there is a profit of 33.33%

**Q62. Answer: (c) 5 cm**

Formula used:
General form $x^2+y^2+2gx+2fy+c=0$
Radius $r^2=g^2+f^2-c$
Calculation:
Comparing the equations
g = -2, f = 3 ,c = -12
Radius= $r=\sqrt{(g^2+f^2-c)} = \sqrt{(4+9-(-12))}=\sqrt{25}=5$
The radius of the circle is 5 cm

**Q63. Answer: (d) 4160**

%students in operating system=16%
%students in java=22%
% students in DBMS=14%
total % students from above specializations=22+16+14=52%
total % of students from all specialization is 100% that is 8000
so 52% is 8000/100× 52=4160
The number of students from the above selected specialization is 4160

**Q64. Answer: (a) 2 years**

Given:
Principle = 390625
Amount = 456976
Rate of interest = 8%
Compounded half yearly
Formula used:
$A=P(1+r/100)^n$
Calculation:
It is compounded half yearly, for 12 months r = 8%
For 6 months, r = 8/2 = 4%
Substituting,
$A=P(1+r/100)^n = 456976=390625(1+4/100)^n$

456976/390625=(104/100)$^n$

(26^4)/(25^4)=(26/25)$^n$

From this we get n = 4 where n is in number of half years

4 half years = 2 years

The amount will be obtained in 2 years.

**Q65. Answer: (b) Rs. 34,481**

Given

principle=160000

rate of interest=10% per annum

time =2years

compounded half yearly

Formula used

Amount=Principle (1+r/100)$^n$

Calculation

because of interest compounded half yearly the rate of interest will be halved

for 12 months r=10%

for 6 months r=5%

n=time taken=2years which is 4 half years

A=P(1+r/100)$^n$ = A=160000(1+5/100)^4 =194481

compounded interest=Amount-Principle=194481-160000=34481Rs

The compound interest is Rs. 34,481

**Q66. Answer: (a) 21/7**

Given:

A can do the work in 5 days.

B can do the work in 6 days.

C can do the work in 10 days.

Calculations:

According to the question,

=> One day work of A = 1/5 units

=> One day work of B = 1/6 units

=> One day work of C = 1/10 units

Total Work of A B and C = (1/5) + (1/6) + (1/10)

Total Work = (6 + 5 + 3)/30

Total Work = 14/30 = 7/15 units

A B and C can complete the work in 15/7 days

Therefore They will finish the same work in 15/7 or 21/7.

Shortcut Trick

| | Time | Efficiency | Total work |
|---|---|---|---|
| A | 5 | 6 | 30 |
| B | 6 | 5 | |
| C | 10 | 3 | |

=> Total time = 30 /(6+5+3) =30/14 = 21/7

**Q67. Answer: (c) 86 cm2**

Given:

Edge of the square = 20 cm

Formula used:

Area of square = $A^2$

Area of Circle = $\pi \times r^2$

Calculations:
Radius = D/2 = 20/2 = 10 cm
According to the question,
Area of shaded region = Area of Square - Area of Circle
=> Area = $(20)^2 - \pi(10)^2$
=> Area = 400 - π100
=> Area = 400 - 314
=> Area = 86 $cm^2$
Therefore The area of the shaded region is 86 cm2.

**Q68. Answer: (c) 1663.2 $cm^3$**

Given:
Radius of the base of a cylinder = 12/2 = 6 cm
Height of the cylinder = 2.45 × 6 = 14.7 cm
Formula Used:
Cylinder volume = π × $(radius)^2$ × height
Calculations:
According to the question,
Volume = π × (6)2 × 14.7
=> Volume = 22/7 × 36 × 14.7
=> Volume = 22 × 36 × 2.1 = 1663.2 cm3
Therefore The volume of the cylinder is 1663.2 cm3.
Shortcut Trick
Option Method:-
Whatever the answer will be, it will be divisible by 11. This means that the rule of divisibility of 11 will follow.
This is the only option(3) which is divisible from 11
[1 + 6 + 2 = 6 + 3] [add odd term =add even term]

**Q69. Answer: (b) 78**

Given:
y varies directly with x,
y = 61 when x = 42,
Calculations:
According to the question
y/x = 61/42
=> y/54 = 61/42
=> y = (61 × 54)/42
=> y = 3294/42 = 78.4 ≈ 78
Therefore The value of y will be 78.

**Q70. Answer: (a) 36√3 $cm^2$**

Given:
Side of equilateral triangle = 12 cm
Formula used:
Area = (1/4) × $a^2$ × √3
Calculations:
According to the questions,
=> Area = (1/4) × (12)2 × √3
=> Area = (1/4) × 144 × √3
=> Area = 36 × √3 = 36√3 $cm^2$
Therefore The area of an equilateral triangle will be 36√3 cm2.

**Q71. Answer: (a) 13**

Given:

$(17.46^2-4.46^2)/(17.46 + 4.46)$

Concept used:

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

Calculations:

$[(17.46)^2 - (4.46)^2] \div (17.46 + 4.46)$

$\Rightarrow [(17.46 + 4.46)(17.46 - 4.46)] \div (17.46 + 4.46)$

$\Rightarrow 17.46 - 4.46 = 13$

Therefore The simplified value of the given equation is 13.

**Q72. Answer: (d) 150**

Given:

The salaries of X, Y and Z are in the ratio 2 : 3 : 5.

Calculations:

Let total salary be 'x'

According to the question,

The Difference in salaries of Z and X = 5x - 2x = 3x

Now the percentage

$\Rightarrow (3x/2x) \times 100$

$\Rightarrow 1.5 \times 100 = 150\%$

Therefore Z has 150% more salary than X.

**Q73. Answer: (c) 75.6**

Given:

The average of two numbers is 96.

If 2 is added to the smaller number, the ratio between the numbers becomes 2 : 3.

Calculations:

Let the numbers be x and y where y > x

According to the question,

$\Rightarrow x + y = 192$ .....(1)

$(x + 2)/y = 2/3$

$\Rightarrow 3x + 6 = 2y$

$\Rightarrow 3x - 2y = -6$ .....(2)

Multiply 3 in eqn 1 and subtract it from eqn 2 we get,

$\Rightarrow 5y = 582$

$y = 582/5 = 116.4$

$\Rightarrow x = 192 - 116.4 = 75.6$

Therefore The smaller number is 75.6

**Q74. Answer: (d) 393/3430**

Given:

$x= [1/5 + \{1/7 \text{ of } (25/42 \div 35/6) - (4/7 \times 6/5 \div 54/63)\} + 28/40]$

Formula Used:-

BODMAS rule

where B - Brackets, O - Order of powers, D - Division, M - Multiplication, A - Addition, and S - Subtraction

Calculation:-

=> BODMAS rule we have to solve from B to S

=> so we have to solve the bracket first

$\Rightarrow x= [1/5 + \{1/7 \text{ of } (25/42 \div 35/6) - (4/7 \times 6/5 \div 54/63)\} +28/40]$

$\Rightarrow x= [1/5 + \{1/7 \text{ of } (25/42 \times 6/35) - (4/7 \times 6/5 \times 63/54)\} + 28/40]$

$\Rightarrow x= 1/5+(1/7\times5/49-4/5)+28/40$

$\Rightarrow x= 1/5+(5/343-4/5)+28/40$

=> x= 1/5+((-1347)/1715)+7/10

=> x = 9/10-1347/1715=(15435-13470)/17150=1965/17150=3930/34300

=> The value of x is 393/3430.

**Q75. Answer: (d) 6280**

Given:

The following table gives information about the population of five different cities in the year 2020.

| City | Total Population | % of Men | % of Women | % of Children |
|---|---|---|---|---|
| P | 46800 | 45% | 35% | 20% |
| Q | 45400 | 35% | 50% | 15% |
| R | 42000 | 48% | 42% | 10% |
| S | 39250 | 42% | 42% | 16% |
| T | 46200 | 40% | 45% | 15% |

Calculations:

According to the question,

Total Children in City S = Total population × 16%

=> 39250 × 16%

=> (39250 × 16)/100

=> (628000)/100 = 6280

Therefore The number of children in city S is 6280.

**Q76. Answer: (b) Five Point Someone**

The correct answer is Five point someone

Key Points

• In five Point Someone, he describes the perennial themes like parental pressure on children for getting admission in highly competitive institute, earn high grades, get a good job, poverty, exploitation at job place, ill effects of domestic quarrel etc.

• In five point someone by Chetan Bhagat, three friends spend four years in the IIT. Alok, Hari and Ryan three dormitory roommates ,have a miserable first day at IIT since they fail the first quiz.

• the novel is based somewhat on Bhagat's own life and is considered a semi-autobiographical work.

Additional Information

• The three mistakes of my life was written by Chetan Bhagat. the story of three friends is followed throughout the book,which is set in western indian city Ahmedabad

• Chetan bhagat published a book in 2011 titled Revolution 2020 Love, corruption, ambition. A love triangle, corruption and a quest for self discovery are all themes in the novel

• Chetan bhagat published a collection of his lectures and articles titled What Young India Wants. It centres on Indian politics and society from the view point of the nations youth.

**Q77. Answer: (d) Rabies**

The correct answer is Rabies.

Key Points

• Rabies is a preventable viral disease most often transmitted through the bite of a rabid animal.

• The Rabies virus infects the central nervous system of mammals, ultimately causing disease in the brain and death

• Risks from monkey bites include serious wound infections, herpes B virus and rabies. if a person is bitten the wound should be thoroughly cleaned with soap and water.

Additional Information

• Malaria is a serious and sometimes fatal disease caused by a parasite that commonly infects a certain type of mosquito which feeds on humans

• People who get malaria are typically very sick with high fevers, shaking chills, and flu-like illness.

• Four kinds of malaria parasites infect humans: Plasmodium falciparum, P. vivax, P. malariae, P. ovale.

• Typhoid fever is a bacterial infection that can spread throughout the body, affecting many organs.

• Without prompt treatment, it can cause serious complications and can be fatal.

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• It is caused by a bacterium called Salmonella typhi, which is related to the bacteria that cause salmonella food poisoning.

• Influenza is a contagious respiratory illness caused by influenza viruses that infect the nose, throat, and sometimes the lungs.

• It can cause mild to severe illness, and at times can lead to death. The best way to prevent flu is by getting a flu vaccine each year.

**Q78. Answer: (c) Mrinalini Sarabhai**

The correct answer is Mrinalini Sarabhai

Key Points

• Mrinalini Sarabhai was an Indian classical dancer, choreographer and instructor.

• She was the founder and director of the Darpana Academy of Performing Arts, an institute for imparting training in dance, drama, music and puppetry, in the city of Ahmedabad.

• She received Padma Bhushan in 1992 and Padma shri in 1965.

• She also received many other citations in recognition of her contribution to art.

Additional Information

• Sonal Mansingh is a dancer of odissi, which is a classical Indian dance form that originated in Orissa, and other Indian classical forms. Apart from being a dancer, she was also a teacher, researcher, choreographer, and social activist.

• Shovana Narayan is a recognised Indian Kathak dancer and a career officer with Indian Audit and Accounts Service. She performs in India and internationally, and has been awarded the Padma Shri.

• Rukmani Arundale was an Indian theosophist, dancer and choreographer of the Indian classical dance form of Bharatanatyam, and an activist for animal welfare.

**Q79. Answer: (d) Ghatam**

The correct answer is Ghatam

Key Points

• The ghatam is an ancient percussion instrument in used Carnatic classical music

• The ghatam consists of a clay pot reinforced with brass, copper and iron fillings.

• The pitch of the ghatam is unique and can only be slightly modified by water and additional clay.

Additional Information

• The pakhavaj is a barrel-shaped, two-headed drum, originating from the Indian subcontinent

• it is the oldest version of double sided drums and its descendants are mridangam of Southern India and kendang of Maritime Southeast Asia and other South Asian double-headed drums.

• Dholak is about 45 cm in length and 27 cm in breadth and is widely used in qawwali, kirtan, lavani and bhangra.

• The drum has two different sized drumheads.

• Tabla word is derived from the Arabic word “tabl” which means a “drum”. Tabla is the most commonly used membranophone percussion musical instrument in Hindustani classical music.

**Q80. Answer: (b) Arpinder Singh**

The correct answer is Arpinder Singh

Key Points

• Arpinder got his training in Ludhiana. In 2014, Arpinder won a bronze medal at the Glasgow Commonwealth games and made it to the headlines

• Thereafter, in 2018, he won a gold medal in Asian Games and the same year he became the first Indian athlete to win a medal in IAAF Continental Cup.

• He was a gold medallist at the 2018 Asian Games. He also claimed a bronze medal at the 2014 Commonwealth Games in Glasgow.

Additional Information

• Satish kumar is an Indian British activist and speaker. He has been a Jain monk, nuclear disarmament advocate and pacifist.

• Lakha singh was a king belonging to the Sisodia lineage of Mewar in present-day state of Rajasthan. He was the son of Maharana Kshetra Singh and ruled from 1382 until his death in 1421

• Former IAS officer Dr Gurdial Singh Sandhu been appointed as Advisor to the Ministry of Urban Development & Housing (UDH), Local Self Government (LSG) and Housing, Rajasthan

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**Q81. Answer: (d) Indian Ocean**

The correct answer is Indian ocean

Key Points

• It is the only ocean with an asymmetric and, in the north, semiannually reversing surface circulation.

• It has no separate source of bottom water that is the Indian Ocean's bottom water originates outside its boundaries and has two sources of highly saline water (the Persian Gulf and the Red Sea

• It is bounded by Asia to the north, Africa to the west and Australia to the east.

Additional Information

• The second-largest ocean on Earth, the Atlantic drives our weather patterns, including hurricanes, and is home to many species from sea turtles to dolphins.

• For centuries the Atlantic Ocean has been a key avenue of trade and travel.

• The Pacific Ocean is the largest and deepest ocean on Earth.

• It spans 60 million square miles from California to China, and in certain regions extends tens of thousands of feet below the surface of the water

• The Southern Ocean is known for its uniqueness in the diversity of organisms.

• Cold adaptation and evolution in thermal isolation over tens of millions of years has resulted in an ecosystem that is unparallelled

**Q82. Answer: (b) Code for Responsible Lending**

The correct answer is "Code for responsible lending."

Key Points

• The Code for Responsible Lending (CRL), a self-regulatory mechanism put in place by the Microfinance Institutions Network (MFIN) and Sa-Dhan along with FIDC (Finance Industry Development Council),

• It is set to introduce additional parameters for tighter risk management.

• The COC of MFIN is designed to ensure that its members follow the RBI guideline as also few self imposed guidelines to improve the quality of lending, transparency, self discipline, coordination among MFIs &healthy competition, grievances redressal mechanism, anti-poaching activities etc.

• The responsible lending obligations involve: making reasonable inquiries about a consumer's financial situation, and their requirements and objectives.

Additional Information

• Industry Code

• it means the code which indicates the nature of the employer's business, which is contained in the Standard Industrial Classification (SIC) manual published by the Federal Office of Management and Budget, or in the North American Industrial Classification System (NAICS) published by the U.S

• Micro finance

• it must conduct proper due diligence as per its internal credit policy to assess the need and repayment capacity of client before making a loan and must only make loans commensurate with the client's ability to repay

• Microlending

• the programs are a type of peer-to-peer financing for small businesses and new startups.

**Q83. Answer: (d) Ustad Alla Rakha**

The correct answer is Ustad Alla Rakha

Key Points

• He is popularly known as Alla Rakha, was an Indian tabla player who specialized in Hindustani classical music.

• He was a frequent accompanist of sitar player Pandit Ravi Shankar and was largely responsible for introducing Tabla to the western audience.

• Alla Rakha left his home at age 12 to learn tabla under the great master (ustad) Mian Qadir Baksh.

• He also trained under Ashik Ali Khan, a vocalist admired especially for his mastery of the khayal Hindustani song repertoire

Additional Information

• Ustad Amjad Ali Khan is popularly known as the “Sarod Samrat“. He is the sixth generation sarod player in his family

• Imrat khan was an Indian sitar and surbahar player and composer.

• Ustad Faiyaz khan was an Indian classical vocalist, an exponent of the Agra Gharana of Hindustani Classical music.

**Q84. Answer: (a) Anopheles mosquito**

The correct answer is Anopheles mosquito

Key Points

• Anopheles mosquitoes Adult Females prefer to feed on humans or animals like Cattles.

• The female mosquitoes travel in the swarms to mate with some Anopheles male mosquitoes which often occur at dusk.

• Following a blood meal, female mosquitoes rest for a few days as the blood breaks down and the eggs hatch.

• With the exception of Antarctica, Anopheles mosquitoes are present almost everywhere.

• Anopheles mosquitoes spread the parasite disease malaria.

• Malaria is a parasitic infection transmitted by Anopheline mosquitoes.

Additional Information

• When fresh or stagnant water is present Adult female mosquitoes lay eggs on the surface

• There are many different places where you can find water, such as puddles, creeks, ditches, ornamental ponds, horse troughs ,unmaintained swimming pools and marshy areas.

• Single eggs are laid by female Culex mosquito.

• Aedes aegypti is a recognised carrier of a number of viruses such as the chikungunya, dengue and zika viruses.There are yearly reports of imported cases in Europe.

• Flea bites leave an itchy welt on the skin, often on the ankles and legs.

**Q85. Answer: (d) Sunil Chhetri**

The correct answer is Sunil Chhetri

Key Points

• Sunil Chhetri, captain of the Indian football team, is one of the most active goal scorers in the country.

• He is the leading goal scorer in international football for India as well as in domestic football tournaments.

• Sunil Chhetri appeared in 54 international matches for India so far and has scored 41 goals which is almost half of his total goals tally (84)

Additional Information

• Gurpreet Singh Sandhu is an Indian professional footballer who plays as a goalkeeper for Indian Super League club Bengaluru and the India national team

• Subrata Paul is an Indian professional footballer who plays as a goalkeeper for Indian Super League club ATK Mohun Bagan, on loan from Hyderabad.

• Baichung Bhutia is an Indian former professional footballer who played as a striker.

• Bhutia is considered the torchbearer of Indian football in the international arena.

• He is often nicknamed the Sikkimese Sniper because of his shooting skills in football.

**Q86. Answer: (a) Ministry of Commerce and Industry**

The correct answer is Ministry of Commerce and Industry.

Key Points

• DPI has created Startup India Seed Fund Scheme (SISFS) with an outlay of INR 945 Crore to provide financial assistance to startups for proof of Concept.

• The Startup India Seed Fund Scheme is being implemented by the government with effect from 1 April 2021.

• It provides financial assistance to eligible departments for the Promotion of Industry and Internal Trade.

• The Ministry of International Trade and the Ministry of Industry were split off from the Ministry of Commerce and Industry in July 1963.

• Currently serving as Minister is BJP member Piyush Goyal.

• Amrit Kaur was a member of Jawaharlal Nehru's first cabinet following India's independence.

Additional Information

• The head of the Ministry of Finance for the Government of India is known as the Minister of Finance or simply the Finance Minister.

The finance minister, one of the top positions in the Union Cabinet, is in charge of the nation's budget.

• The Ministry is in charge of organising all national skill development initiatives, closing the skills gap between supply and demand, developing the framework for technical and vocational education, skill up-skilling, developing new skills, and encouraging creative thinking that is not limited to existing jobs.

• The formation of policies, planning, development, export promotion, and trade regulation for the textile industry fall within the purview of the ministry of textiles. This comprises all cellulosic fibres, both natural and synthetic, used in the production of textiles, apparel, and handicrafts.

**Q87. Answer: (a) Mojave Desert of California**

The correct answer is Mojave Desert of California.

Key Points

• The Mojave Desert has provided an alien setting for fiction ranging from Star Trek to Fear and Loathing in Las Vegas because of its extreme aridity, harsh weather, and eerie scenery.

• Amid the Southwest of the United States, in the Sierra Nevada mountains' rain shadow, sits the xeric Mojave Desert.

• It has the name of the local Mojave people.

Additional Information

• A 1,600 km long stretch of land on the Pacific coast, west of the Andes Mountains, is covered by the Atacama Desert, a desert plateau in South America.

• Amazing wind-eroded landforms can be found in southeast Iran's Lut Desert.

• A desert on the continent of Africa is called the Sahara.

**Q88. Answer: (d) Patiala**

The correct answer is Patiala.

Key Points

• Lakshmi Shankar was an Indian singer and a noted Hindustani classical.

• Born into a south Indian Brahmin family.

• She became an outstanding Hindustani vocalist of the Patiala Gharana and married Rajendra Shankar, brother of Uday Shankar, a Bengali by birth.

• A special feature of the Patiala Gharana approach to singing is its rendering of intricate taans.

• Hindustani classical music is the classical music of the northern regions of the Indian subcontinent.

• It may also be called North Indian classical music or, in Hindustani.

• The Hindustani music style is mainly found in North India, Pakistan, and Bangladesh.

Additional Information

• The Gwalior Gharana evolved during the time of the Mughal Empire.

• The name Agra Rangeela Gharana, representing his soft and vibrant gayaki.

• The name of this school of music derives from Kirana, a town and tehsil of Shamli District in Uttar Pradesh.

**Q89. Answer: (c) Karan Johar**

The correct answer is Karan Johar.

Key Points

• Karan Johar has finally launched his autobiography. Titled An Unsuitable Boy, the book chronicles the life story of the celebrated filmmaker.

• The book is an honest, heart-warming, and personal account of Karan Johar's life and the business of Bollywood.

• Karan Johar is a director, screenwriter, producer, costume designer, actor, and television host.

Additional Information

• Sanjay Leela Bhansali is an Indian filmmaker, director, screenwriter, and music composer.

• Aditya Chopra is an Indian filmmaker, studio executive, and film distributor.

• Vikram Bhatt is an Indian director, producer, screenwriter, and actor.

**Q90. Answer: (a) Girija Devi**

The correct answer is Girija Devi.

Key Point

• Girija Devi was an Indian classical singer of the Seniya and Banaras gharanas.

• She performed classically and light classical music and helped elevate the profile of thumri.

• Girija Devi is also known as 'The Queen of Thumri'.

• Thumri is North India's most popular light-classical song form.

• It is developed during the 19th century at the court of Lucknow's ruler Wajid Ali Shah.

Additional Information

• Shubha Mudgal is an Indian singer of Hindustani classical music.

• Gayatri Sankaran is an Indian Carnatic musician and vocalist specializing in Carnatic vocals and violin performances.

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• Rita Devis is a Hindustani classical singer.

**Q91. Answer: (a) Jeet Thayil**

The correct answer is Jeet Thayil.

Key Point

• Narcopolis is the debut novel of Indian author Jeet Thayil, which was shortlisted for the 2012 Man Booker Prize.
• It is set in 1970s Old Bombay and concerns opium and its influence.
• The novel's narrator arrives in Bombay, where he becomes seduced into the opium underground.
• Jeet Thayil is an Indian poet, novelist, librettist, and musician.

Additional Information

• Shashi Tharoor is an Indian former international diplomat, politician, and writer.
• David Davidar is an Indian novelist and publisher.
• Anees Salim is an Indian author.

**Q92. Answer: (a) Corn starch**

The correct answer is Corn starch.

Key Points

• The starch is obtained from the endosperm of the kernel.
• These endosperms are ground into a fine, white powder.
• Corn starch is a common food ingredient.
• Corn starch is often used as a thickening agent.
• Corn starch consists of amylose and amylopectin.

Additional Information

• Gelatine is brittle when dry and rubbery when moist.
• Potato starch is a starch extracted from potatoes.
• Pectin was first isolated and described in 1825 by Henri Braconnot.

**Q93. Answer: (d) 1953**

The correct answer is 1953.

Key Points

• The government of India was forced to create the first linguist state known as Andhra Pradesh by separating the Telugu-speaking areas from the Madras state.
• The first-of-its-kind linguistic movement started in 1895.
• The movement gained momentum in later years.

Additional Information

• In 1956, the SRC recommended the creation of linguistic states.
• Recommended a bi-lingual state for Maharashtra-Gujarat.
• The Indian government declared Bombay as a centrally administered territory.

**Q94. Answer: (c) January**

The correct answer is January.

Key Points

• The historic Ajanta and Ellora caves of Aurangabad are in the spotlight during the festival.
• The Ajanta- Ellora caves evolved during the period 2nd century BC to 6th century AD.
• The paintings and sculptures of Ajanta and Ellora caves are UNESCO World Heritage Sites since 1983.

Additional Information

• There are 34 caves at Ellora dating from 11th centuries.
• These are considered masterpieces of the Buddhist religion that have had a great influence on the development of art in India.
• Ajanta and Ellora caves are Maharashtra's star tourist attractions.

**Q95. Answer: (c) Osteomalacia**

The correct answer is Osteomalacia.

Key Points

• Osteomalacia is softening of the bones.

• It most often occurs because of a problem with vitamin D, which helps your body absorb calcium.

• The body needs calcium to maintain the strength and hardness of bones.

Additional Information

• Osteopenia is when your bones are weaker than normal but not so far gone that they break easily, which is the hallmark of osteoporosis.

• Most cases of Osteomyelitis are caused by staphylococcus bacteria, types of germs commonly found on the skin or in the nose of even healthy individuals.

• A lifelong lack of calcium plays a role in the development of Osteoporosis.

**Q96. Answer: (b) Bharatanatyam**

The correct answer is Bharatanatyam.

Key Points

• Tanjore Balasaraswati, also known as Balasaraswati, was an Indian dancer, and her rendering of Bharatanatyam.

• A classical dance style originated in the South Indian state of Tamil Nadu.

• Balasaraswati became a sought-after dancer.

• Tutelage under Kandappa Pillai continued along with guidance from Gauri Ammal and Chinnaya Naidu.

• Balasaraswati, The dancer who popularised Bharatnatyam to the world.

• She founded the Dipasikha Dance Foundation in Chennai.

Additional Information

• Kuchipudi is a dance-drama performance, with its roots in the ancient Hindu Sanskrit text of Natya Shastra.

• Odissi is a dance form from the state of Odisha in eastern India.

• Mohiniyattam is a graceful dance to watch and is a solo recital by women.

**Q97. Answer: (d) UAE and Oman**

The correct answer is UAE and Oman.

Key Points

• The 2021 ICC Men's T20 World Cup was the 7th ICC Men's T20 World Cup tournament.

• The matches played in the United Arab Emirates and Oman from 17 October to 14 November 2021.

• The United Arab Emirates are the relations between the United Arab Emirates and Oman.

• With a total of 45 matches, the T20 World Cup was composed of two rounds.

• ICC T20 World Cup 2021 Most Runs was Babar Azam with 303 Runs Tops The List.

Additional Information

• The U.A.E. has an embassy in Muscat while Oman maintains an embassy in Abu Dhabi and a consulate-general in Dubai.

• U.A.E. and Oman, both countries are part of the Middle East region and share close cultural ties.

• The United Arab Emirates is one of the Persian Gulf States.

**Q98. Answer: (d) Chess**

The correct answer is Chess.

Key Points

• The golden rule of chess is a piece is safe only as long as it is defended by the same number of pieces that are attacking it.

• If your opponent attacks one of your pieces, count the number of your pieces that defend it immediately to make sure that it is safe.

• The fifty-move rule in chess states that a player can claim a draw if no capture has been made and no pawn has been moved in the last fifty consecutive moves.

Additional Information

• The name snooker comes from a comment chamberlain made about a player who missed a shot.

• Baseball is a bat-and-ball sport played between two teams of nine players each.

• Billiards, any of various games played on a rectangular table with a designated number of small balls and a long stick called a cue.

**Q99. Answer: (a) Kathak**

The correct answer is Kathak.

Key Points

• Kumudini Lakhia is an Indian Kathak dancer and choreographer based in Ahmedabad, Gujarat.

• She founded Kadamb School of Dance and Music, an institute of Indian dance music in 1967.

• She started her career dancing with Ram Gopal.

• Bharata natyam, kathakali, manipuri, kuchipudi, and odissi are among the major Indian classical dance-dramas, along with kathak, which is one among them. Native to northern India, Kathak was shaped by both Muslim and Hindu cultural influences.

• One of the eight primary styles of Indian classical dance is kathak. It is the traditional dance of Uttar Pradesh. The origins of Kathak are frequently attributed to the travelling storytellers or bards known as Kathakars in ancient northern India.

• Awards:

• Padma Shri in 1987

• Padma Bhushan in 2010

• Padma Vibhushan (posthumously) in 2025.

Additional Information

• Kumudini learned first from various gurus of Jaipur Gharana, and then from Shambhu Maharaj.

• Kumudini was the name of the mother of Rai Bahadur Ranada Prasad Shaha.

• The world-famous Kathak dancer, Pandit Birju Maharaj is the face of the Kalka-Bindadin Gharana of Lucknow.

**Q100. Answer: (b) Sahyadri Range**

The correct answer is Sahyadri Range.

Key Points

• The Krishna river is a river in the Deccan plateau and the third-longest river in India.

• The range is known as Sahyadri in Maharashtra and Karnataka.

• The smallest peak in the western that's is Kodikuthi.

Additional Information

• The Satpura Range is a range of hills in central India.

• The Vindhya Range is a complex, discontinuous chain of mountain ridges, hill ranges, highlands, and plateau escarpments in west-central India.

• The Eastern Ghats are a discontinuous range of mountains along India's eastern coast.

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