Time to climb the adder of success









AP: 98851 25025/26 TG: 92487 33361/62

MATCHED VICTORY IN CA & CMA INTER 2020, 2021, 2022 & 2023 RESUI

CMA INTER ALL INDIA 1ST RANKER

FEB 2020 RESULTS

CMA INTER

MAR 2021 RESULTS

ALL INDIA 2ND RANKER ALL INDIA 1ST RANKER ALL INDIA 1ST RANKER ALL INDIA 1ST RANKER **FEB 2022 RESULTS**

SEPT 2022 RESULTS SEPT 2023 RESULTS

K. DEEPAK JAIN HT NO. 233277



CH. PADMA RAJU HT NO. 134148



CH. YASWANTH HT NO. 433780



RISHAB OSTWAL R HT NO. 723800



L. VAGDHEVA REG NO. 02212134955

ONLY INSTITUTE IN SOUTH INDIA TO **HAVE NEARLY "3000" ADMISSIONS** PER ANNUM AT CA FINAL & **CMA FINAL LEVEL** (OFFLINE AND ONLINE).

ONLY INSTITUTE IN SOUTH INDIA TO **HAVE NEARLY "5000" ADMISSIONS** PER ANNUM AT CA INTER & CMA INTER LEVEL (OFFLINE AND ONLINE).

MASTERMINDS FOR CA & CMA



🔟 MASTERMINDSFOR CA 💘 MASTERMINDS FOR CA



106 IPCC/CA INTER RA THE LAST 10.5 YEARS



























HT No:365158



V. HEMANTH HT No:158220























































































































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DO YOU KNOW ?

YOU CAN JOIN CA INTER
EVEN IF YOU FAIL IN
CA FOUNDATION.
(CA & CMA INTER
INTEGRATED PROGRAM)

FOR FULL DETAILS SCAN THIS OR CODE



HERE IS HOW?

MASTERMINDS INTRODUCED CA & CMA INTER INTEGRATED PROGRAM

FOR THOSE STUDENTS WHO QUALIFIED CMA FOUNDATION
BUT FAILED IN CA FOUNDATION

HIGHLIGHTS OF CA & CMA INTER INTEGRATED PROGRAM:

- >> AT FIRST WE WILL OFFER COACHING FOR THE COMMON SYLLABUS OF CA & CMA INTER WITH CA INTER MATERIALS AND LATER OFFER COACHING FOR EXCLUSIVE SYLLABUS OF CMA INTER.
- >> STUDENTS WILL APPEAR FOR CMA INTER AND GET QUALIFIED IN BOTH GROUPS OF CMA INTER.
- >> AFTER QUALIFYING BOTH GROUPS OF CMA INTER, STUDENTS CAN DIRECTLY GET REGISTERED FOR CA INTER WITHOUT QUALIFIYING CA FOUNDATION (CALLED DIRECT ENTRY SCHEME FOR CA INTER). CA FOUNDATION IS EXEMPTED FOR THOSE STUDENTS WHO QUALIFIED CMA INTER AND SUCH STUDENTS CAN REGISTER DIRECTLY FOR CA INTER.

DON'T MISS THIS WONDERFUL PATHWAY OF DUAL QUALIFICATION.





OUR SINGLE DIGIT RANKS IN IPCC / CA INTER LEVEL EXAMS



CA INTER FEB 26th, 2022





CA IPCC JULY 30th, 2018





HT NO. 362439

CA IPCC JULY 30th, 2018





CA IPCC AUG 23rd, 2019





CA INTER FEB 26th, 2022



J. BIKSHALU BABU HT NO. 365158

CA IPCC FEB 4th, 2015





- **MASTERMINDS FOR CA & CMA**
- **MASTERMINDSFOR CA**
- **WASTERMINDS FOR CA**
- **WWW.MASTERMINDSINDIA.COM**

AP: 98851 25025/26 TG: 92487 33361/62

WHEN YOU THINK OF TAKING ADMISSION IN MASTER MINDS LOOK AT "OUR COMMITMENT" IN DELIVERING THE SERVICES TO "OUR STUDENTS" THAN "OUR RANKS".



Think COMMERCE, Think MASTER M

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nd G. BHARGAV **RANK** REG NO. 02191054920 All India 2nd Rank 🚱 పాటు CMA INTER & CMA FINAL නි

మా విద్యార్ధులు మొత్తం

85 ర్యాంకులు సాధించారు.

- ఒక రోజు ర్యాంకులు మాత్రమే.
- సమానమైన మార్కులు వచ్చిన విద్యార్ధులు అందలికి ఒకే ర్యాంకు ప్రకటిస్తారని గమనించగలరు.

CMA INTER లో మా విద్వార్తులు **సాభించిన 50** ర్వాంకులు

ALL INDIA 5,7,7,7,8,9,10,11,15,15, 16,19,19,19,20,21,22,22,23,26,27, 27,28,29,29,29,31,32,34,34,35,36, 37,38,38,39,41,41,41,41,41,43,43, 43,45,46,48,49,50,50,Ranks

CMA FINAL లో మా విద్యార్థులు సాభించిన 35 ర్యాంకులు

ALL INDIA 2,6,9,13,14,15, 16,16,19,23,23,25,26,28, 28,30,30,31,31,33,34,34, 34,35,36,37,39,40,40,40, 41,43,47,47,48 Ranks



- GUNTUR
- VIJAYAWADA
- VIZAG
- HYDERABAD
- **NELLORE**
- RAJAHMUNDRYKURNOOL

ఈ ప్రకటనలో పివైనా ముద్రణాదోషాలుంటే సహ్యదయంతో మాద్ర



Think CA & CMA Think MASTER MINDS

MAN SHOW" in Sept 26th, 2023 CMA Results





SI



OUR STUDENTS HAVE ACHIEVED A TOTAL OF 68 RANKS IN CMA INTER & CMA FINAL. THESE ARE NOT OUR LIFETIME RANKS, **BUT ONLY ONE-DAY RANKS. SAME RANK CAN BE AWARDED TO** MULTIPLE STUDENTS SECURING SAME MARKS.

DETAILS OF THE 44 RANKS ACHIEVED BY MASTER MINDS STUDENTS IN CMA INTER.

ALL INDIA 1,2,4,5,6,7,8,9,14,15,16, 17,17, 18,18,19,21,21,22,23,24,24,25, 26,26,28,28,31,33,35,36,36,37,41,42, 43,44,45,46,46,48,49,49,49 Ranks

DETAILS OF THE 24 RANKS ACHIEVED IN CMA FINAL.

ALL INDIA 1,2,3,7,10, 12,16,17,18,18,18,21, 31,32,33,34,39,40,41, 41,42,45,46,48 Ranks



CS • MEC • CEC

GUNTUR | RAJAHMUNDRY | KURNOOL | VIZAG | NELLORE

VIJAYAWADA

IF THERE ARE ANY PRINTING ERRORS IN THIS ADVERTISEMENT, KINDLY PLEASE BRING TO OUR NO

- GUNTUR
- VIJAYAWADA
- VIZAG
- HYDERABAD
- TIRUPATHI
- NELLORE
- RAJAHMUNDRYKURNOOL

A VICTORY NEVER BEFORE IN THE HISTORY. "ONE MAN SHOW" IN SEPT 27, 2022 CMA RESULTS





OUR STUDENTS HAVE SECURED 125 RANKS
IN CMA INTER AND CMA FINAL PUT TOGETHER,
INCLUDING 1ST & 2ND RANKS.
THESE ARE NOT OUR LIFE TIME RANKS,
THESE ARE JUST ONE DAY RANKS.
SAME RANK CAN BE AWARDED TO
MULTIPLE STUDENTS SECURING SAME MARKS.

DETAILS OF 86 ALL INDIA RANKS SECURED IN CMA INTER

ALL INDIA 1,3,4,5,6,8,10,13,13,14, 16,18,19,20,20,21,21,22,24,24,24, 26,27,28,28,28,28,29,29,29,30,30, 31,33,33,34,35,37,37,38,38,39,39, 39,39,39,39,40,41,41,41,41,41,41,42, 43,43,43,43,43,44,44,45,45,45,45,46, 46,46,46,46,47,47,48,48,48,49,49,49,49,49,50,50,50,50,50,50,50,50 Ranks

DETAILS OF 39 ALL INDIA RANKS SECURED IN CMA FINAL

ALL INDIA 2,3,11, 15,16,16,18,19,21, 24,26,27,27,28,34, 35,35,36,37,37,39, 39,39,40,40,40,40, 41,41,41,42,43,43, 44,44,45,45,46, 49 Ranks

ALL INDIA RANKS AT CMA INTER & FINAL LEVELS IN THE LAST 19 EXAMS / RESULTS.

OUR STUDENTS AND STAFF MADE US TO FEEL PROUD. SINCERE THANKS TO THEM

JAN 2024 EXAMS (FEB 2024 RESULTS) JULY 2023 EXAMS (SEP 2023 RESULTS) JAN 2023 EXAMS (MAR 2023 RESULTS) JULY 2022 EXAMS (SEPT 2022 RESULTS) DEC 2021 EXAMS (FEB 2022 RESULTS) DEC 2020 EXAMS (MAR 2021 RESULTS) DEC 2019 EXAMS (FEB 2020 RESULTS) JUNE 2019 EXAMS (FEB 2019 RESULTS) JUNE 2019 EXAMS (FEB 2019 RESULTS) JUNE 2018 EXAMS (FEB 2018 RESULTS) JUNE 2017 EXAMS (FEB 2018 RESULTS) JUNE 2017 EXAMS (FEB 2017 RESULTS) JUNE 2016 EXAMS (FEB 2016 RESULTS) JUNE 2015 EXAMS (FEB 2015 RESULTS) JUNE 2015 EXAMS (AUG 2015 RESULTS) JUNE 2014 EXAMS (FEB 2015 RESULTS) JUNE 2014 EXAMS (FEB 2014 RESULTS) JUNE 2014 EXAMS (FEB 2014 RESULTS) TOTAL 822		
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DEC 2013 EXAMS (FEB 2014 RESULTS) 7	DEC 2014 EXAMS (FEB 2015 RESULTS)	12
	JUNE 2014 EXAMS (AUG 2014 RESULTS)	15
TOTAL 822	DEC 2013 EXAMS (FEB 2014 RESULTS)	7
	TOTAL	822

DEAR CA FOUNDATION STUDENTS,

If you think that your performance is not upto the mark and you may fail in the coming results, then Don't wait till the declaration of CA Foundation results (AUG 7th 2024). Take your admission in Recently started CA Foundation Regular batch now itself. If you wait till the Declaration of CA Foundation results you will be hardly left with less than 5 months time to prepare yourself for JAN 2025 CA Foundation exams. 5 months is highly insufficient to offer proper coaching and to conduct revision exams.

CA INTER REGULAR BATCH
(PRE RESULTS) - JULY 3rd, 2024
CA INTER REGULAR BATCH
(POST RESULTS) - AUG 8th, 2024
(AVAILABLE AT ALL OUR BRANCHES IN

OFFLINE AND ONLINE MODES)

FOR FREE DEMO VIDEOS
OF OUR LECTUERES
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MARATHON CLASSES FOR ALL SUBJECTS

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MASTERMINDS FOR CA & CMA

GETTING A RANK BECOMES EASY WHEN YOU ARE BACKED BY AN EXPERIENCED TEAM LIKE MASTER MINDS



CA FOUNDATION 2019 RESULTS



K. SAI SRIKAR HT NO. 613539

BIG NEWS

OUR STUDENT SECURED 362 MARKS AT FOUNDATION LEVEL IN TODAY'S RESULTS (SEPT 13, 2021) WHICH IS MORE THAN THE ALL INDIA1ST RANK IN FEB 2021 RESULTS

> 362/400 MARKS



P. POOJITHA REDDY H.NO. 140552

This could be one of the highest score at All India Level.
Earlier ICAI used to declare Ranks at CA Foundation level.
But this time they have not announced Ranks
at CA Foundation level.

CA FOUNDATION - BUSINESS MATHEMATICS JUNE 2024 ATTEMPT - MEMORY BASED OUESTION PAPER

1. RATIOS & PROPORTIONS

- 1) If 4 numbers 1/4, 1/6, 1/10 and 1/x are in proportional, then what is the value of x?
 - a) 14
- b) 15
- c) 10
- d) 1/12

3. THEORY OF INDICES & SURDS

- 2) If $2^x = 4^y = 8^z$ and $\frac{1}{2^x} + \frac{1}{4y} + \frac{1}{6z} = \frac{24}{7}$ then value z is.
 - a) $\frac{7}{16}$

4. LOGARITHMS

- **3)** If $log_a{}^b = 3$, $log_b{}^c = 2$ then $log_a{}^c = ?$
 - a) 9
- b) 6
- c) 5

5. RELATIONS & FUNCTIONS

- 4) Consider the following relations on A = {1, 2, 3}, R = {(1, 1), (1, 2), (1, 3), (3, 3)} S = {(1, 1), (1, 2), (2, 1), (2, 2), (3, 3)} T = {(1, 1), (1, 2)2), (2, 2), (2, 3)}, \emptyset = empty set. Which one of these forms an equivalence relation?
 - a) Ø
- b) S
- c) T
- d) R

6. SEQUENCE & SERIES

- **5)** In AP if 7^{th} term is x, and $(x+7)^{th}$ term zero, then xth term is
 - a) 6
- b) 7
- c) 8
- d) 10
- 6) If the 2nd and 8th term of AP are equal to constant a, then the sum of first n terms of this AP is equal to
 - a) na
- b) a/n
- c) 2n + n(a 1)
- d) n + a(n 1)
- 7) The 3rd term of AP is 7 and 7th term is 2 more than thrice the third term. Then the common difference is
 - a) 4
- b) 3 c) 5 d) 6

- 8) If the arithmetic mean of two numbers is 10 and the geometric mean is 6, then the difference in the numbers is
 - a) 12
- b) 14
- c) 16
- d) 8

7. EOUATIONS

- 9) The roots of the equation $x^2 7x + 10 = 0$
 - a) -2&-5
- b) 2 & 5
- c) -2&5
- d) 2&-5
- **10)** If α and β are roots of the equation $x^2 8x$ + 12 = 0 then $\frac{1}{\alpha}$ + $\frac{1}{\beta}$
- a) $\frac{2}{3}$ b) $\frac{2}{4}$ c) $\frac{3}{4}$
- **11)** The roots of the equation x^3 $3x^2$ -4 x + 12 = 0 has three real roots. They are:
 - a) -2,2,3
- b) -2, -2,3
- c) 2, -2, -3
- d) -2.2. -3
- 12) A fraction becomes 1 when 3 are added to the numerator and 1 is added to the denominator. but numerator denominator are decreased by 2 and 1 respectively, it becomes ½. The denominator of fraction is
 - a) 5
- b) 6
- c) 7
- d) 8
- **13)** If α and β are roots of the equation ax^2+bx +c=0, then the equation whose roots are $\frac{1}{2}$ and $\frac{1}{8}$ is:
 - a) $cx^{2}-bx+a=0$
- b) $cx^2+bx+a=0$
- c) $x^2+bx+a=0$
- d) $x^2+bx-a=0$

8. PERMUTATIONS & COMBINATIONS

- 14) In how many ways can 5 boys 3 girls sit in a row so that no two girls are together
 - a) 14,400
- b) 14,000
- c) 14.425
- d) 12,400
- 15) In how many ways the letters of the word "STADIUM" be arranged in such a way that all vowels all occur together?
 - a) 7!.4! b) 7!.3!
- c) 5!.4! d) 5!.3!

- 16) A user wants to create a password using 4 lower case letters (a-z) and 2 uppercase letters (A-Z). No letter can be repeated in any form. In how many ways can the password be created if the password be created if the password must start with an uppercase letter?
 - a) 26 x 25 x 24 x 23 x 22 x 5 x 21
 - b) 26 x 25 x 24 x 23 x 22 x 2 x 21
 - c) 26 x 5 x 25 x 24 x 23 x 2 x 22 x 21
 - d) 6 x 26 x 25 x 24 x 23 x 22 x 21
- 17) How many ways can 5 different trophies can be arranged on a shelf if one particular trophy must always be in the middle?
 - a) 24
- b) 120
- c) 48
- d) 144

9. LINEAR INEQUALITIES

- **18)** Given the constraints, $x \le 3$, $y \le 4$ and $4x+3y \le 12$, the point ____ is in the feasible region. (Select from the below given list)
 - a) (3, 4)
- b) (2,4)
- c) (2, 2)
- d) (1, 1)
- 19) A senior typist can type five reports and a junior typist can type three reports per day. But the management needs to complete atleast 30 reports in a day. If S and J denote the number of senior and junior typists assigned for the work, which of the following inequality represents the constraint?
 - a) $5S + 3J \le 30$
- b) $5S + 3I \ge 30$
- c) 3S + 5J > 35
- d) 3S + 5J < 30

10. TIME VALUE OF MONEY

- **20)** An amount of ₹4500 becomes ₹7200 in two years at S.I rate of :
 - a) 15%
- b) 25%
- c) 30%
- d) 40%
- 21) You bought a painting 10 years ago as an investment. You originally paid ₹ 85,000 for it.If you sold it for ₹4,84,050 ,what was your annual return on investment?
 - a) 47%
- b) 4.7%
- c) 19%
- d) 12.8%

- **22)** If the interest rate on a loan is 1% per month, then the effective annual rate of interest is
 - a) 12%
- b) 12.36%
- c) 12.68%
- d) 12.84%
- **23)** At 8% compounded annually, how long will it take ₹750 to double?
 - a) 6.5 years
- b) 48 months
- c) 9 years
- d) 12 years
- **24)** The difference between C.I & S.I for a period of 2 years ,at same interest rate r, is _____
 - a) $P \times r^2$
- b) $P \times \frac{r}{2}$
- c) P x 2r
- d) $P^2 \times r$
- **25)** Ram borrowed ₹5000 at 12.5% per annum compound interest. The money was repaid after 3 years. The total interest paid by him approximately is _____, if (1.125)³ =1.4238
 - a) ₹2119
- b) ₹2200
- c) ₹2000
- d) ₹2500
- **26)** A person invests in a fund that pays 4% per annum for 4 years. The future value of current ₹4000 would be (Use if needed $(1.04)^4 = 1.1698$, $\frac{1}{(1.04)^4} = 0.8548$, $(1.04)^6 = 1.2160$ and $\frac{1}{(1.04)^6} = 0.8219$)
 - a) ₹3419
- b) ₹4679
- c) ₹4866
- d) ₹3287
- 27) What is the present value of an investment that pays ₹ 400 at the end of 3 years and ₹.500 at the end of 6 years?
 - a) ₹320
- b) ₹335
- c) ₹340
- d) ₹280
- **28)** Assuming that the discount rate is 12% per annum, how much would you pay to get ₹100, growing at 4%, annually, forever?
 - a) Rs.1,425
- b) Rs.1,300
- c) Rs.1,250
- d) Rs.1,150
- **29)** Find the future value of an annuity of Rs.5000 is made annually for 6 years at the rate of interest 12% compounded annually, if (1+0.12)⁶ 1.9738.
 - a) Rs.45,575
- b) Rs.40,575
- c) Rs.39,465
- d) Rs.37,868

- 30) If a loan of ₹ 30,000 is to be paid in 5 annual instalments with interest rate of 14% per annum, then the equal annual instalment will be (Take P(5.014) = 3.43305)
 - a) ₹7400
- b) ₹8100
- c) ₹8738
- d) ₹8322
- 31) What is the present value of Rs.5,000 to be obtained after six years if the interest rate is 5% p.a.? (Use the following if needed: $\frac{1}{1.05^n}$ =0.74621,0.71068,0.67686 and 0.64462, for n = 6,7,8 and 9 respectively.)
 - a) Rs.3,731
- b) Rs.3,553
- c) Rs.3,384
- d) Rs.3,223
- 32) Find the effective rate of interest if an amount of ₹40,000 deposited in a bank for 1 year at the rate of 10% compounded semi annually.

 - a) 10.20% p.a. b) 10.05% p.a.

 - c) 10.25% p.a. d) 10.10% p.a.
- 33) You are considering two investments:

Investment A yields 10% compounded Investment В vields compounded semi-annually.

Both Investments have equal annual yields. Find r.

- a) 19.873%
- b) 10%
- c) 10.38%
- d) 10.125%

11. LIMITS AND CONTINUITY

- **34)** If $\lim_{x\to 2} \frac{x^2-4x+4}{x-2} =$
 - a) 0
- b) 1
- c) 2
- d) 0.5

12. DIFFERENTIAL CALCULUS

- **35)** If $f(x) = (x + 1)^{(x+1)}$ then find $f^1(0)$
- a) 0 b) 1 c) -1 d) 2
- **36)** If f(x) = (x 1) x (x + 1) then $\frac{dy}{dx}$

 - a) $3x^2 1$ b) $3x^2 + 1$
 - c) $x^2 3$
- d) $x^2 + 3$
- **37)** If a function is given by $f(x) = e^{3x}$, what is the derivative of the function?
 - a) $3.e^{3x}$
- c) $3xe^{3x}$
- d) $3e^{3x} + 3$
- **38)** Find $\frac{dy}{dx}$ for $x^2y^2 + y = 0$
 - a) $\frac{dy}{dx} = \frac{2y^2x}{2v^2x^2+1}$ b) $\frac{dy}{dx} = \frac{-2y^2x}{2yx^2+1}$
 - c) $\frac{dy}{dx} = \frac{-2y^2x}{2y^2x^2}$ d) $\frac{dy}{dx} = \frac{2y^2x}{2y^2x^2}$

13. INTEGRAL CALCULUS

- **39)** Evaluate $\int_0^1 x^2 \sqrt{x^3 + 4} \, dx$
 - a) $\frac{2}{9} \left(4^{\frac{3}{3}} 3^{\frac{3}{2}} \right)$ b) $\frac{2}{9} \left(5^{\frac{3}{2}} 4^{\frac{3}{2}} \right)$
 - c) $\frac{2}{9} \left(4^{\frac{3}{2}} + 3^{\frac{3}{2}} \right)$ d) $\frac{2}{9} \left(5^{\frac{3}{2}} + 4^{\frac{3}{2}} \right)$
- **40)** $\int_0^1 u(1-u)^{10} dv$
 - a) $\frac{1}{10 \times 11}$ b) $\frac{1}{12 \times 11}$

 - c) $\frac{1}{10 \times 9}$ d) $\frac{1}{12 \times 13}$

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CA FOUNDATION - STATISTICS JUNE 2024 ATTEMPT - MEMORY BASED OUESTION PAPER

1. MEASURES OF CENTRAL TENDENCY - 1

- 1) Which of the following measure of central tendency depends on the position of the observation?
 - Mean
- b) Median
- c) Mode
- d) Harmonic mean
- 2) Which of the following measure of central tendency will be unaffected if the lower and highest observations are removed?
 - a) Mean
- b) Mode
- c) Median
- d) Range
- 3) The mean of a set of 20 observations is 18.3. The mean is decreased by 0.6 when a new observation is added to the set. The new observation is:
 - a) 17.6
- b) 18.9
- c) 5.7
- d) 24.6
- If there are two groups containing 40 and 30 observations and have arithmetic means as 50 and 60, then the combined arithmetic mean is:
 - a) 55.48
- b) 56.35
- c) 54.28
- d) 59.28

2. MEASURES OF CENTRAL TENDENCY - 2

- 5) If Mean of a data set 22 and Median is 22.33, then the Mode is:
 - a) 21
- b) 21.34
- c) 22.99
- d) 21.54

3. MEASURES OF DISPERSION

- 6) For the first 20 natural numbers, the standard deviation is:
 - a) 5.77
- b) 7.75
- c) 5.64
- d) 6.54
- 7) If Mean Deviation about Arithmetic Mean is 1.78 and Arithmetic Mean is 3.50 then coefficient of Mean Deviation about Arithmetic Mean is:
 - a) 50.85
- b) 44.33
- c) 52.65
- d) 51.85

- 8) The coefficient of the range of the data 7, 8, 4, 1, 9, 12, 18, 16, 94, 3, 5, -6 is
 - a) 133.6
- b) 163.3
- c) 166.3
- d) 113.6
- 9) If in a data a set, 25% of values are less than 30 and one-fourth values are greater than 90, then coefficient of QD
 - a) 40
- b) 30
- c) 70
- d) 50
- **10)** Consider the data sets: X = {-6, 2, -2, 6}; Y = $\{4, 8, 2, 6\}; z = \{103, 100, 102, 101\}. Let S_X,$ S_V and S_Z be the standard deviations of the sets X, Y and Z respectively. We have the relation:

 - a) $S_x < S_y < S_z$ b) $S_z < S_y < S_x$
 - c) $S_x < S_z < S_v$
- d) $S_v < S_z < S_x$
- 11) If Arithmetic Mean and coefficient of variation of y are 5 & 20 respectively, the variance of 12 - 3y
 - a) 9
- b) 81
- c) 3
- 100 d)

4. CORRELATION

- **12)** If cov(x, y) = -2.15, $S_x = 1.30$; $S_y = 2.50$ then find correlation coefficient r?
 - a) -0.66 b) 0.66
- c) 0.76
- d) 0.99
- 13) Spearman's Correlation Coefficient is used to check:
 - a) The scattering of the data
 - b) The relationship in variables
 - c) The median of a data
 - d) The range of a data
- 14) The range of the correlation coefficient is:
 - a) Between -1 and 1
 - b) Between -1 and 1 including 1
 - c) Between -1 and 1 including -1
 - d) Between -1 and 1 including -1, 1
- 15) For a group of 10 students the sum of squares of difference in ranks for Physics and Chemistry marks was 60, what is the value of rank correlation coefficient. (Choose the nearest value)
 - a) 0.636
- b) 0.725
- c) 0.698
- d) 0.842

5. REGRESSION

- **16)** If the regression lines 3x 4y 8 = 0 and 4x- 3y = 1 then the correlation coefficient between x and y is:
 - a) 3/4
- b) 3/8
- c) 4/8
- d) 1/4

6. INDEX NUMBERS

- 17) The average of base year and current year is used in index number.
 - a) Laspeyres's
 - b) Paasche's
 - c) Fisher's ideal
 - d) Marshall Edgeworth
- 18) Which index number formula does not satisfy the time reversal test?
 - a) Fisher's ideal index & Laspeyre's index
 - b) Laspevre's index & Paasche's index
 - c) Paasche's index & Fisher's ideal index
 - d) Laspeyre's index, Fisher's ideal index and Paasche's index
- 19) If the prices of all commodities in the base year are twice the values of respective commodities in the current year, then the Fisher's ideal index number is equal to:
 - a) 200
- b) 50
- c) 400 d) 25
- 20) Which index number formula satisfies both the time reversal test and factor reversal tests?
 - a) Fisher's ideal index
 - b) Laspeyre's index
 - c) Paasche's index
 - d) Marshall-Edgeworth index
- 21) Which of the following is not a test of adequacy in the context of index numbers?
 - a) Unit test
 - b) Square test
 - c) Circular test
 - d) Factor reversal test

7. STATISTICAL DESCRIPTION OF DATA - 1

NIL

8. STATISTICAL DESCRIPTION OF DATA – 2

- 22) Two frequency distribution are given to you. To compare them visually the best diagram to be drawn on same sheet is:
 - a) Pie Chart
- b) Histogram
- c) Frequency polygon
- d) Bar chart
- 23) A less than ogive curve drawn by plotting
 - a) Less than cumulative frequency on the vertical axis
 - b) More than cumulative frequency on the vertical axis
 - c) Highest frequencies on vertical axis
 - d) Lowest frequencies on vertical axis
- 24) The following set of data cannot be presented in a table.
 - a) The heights of students described in centimeters
 - b) The weights of candidates expressed in kilograms
 - The amount of rainfall opined as "medium", "average", "heavy", etc.
 - d) The number of bills per day cleared by an auditor in a month
- 25) A histogram & pie chart represent the same data on monthly expenses of a household. Which statement is most likely true?
 - The histogram only shows the frequency of each expense category, while the pie chart shows the proportion of each category.
 - Both the histogram and pie chart show the frequency of each expense category.
 - c) Both the histogram and pie chart show proportion of each expense the category.
 - Pie charts are always better than histograms for representing expenses.
- 26) An ogive is used to represent:
 - a) The frequency of each data point
 - b) The number of data points falling below a specific value
 - The proportion of data points falling below a specific value
 - d) The relationship between two variables

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- 27) According to the empirical rule, if the data form a "bell-shaped" distribution, then the maximum and minimum frequencies occur at and respectively.
 - a) Middle, left end
- b) Middle, right end
- c) End, Middle
- d) Middle, ends

9. PROBABILITY

- 28) A number is selected at random from the set $\{1, 2 - - - 99\}$. The probability that it is divisible by 9 or 11 is _
 - a) 19/100
- b) 19/99
- c) 10/100
- d) 10/99
- 29) Two coins are tossed. Define the events A = {"the first toss is head"}, A_2 = {"number of heads is 2"}, A_1 = {"number of heads is 1"}, $A_0 = \{\text{"number of heads is 0"}\}\ \text{and}\ A_3 = \{\text{"both of heads is 0"}\}\$ outcomes are alike"}. The event A is independent of
 - a) A_2
- b) A_3
- c) A_0
- d) A_1 and A_0 both
- 30) From a bag containing 4 red, 5 blue and 6 white caps, two caps are drawn without replacement. What is the probability that the caps are of different colours?
- b) $\frac{37}{105}$

- A question in statistics is given to three students A, B and C. Their chances of solving the question are 1/3, 1/5 and 1/7 respectively. The probability that the question would be solved is:
- b) $\frac{16}{35}$

- 32) A company produces two types of products, A and B. The probability of a defective product in type A is 0.05 and in type B is 0.03. If the company produces 60% type A and 40% type B, what is the probability of a randomly selected product being defective?

 - a) 0.042 b) 0.03 c) 0.048 d) 0.052

10. RANDOM VARIABLES

33) A random variable has the following probability distribution:

X	2	3	5
Р	K	2K	2K

Find K.

- a) $\frac{1}{3}$
- b) $\frac{2}{5}$ c) $\frac{1}{5}$
- 34) The following table gives the cumulative probability function of X:

Х	0	1	2	3	4	5
P(X)	6/30	5/30	13/30	1/15	1/10	1/30

The expectation of X is ___

- a) 1.8
- b) 1.7
- c) 1.5
- d) 1.6

11. THEORETICAL DISTRIBUTION

- 35) For a normal distribution, the ratio of MD and SD
 - a) 0.4
- b) 0.6
- c) 0.8
- d) 1.0
- **36)** The mean of Poisson distribution is 4. The probability of two successes is:
- a) $\frac{8}{a^4}$ b) $\frac{4}{a^4}$ c) $\frac{16}{a^4}$
- 37) For a binomial distribution, variance is 0.2 and the mean is 0.6. The probability of getting 3 successes out of a trial of 5 is

- 38) A company produces 5 defective items out of 300 items. The probability distribution follows a:
 - a) Binomial distribution
 - b) Normal distribution
 - c) Poisson distribution
 - d) Standard normal distribution

12. SAMPLING

- 39) Which of the following is not a type of sampling?
 - a) Probability
- b) non-probability
- c) Stand-alone
- d) Mixed
- **40)** Which sampling is based on the discretion of the sampler?
 - a) Systematic
- b) multi-stage
- c) Stratified
- d) Purposive

HAPPY LEARINING

CA FOUNDATION - LOGICAL REASONING JUNE 2024 ATTEMPT - MEMORY BASED OUESTION PAPER

1.SERIES

- next **1)** What comes in the series: FMAMJJASON?
 - a) DJM b) DBM c) DJF d) DDJ
- 2) Find the missing value in the series: 51, 52, 60, 87, 151, _____ 492.?
 - a) 195
- b) 276
- c) 317
- d) 420

2.ODDMAN OUT

- 3) In a series of letters, which one is the odd one out: BDFH, JLNP, RTVX, ZBDE?
 - a) BDFH
- b) JLNP
- c) RTVX
- d) ZBDE

3.CODING-DECODING

- 4) In a certain code TEACHER is written as VGCEJGT, how is CHILDREN written in that code.?
 - a) EJKNEGTP
- b) EGKNFITP
- c) EJKNFGTO
- d) EJKNFTGP
- 5) In a certain code INACTIVE is written ns VTTCANIE, how is COMPUTER written in the same code.?
 - a) PMOCRETU
- b) ETUPMOCR
- c) UTEPMOCR
- d) MOCPETUR

4.DIRECTIONS

- 6) Ram started walking from A, 200 m towards North to reach B. Then he turned right and walks 300 m to reach C. Then he turns right and walks 350 m to reach D. Then he turns left and walks 150 m to reach E. Finally, he turns left and walks 150 m. He arrived at the point F. What is the distance between point A and F?
 - a) 450 m
- b) 200 m
- c) 250 m
- d) 300 m
- 7) Roy walks 2 kms to West, then turns and starts walking South-East. He walks 3 kms. Then he turns North and walks 5 kms. Then again, he turns East and walks 2 kms. Finally, he turns South and walks 6 kms. In which direction, is from the starting point?

- a) South-West
- b) South-East
- c) North-East
- d) North-West
- 8) Shyam walks 12 m South from his house, turns left and walks 20 m, again turns left and walks 45 m again turns right and walks 10 m to reach coffee shop. In which direction is coffee shop from his house?
 - a) South-West
- b) East
- c) North-East
- d) North
- 9) A car starts from a point, runs 20 kms towards north, turns right and runs 35 kms, turns right again and runs. Which is the direction now it is facing?
 - a) North
- b) South
- c) East
- d) West
- 10) If Shyam sees the rising sun behind the tower and setting sun behind the Railway station from his house. What is the direction of tower from Railway station?
 - a) South b) North c) West d) East

5.BLOOD RELATIONS

- 11) A says B is my sister's son, B says D is my father-in-law, C says D is my wife's brother. What is the relationship between A and D?
 - a) Uncle -nephew
- b) Brother-sister
- c) Father-son
- d) Cousins
- 12) A is B's sister, C is B's mother, D is C's father, E is D's mother. How is A related to D?
 - a) Grandmother
- b) Grand father
- c) Daughter
- d) Grand Daughter
- 13) Raju is a husband of Devi, Karan is father of Gopal, Arjun is a son of Shobha, Ashok is brother of Shobha, Karan is a father of arjun, Karan is son-in-law of devi, then how is Raju is related to Arjun?
 - a) Father
- b) Uncle
- c) Son-in-law
- d) Grand father
- **14)** Pointing towards a photograph Mrs. x says, "This man's son's sister is my mother-in-law. How is Mrs. x husband is related to a man in the photograph?
 - a) Son
- b) Grand son
- c) Brother
- d) Daughter

- **15)** X, is a male introduces Y saying, He is the husband of the granddaughter of the father of my father. How is Y related to X?
 - a) Brother
- b) Father
- c) Brother-in- law
- d) Father-in-law

6.SEATING ARRANGEMENTS

- 16) Five players named as A, B, C, D and E are sitting on a bench, facing south, and are waiting to be interviewed by a selector. The person C is an immediate neighbor of both A and B, the person A is the fourth person from right end, If E is to right of B, then where is E sitting?
 - a) Fifth from right end
 - b) Fourth from right end
 - c) Fifth from left end
 - d) Second from right end
- 17) The persons named U, V, W, X, Y and z are sitting along the circumference of a round table. They are facing the center of the round table. Given: X is the third left of Z and U is the second right of X; W is third to Y's right. Then V is sitting immediate left to
 - a) V
- b) U
- c) W
- d) X

- **18)** Eight friends A. B, C. D, E, F, G, and H are sitting around a circular table facing the Centre. A is sitting two places to the right of B, who is sitting directly opposite D. C is sitting to the immediate left of B and to the immediate right of E. F, who is opposite to G, is not sitting next to A. Who is sitting to the immediate left of H?
 - a) A
- b) B
- c) C
- d) D
- 19) 5 persons are standing in a line. The 2 persons at the extreme ends are a professor and a businessman. An advocate is standing to the right of student. An author is to the left of the businessman. Counting from the Professor's end. the author is at which place?
 - a) 2nd
- b) 3rd
- c) 4th
- d) 5th
- **20)** A, B, C, D, E and F are standing in a circle talking, facing inward, E is right of C, who is standing 3 places away from D. A is standing 2 seats away from F.

Which of the following has to be true?

- a) A is standing opposite to C
- b) A is standing next to E
- c) A is standing next to D
- d) A is standing next to B

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- 41 ALL INDIA RANKS IN CA INTER IN THE LAST 10 ATTEMPTS[TILL NOV 2023 ATTEMPT]
- 2024 50 ALL INDIA RANKS IN CMA INTER RESULTS OF DEC 2023 ATTEMPT INCLUDING ALL INDIA 5TH RANK.
- OWN HOSTEL FACILITY FOR BOYS & GIRLS.



CA FOUNDATION - BUSINESS MATHEMATICS JUNE 2024 ATTEMPT - PROBABLE SUGGESTED ANSWERS

1) $\frac{1}{4}$, $\frac{1}{6}$, $\frac{1}{10}$, $\frac{1}{x}$ are in proportion.

$$\frac{1}{4}$$
. $\frac{1}{x} = \frac{1}{6}$. $\frac{1}{10}$

$$\frac{1}{4x} = \frac{1}{60}$$

$$4x = 60$$

Option: b)

2) $2^x = 4^y = 8^z$

$$2^x = 2^{2y} = 2^{3z}$$

$$x = 2y = 3z$$

Let,
$$x = 2y = 3z = k$$

Now,
$$\frac{1}{2x} + \frac{1}{4y} + \frac{1}{6z} = \frac{24}{7}$$

$$\frac{1}{2.k} + \frac{1}{4 \times \frac{k}{2}} + \frac{1}{6 \times \frac{k}{2}} = \frac{24}{7}$$

$$\frac{1}{2k} + \frac{1}{2k} + \frac{1}{2k} = \frac{24}{7}$$

$$\frac{3}{2k} = \frac{24}{7}$$

$$K = \frac{7}{16}$$

$$\therefore 3z = k \rightarrow 3z = \frac{7}{16} \rightarrow z = \frac{7}{48}$$

Option: c)

3) Given, $\log_a^b = 3$, $\log_b^c = 2$

Now,
$$\log_a^c = \log_b^c \times \log_a^b$$

$$= 2 \times 3 = 6$$

Option: b)

4) $A = \{1,2,3\}$

R =
$$\{(1,1) (1,2) (1,3) (3,3)\} \rightarrow \text{Not reflexive}$$

$$S = \{(1,1) (1,2) (2,1) (2,2) (3,3)\}$$

"S" is Reflexive, symmetric, and transitive.

So "S" is an equivalence relation.

Option: b)

5) Given, $t_7 = x$ and $t_{x+7} = 0$

$$d = \frac{t_{x+7} - t_7}{(x+7) - 7} = \frac{0 - x}{x} = -1$$

Now,
$$t_x = t_7 + (x - 7)d$$

$$= x + (x - 7)(-1)$$

$$= x - x + 7 = 7$$

Option: b)

6) Given, $t_2 = a$ and $t_8 = a$

Now,
$$d = \frac{t_8 - t_2}{8 - 2} = \frac{a - a}{6} = 0$$

.. The given AP is a constant sequence with number 'a'.

So,
$$S_n = a + a + a + a + \dots + a = na$$

Option: a)

7) Given, $t_3 = 7$, $t_7 = 3t_3 + 2 = 3(7) + 2 = 23$

$$d = \frac{t_7 - t_3}{7 - 3} = \frac{16}{4} = 4$$

Option: a)

8) Given, AM = $10 \Rightarrow \frac{a+b}{2} = 10 \Rightarrow a + b = 20$

$$GM = 6 \Rightarrow \sqrt{ab} = 6 \Rightarrow ab = 36$$

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

$$(a - b)^2 = (20)^2 - 4 \times 36$$

$$(a - b)^2 = 256$$

$$\Rightarrow$$
 a – b = 16

Option: c)

9) $x^2 - 7x + 10 = 0$

$$(x-2)(x-5)=0$$

$$X = 2$$
 and $x = 5$

Option: b)

10) $x^2 - 8x + 12 = 0$

$$\alpha + \beta = 8$$
; $\alpha\beta = 12$

Now,
$$\frac{1}{\alpha} + \frac{1}{\beta} = \frac{\alpha + \beta}{\alpha \beta} = \frac{8}{12} = \frac{2}{3}$$

Option: a)

11) By Verification, (a)

(or)

(oi)

$$S_{1} = \frac{-(-3)}{1} = 3$$

$$S_{2} = \frac{-4}{1} = -4$$

$$S_{3} = -12$$

$$a) - 2, 2, 3$$

$$S_{1} = -2 + 2 + 3 = 3$$

$$S_{2} = (-2) \times 2 + 2 \times 3 + 3$$

$$\times -2$$

$$= -4$$

$$S_{3} = (-2) \times 2 \cdot 3 = -12$$

Option: a)

12) Let Fraction = $\frac{x}{y}$

Given,
$$\frac{x+3}{y+1} = 1$$
 $x + 3 = y + 1$
 $x - y = -2 \rightarrow (1)$

$$\begin{vmatrix} \frac{x-2}{y-1} = \frac{1}{2} \\ 2x - 4 = y - 1 \\ 2x - y = 3 \rightarrow (2) \end{vmatrix}$$

On solving (1) & (2) we get x=5, y=7

Denominator = y=7

Option: c)

13) Given equation is ax^2 + bx + c = 0 and α , β

Now, the equation whose roots are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$ is $f\left(\frac{1}{x}\right) = 0$

$$a\left(\frac{1}{x}\right)^{2} + b\left(\frac{1}{x}\right) + c = 0$$

$$\frac{a}{x^{2}} + \frac{b}{x} + c = 0$$

$$\frac{a + bx + cx^{2}}{x^{2}} = 0$$

Option: b)

 $cx^{2} + bx + a = 0$

14) Given, 5 boys + 3 girls \rightarrow Total = 8

Condition: No two girls come together.

First arrange 5 boys in 5! Ways

Then, there are 6 gaps.

In 6 gaps, 3 girls can be arranged in $6P_3$ ways

So, Total arrangements =
$$5! \times 6P_3$$

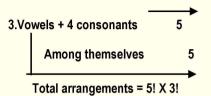
= $120 \times 120 = 14,400$

Option: a)

15) Given word is STADIUM

It has 7 letters (3 vowels and 4 consonants)

Condition: all vowels come together.



Option: d)

16) Select 4 lower case letters in 26_{c_4} and 2 upper case letters in 22_{c_2} war.

First fill the starting place with Capital letter in 2_{p_1} ways

Now the remaining 5 places in 5! Ways.

So, total passwords =
$$26_{C_4} \times 22_{C_2} \times 2_{p_1} \times 5!$$

= $26 \times 25 \times 24 \times 23 \times 22 \times 5 \times 21$

Option: a)

17) Given, number of trophies is 5

Condition: A particular trophy always at the middle.

Arrange that particular trophy at middle in 1 way.

Then, the remaining 4 trophies in 4 places in

So, total arrangements = $1 \times 4! = 24$

Option: a)

18)

By Verification,
d) (1, 1)
$$1 \le 3$$

 $1 \le 4$
 $4 + 3 = 7 \le 12$

Option: d)

19) Given, No. of Senior typists = S

No. of Junior typists = J

The number of reports typed by a senior per day = 5 units

The number of reports typed by a junior per day = 3 units

So, total work = 5S + 3J

Given, at least 30 units of work required per day.

$$\therefore 5S + 3J \ge 30$$

Option: b)

20)

$$A = 7.200$$

$$T = 2$$
 years

$$R = \frac{100 \text{ SI}}{PT} = \frac{100 \times 2,700}{4.500 \times 2} = 30\%$$

Option: c)

$$A = P (1 + i)^n$$

$$85,000 (1 + i)^{10} = 4,84,050$$

$$(1 + i)^{10} = 5.6947$$

By Verification,

$$R = 19\%$$

$$(1.09)^{10} = 5.69468$$

Option: c)

22) R = 1% per month = 12% p. a.

Effective rate of interest is $E = (1 + i)^n - 1$

$$=(1.01)^{12}-1$$

= 12.6825%

Option: c)

23) R =
$$8\% \Rightarrow i = 0.08$$

$$A = P (1 + i)^n$$

$$750 (1.08)^n = 1500$$

$$(1.08)^n = 2$$

$$\therefore$$
 n = 9 years

Option: c)

24) The difference between CI & SI for 2 years at 'r' rate of interest is $p \times r^2$.

Option: a)

$$R = 12.5\% \Rightarrow i = 0.125 \& n = 3$$

$$CI = P[(1+i)^n - 1]$$

$$= 5,000 [(1.125)^3 - 1]$$

Option: a)

$$n = 4$$

$$R = 4\%$$

Future Value = A =
$$p[(1+i)^n]$$

$$= 4,000 (1.04)^4 = 4,679$$

Option: b)

27) Given,
$$A_3 = 400$$
, $A_6 = 500$

Now,
$$\frac{A_6}{A_3} = \frac{p(1+i)^6}{p(1+i)^3} = \frac{500}{400}$$

$$(1 + i)^3 = 1.25$$

Now,
$$A_3 = P (1 + i)^3 = 400$$

$$= P \times 1.25 = 400$$

Option: a)

$$i = 0.12$$
, $g = 0.04$

PV of GP =
$$\frac{A}{i-g} = \frac{100}{0.12-0.04} = \text{Rs.}1,250$$

Option: c)

29) Annuity =
$$A = 5,000$$

$$n = 6$$

$$i = 0.12$$

FV of Annuity regular =
$$\frac{A}{i}[(1+i)^n - 1]$$

$$=\frac{5,000}{0.12}[(1.12)^6-1]=40,575$$

Option: b)

30)
$$n = 5$$
, $i = 0.14$

$$Loan = 30,000$$

$$\frac{A}{i}[1-(1+i)^{-n}]=30,000$$

$$\frac{A}{0.14}[1-(1.14)^{-5}]=30,000$$

$$A \times 3.43305 = 30,000$$

$$A = 8,738$$

Option: c)

$$n = 6$$

$$i = 0.05$$

Present value = P = $\frac{A}{(1+i)^n}$

$$=\frac{5,000}{(1.05)^6}=3,731$$

Option: a)

32) R = 10% semi annually

$$i = \frac{R}{200} = 0.05 \& m=2$$

$$E = (1 + i)^m - 1$$

$$= (1.05)^2 - 1 = 0.1025 = 10.25\%$$

Option: c)

33) Investment A

Investment B

$$n_1 = 4$$

$$n_2 = 2$$

$$R_1 = 10\%$$

$$R_2 = r\%$$

$$i_1 = \frac{R_1}{400} = \frac{10}{400} = 0.025$$
 $i_2 = \frac{R_2}{200} = \frac{r}{200}$

$$i_2 = \frac{R_2}{200} = \frac{r}{200}$$

Given two Investments have equal annual

$$(1+i_1)^{n_1} = (1+i_2)^{n_2}$$

$$(1.025)^4 = (1 + \frac{r}{200})^2$$

$$1.1038128 = (1 + \frac{r}{200})^2$$

Option: d)

34)
$$\lim_{x \to 2} \frac{x^2 - 4x + 4}{x - 2} = \lim_{x \to 2} \frac{(x - 2)^2}{x - 2}$$
$$= \lim_{x \to 2} (x - 2)$$
$$= 2 - 2 = 0$$

Option: a)

35) We know $\frac{d}{dx}(x^x) = x^x(1 + \log x)$

Let
$$f(x) = (x + 1)^{(x+1)}$$

$$f'(x) = (x + 1)^{x+1}[1 + \log(x + 1)](1)$$

$$f'(0) = 1' \times [1 + \log 1]$$

$$f'(0) = 1$$

Option: b)

36)
$$f(x) = (x-1) x (x+1)$$

= $x^3 - x$

$$f'(x) = \frac{dy}{dx} = 3x^2 - 1$$

Option: a)

37)
$$y = e^{3x}$$

$$\frac{dy}{dx} = \frac{d}{dx} (e^{3x})$$
$$= e^{3x} \times 3$$
$$= 3e^{3x}$$

Option: a)

38)
$$x^2 y^2 + y = 0$$

$$\frac{dy}{dx} = \frac{-\frac{df}{dx}}{\frac{df}{dy}}$$

$$=\frac{-(y^2.\ 2x+0)}{(x^2.2y+1)}$$

$$=\frac{-2xy^2}{2x^2y+1}$$

Option: b)

39) We know $\int [f(x)]^n \cdot f^1(x) dx = \frac{(f(x))^{n+1}}{(n+1)} + c$

$$\int_0^1 x^2 \sqrt{x^3 + 4} \, dx = \frac{1}{3} \int_0^1 (x^3 + 4)^{\frac{1}{2}} (3x^2) dx$$
$$= \frac{1}{3} \left[\frac{2}{3} (x^3 + 4)^{\frac{3}{2}} \right]_0^1$$
$$= \frac{2}{9} \left[(1 + 4)^{\frac{3}{2}} - (0 + 4)^{\frac{3}{2}} \right]$$
$$= \frac{2}{9} \left[5^{\frac{3}{2}} - 4^{\frac{3}{2}} \right]$$

Option: b)

40) We know $\int_0^a x(a-x)^n dx$. = $\frac{a^{n+2}}{(n+1)(n+2)}$

$$\int_0^a u (1-u)^{10} du. = \frac{1^{10+2}}{(10+1)(10+2)}$$
$$= \frac{1}{11 \times 12}$$

Option: b)

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CA FOUNDATION - STATISTICS JUNE 2024 ATTEMPT - PROBABLE SUGGESTED ANSWERS

1. MEASURES OF CENTRAL TENDENCY - 1

1) Among the given options, median depends on the position of the observations.

Option: b)

2) Among the given options, Median is unaffected if the lower and highest observations are removed.

In other words, Median is unaffected by the extreme values of the data.

Option: c)

3) Given that, n = 20 and $\bar{x} = 18.3$

Let a be the new observation.

When a new observation is added, then the new mean is:

$$\bar{x}_c = 18.3 - 0.6 = 17.7$$

$$\Rightarrow \frac{n\bar{x}+a}{n+1} = 17.7 \Rightarrow \frac{20 \times 18.3 + a}{21} = 17.7$$

$$\Rightarrow 366 + a = 371.7 \Rightarrow a = 371.7 - 366 = 5.7$$

Option: c)

4) Given that $n_1 = 40$, $n_2 = 30$, $\bar{x}_1 = 50$ and $\bar{x}_2 = 60$

The combined arithmetic mean is:

$$\bar{x}_{12} = \frac{n_1 \bar{x}_1 + n_2 \bar{x}_2}{n_1 + n_2} = \frac{2000 + 1800}{70} = 54.28$$

Option: c)

2. MEASURES OF CENTRAL TENDENCY - 2

Given that, Mean = 22 and Median = 22.33Therefore, Mode = 3Median - 2Mean

= 66.99 - 44 = 22.99

Option: c)

3. MEASURES OF DISPERSION

6) We know that the SD for first n natural numbers is:

$$SD = \sqrt{\frac{n^2 - 1}{12}}$$

Here n = 20

$$\therefore SD = \sqrt{\frac{20^2 - 1}{12}} = \sqrt{\frac{399}{12}} = 5.77$$

Option: a)

7) Given that, $M.D._{\bar{x}} = 1.78$ and $\bar{x} = 3.50$ Therefore, Coefficient of M.D. about A.M. is: Coefficient of

$$M.D._{\bar{x}} = \frac{M.D._{\bar{x}}}{\bar{x}} \times 100 = \frac{1.78}{3.50} \times 100 = 50.85$$

Option: a)

8) In the given data, L = 94 and S = -6 Therefore.

Coefficient of Range

$$= \frac{L-s}{L+S} \times 100 = \frac{100}{88} \times 100 = 113.6$$

Option: d)

9) Given that, $Q_1 = 30$ and $Q_3 = 90$ Coefficient of Q.D.

$$= \frac{Q_3 - Q_1}{Q_3 + Q_1} \times 100 = \frac{60}{120} \times 100 = 50$$

Option: d)

10) From the given data, we have the following:

х	Υ	Z	$(X-\overline{X})^2$	$(Y-\overline{Y})^2$	$(Z-\overline{Z})^2$
-6	4	103	36	1	2.25
2	8	100	4	9	2.25
-2	2	102	4	1	0.25
6	6	101	36	1	0.25
То	tal	80	12		3

Using calculator, $\bar{X} = 0$, $\bar{Y} = 5 \& \bar{Z} = 101.5$

From the above table, we can observe that:

$$\sum (Z - \bar{Z})^2 < \sum (Y - \bar{Y})^2 < \sum (X - \bar{X})^2$$

Hence, $S_Z < S_V < S_X$

Option: b)

11) Given that, $\bar{y} = 5 \& C.V(y) = 20$

We know that,
$$C.V(y) = \frac{\sigma_y}{\bar{y}} \times 100$$

$$\Rightarrow 20 = \frac{\sigma_y}{5} \times 100 \Rightarrow \sigma_y = 1 \Rightarrow \sigma_y^2 = 1$$

Therefore, Variance of $12 - 3y = 9 \times \sigma_v^2 = 9$

Option: a)

4. CORRELATION

12) From the given data, Karl Pearson's correlation coefficient is given by:

$$r = \frac{cov(x,y)}{S_x S_y} = \frac{-2.15}{1.30 \times 2.50} = -0.66$$

Option: a)

13) Spearman's Correlation Coefficient is used to check the relationship between the variables.

Option: b)

14) The range of the correlation coefficient is between -1 and 1 including both the limits-1, 1.

Option: d)

15) Given that, n = 10 and $\sum d^2 = 60$

Spearman's rank correlation coefficient is given by:

$$R = 1 - \frac{6\sum d^2}{n(n^2 - 1)}$$
$$= 1 - \frac{360}{990} = 1 - 0.364 = 0.636$$

Option: a)

5. REGRESSION

16) Given regression equations are:

$$3x - 4y - 8 = 0 (Y \text{ on } X) \Rightarrow b_{YX} = \frac{3}{4}$$
$$4x - 3y = 1 (X \text{ on } Y) \Rightarrow b_{XY} = \frac{3}{4}$$
$$\therefore r = \sqrt{b_{YX} \times b_{XY}} = \frac{3}{4}$$

Option: a)

6. INDEX NUMBERS

17) The average of base year and current year is used in Marshall – Edgeworth Index number.

Option: d)

18) Both Laspeyre's index and Paasche's index numbers does not satisfy the time reversal test.

Option: b)

19) Given that $p_0 = 2p_1$

∴ Fisher's Ideal Index number is equal to:

$$P_{01} = \sqrt{\frac{\sum p_1 q_0}{\sum p_0 q_0} \times \frac{\sum p_1 q_1}{\sum p_0 q_1}} \times 100$$

$$\Rightarrow P_{01} = \sqrt{\frac{\sum p_1 q_0}{\sum 2 p_1 q_0}} \times \frac{\sum p_1 q_1}{\sum 2 p_1 q_1} \times 100$$

$$= \frac{1}{2} \times 100 = 50$$

Option: b)

20) Fisher's ideal index number formula satisfies both time reversal test and factor reversal tests.

Option: a)

21) Among the given options, square test is not a test of adequacy in the context of index numbers.

Option: b)

7. STATISTICAL DESCRIPTION OF DATA – 1: NIL

8. STATISTICAL DESCRIPTION OF DATA – 2

22) To compare the given two frequency distributions visually, histogram is the best diagram to be drawn on the same sheet.

Option: b)

23) A less than ogive curve drawn by plotting the less than cumulative frequencies on the vertical axis and class boundaries on the horizontal axis.

Option: a)

24) The data that cannot be presented in a table is the amount of rainfall opined as "medium", "average", "heavy" etc.

This is because the descriptions "medium", "average", "heavy" are qualitative and subjective, making them difficult to tabulate meaningfully.

Option: c)

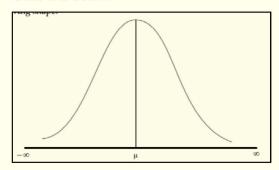
25) Among the given options, the most likely true statement to present the data on monthly expenses of a household is that the Pie charts are always better than histograms for representing expenses.

Option: d)

26) An ogive curve is used to represent the number of data points falling below the specific value.

Option: b)

27) If the data form a bell-shaped distribution, then the shape of the bell-shaped curve looks like below:



From the above curve, we can observe that the maximum frequency always lies at middle and the minimum frequencies occur at the tails of the curve on both ends.

Option: d)

9. PROBABILITY

28) Given set is {1, 2,, 99}.

A number is selected at random.

A = Number divisible by 9

B = Number divisible by 11

Then A∩B = Number divisible by 99

Then $p(A \cup B) = P(A) + P(B) - P(A \cap B)$

$$=\frac{11}{99}+\frac{9}{99}-\frac{1}{99}=\frac{19}{99}$$

Option: b)

29) Two coins are tossed

$$A = \{HT, HH\}, A_2 = \{HH\}, A_1 = \{HT, TH\},$$

$$A_0 = \{TT\}, A_3 = \{HH, TT\}$$

$$A \cap A_2 = \{HH\},\$$

$$A \cap A_3 = \{HH\},$$

 $A \cap A_0 = \emptyset$ so A & A₀ are mutually exclusive

Observe that

 $P(A \cap A_2) \neq P(A).P(A_2)$

So A is not independent on A₂

$$P(A \cap A_3) = P(A) \cdot P(A_3)$$

So A is independent of A₃

Option: b

- **30)** There are 4 red caps+ 5blue caps + 6white caps. Total = 15
 - 2 Caps are selected at random without replacement

P (They are different colors)

= RB or BW or WR or BR or WB or RW

$$= \left(\frac{4c_1 \times 5c_1 + 5c_1 \times 6c_1 + 6c_1 \times 4c_1}{15c_1 \times 14c_1}\right) \times 2$$
$$= \frac{20 + 30 + 24}{105} = \frac{74}{105}$$

Option: a)

31) Given the chances of 3students A, B, C solving a problem are $\frac{1}{3}$, $\frac{1}{5}$, $\frac{1}{7}$

Let P(A) =
$$\frac{1}{3}$$
, P(B) = $\frac{1}{5}$, P(C) = $\frac{1}{7}$

Here events are independent.

P (Problem can be solved) = $P(A \cup B \cup C)$

$$= 1 - P(\bar{A}). P(\bar{B}). P(\bar{C})$$

$$=1-\left(\frac{2}{3}\times\frac{4}{5}\times\frac{6}{7}\right)=\frac{19}{35}$$

Option: a)

32) Let E_1 = Event that the product is type A

 E_2 = Event that the product is type B

Given P
$$(E_1)$$
 = 60% = 0.6, P (E_2) = 40% = 0.4

Let E be the event that the product is defective.

Given P
$$(\frac{E}{E_1})$$
 = 0.05, P $(\frac{E}{E_2})$ = 0.03

P (product is defective) = P (E_1) × P ($\frac{E}{E_1}$) + P (E_2) × P ($\frac{E}{E_2}$) = 0.6 × 0.05 + 0.4 × 0.03 = 0.042.

Option: a)

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10. RANDOM VARIABLES

33) To find the value of K, we know that:

$$\sum P = 1 \Rightarrow 5K = 1 \Rightarrow K = \frac{1}{5}$$

Option: c)

34)

Х	P(X)	X.P(X)	
0	6/30	0	
1	5/30	5/30	
2	13/30	26/30	
3	1/15	3/15 = 6/30	
4	1/10	4/10 = 12/30	
5	1/30	5/30	
Total		54/30 = 1.8	

The expected value of X is:

$$E(X) = \sum x P(x) = 1.8$$

Option: a)

11. THEORETICAL DISTRIBUTION

35) For a normal distribution, the ratio of MD and SD is 12:15 i.e, 12/15 = 0.8

Option: c)

36) Given that $\lambda = 4$

The PMF of Poisson distribution is:

$$P(X = x) = \frac{e^{-\lambda}\lambda^x}{x!} = \frac{e^{-4}4^x}{x!}, x = 0,1,2,...$$

The probability of two successes is:

$$P(X = 2) = \frac{e^{-4}4^2}{2!} = \frac{8}{e^4}$$

Option: a)

37) For a binomial distribution,

Variance = 0.2 and Mean = 0.6

$$q = \frac{Variance}{Mean} = \frac{0.2}{0.6} = \frac{1}{3}$$
$$\therefore p = \frac{2}{3}$$

The probability of getting 3 successes out of a trial of 5 is:

$$P(X = 3) = 5_{C_3} \left(\frac{2}{3}\right)^3 \left(\frac{1}{3}\right)^2 = \frac{80}{3^5}$$

Option: a)

38) The given scenario follows the key characteristics of the Binomial distribution i.e., finite number of trials (300 items) and each trial have two possible outcomes (defective and non-defective). Hence the probability distribution follows the binomial distribution.

Option: a)

12. SAMPLING

39) Among the given options, the stand-alone method is not a type of sampling method.

Option: c)

40) Purposive sampling is based on the discretion of the sampler.

Option: d)

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CA FOUNDATION - LOGICAL REASONING JUNE 2024 ATTEMPT - PROBABLE SUGGESTED ANSWERS

SERIES

1) F M A

Ans: c)

2)

Ans: b)

ODD MAN OUT

3)

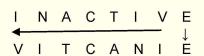
Ans: d)

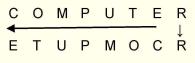
CODING-DECODING

4) T E A C H E R +2 +2 +2 +2 +2 +2 +2 V G C E J G T

> C H I L D R E N +2 +2 +2 +2 +2 +2 +2 E J K N F T G P Ans: d)

5)





Ans: b)

DIRECTIONS

6)

B

300 m

200 m

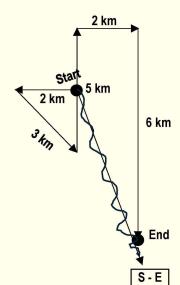
450 m

150 m

150 m

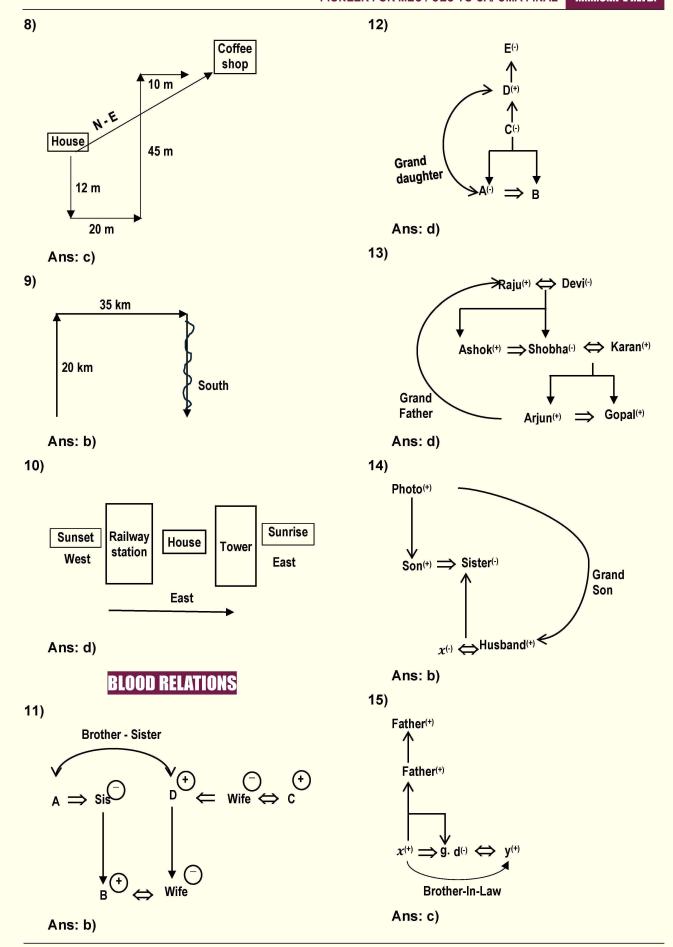
Ans: a)

7)



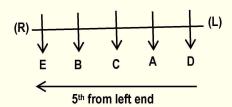
Ans: b)

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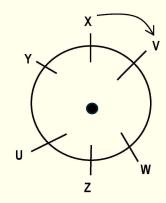
SEATING ARRANGEMENTS

16)

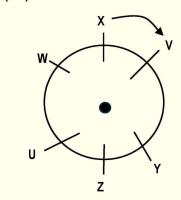


Ans: c)

17)

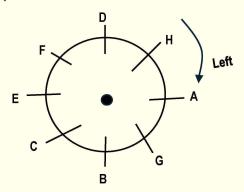


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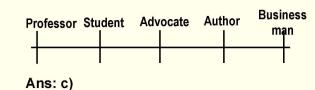
Ans: d)

18)

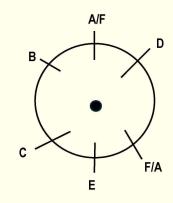


Ans: a)

19)



20)



Ans: c)

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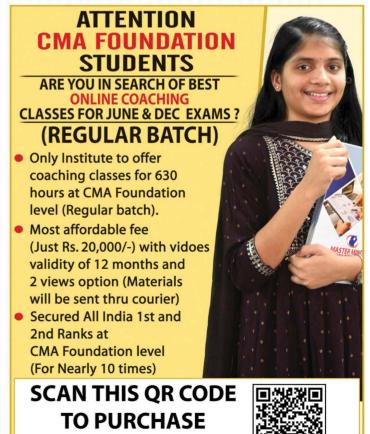






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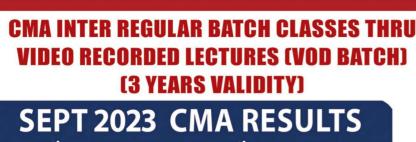
SECURED
9 ALL INDIA
1ST RANKS IN LAST 4 YEARS
(2020, 2021, 2022 & 2023)
CA AND CMA RESULTS

FEES IS JUST RS.25,999/-,
WITH 3 YEARS VALIDITY &
2 VIEWS OPTION (MATERIALS
WILL BE SENT THRU COURIER)

SECURED
40 ALL INDIA RANKS
AT CA FOUNDATION LEVEL
IN JUST 3 EXAMS
(INCLUDING 2ND RANK)

SCAN THIS QR CODE TO PURCHASE THIS COURSE







VIDEOS VALIDITY 3 YEARS

OPTION

2 VIEWS

PRINTED BOOKS WILL BE **SENT THRU COURIER**

CMA INTER GROUP 1 (APPROXIMATELY **950 HOURS)** FEE: RS 25,999/-

CMA INTER GROUP 2 (APPROXIMATELY 600 HOURS) FEE: RS 25,999/-

CMA INTER BOTH GROUPS (APPROXIMATELY 1550 HOURS) FEE: RS 45,900/-COURSE CODE : CC348 COURSE CODE : CC349 COURSE CODE : CC358

CA INTER REGULAR RATCH COACHING CLASSES THRU VIDEO RECORDED LECTURES (VOD BATCH) (3 YEARS VALIDITY)



VIDEOS VALIDITY **3 YEARS**

2 VIEWS * OPTION *

PRINTED BOOKS WILL BE **SENT THRU COURIER**

CAINTER GROUP 1 (APPROXIMATELY **700 HOURS)** FEE: RS 25,999/-**COURSE CODE: CC311**

CAINTER GROUP 2 (APPROXIMATELY 600 HOURS) FEE: RS 25,999/-COURSE CODE: CC310 **CA INTER BOTH GROUPS** (APPROXIMATELY 1300 HOURS) FEE: RS 45,900/-**COURSE CODE: CC309**

CMA FOUNDATION COACHING

FOR INTERCEC STUDENTS CMA FOUNDATION + CEC (INTEGRATED COACHING)

THIS INTEGRATED BATCH IS AVAILABLE IN **ALL BRANCHES OF MASTER MINDS**

EXCLUSIVE CEC ADMISSIONS ARE ALSO AVAILABLE WITHOUT CMA FOUNDATION



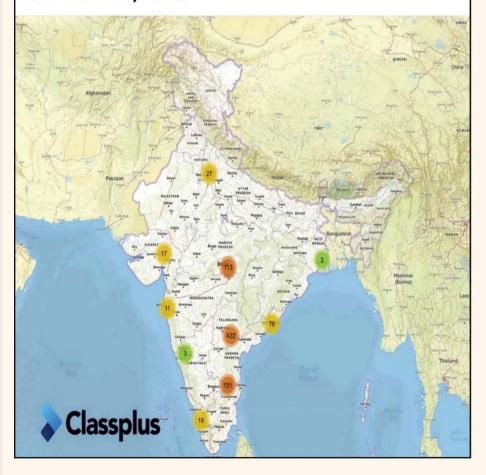


TO DOWNLOAD **OUR APP SCAN** THIS OR CODE



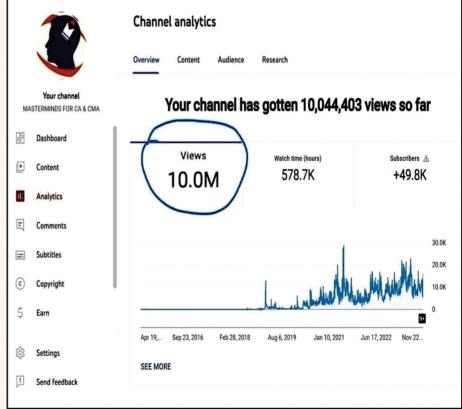


HAPPY TO SHARE THE INSIGHTS OF OUR
"PAN INDIA PRESENCE" THRU OUR ONLINE
COACHING CLASSES OR TEST SERIES.
MAP GENERATED BY CLASS PLUS TEAM
(OUR TECH PARTNER FOR ONLINE SERVICES)
ON NOV 22, 2023





Happy to share a major milestone. Our YouTube channel crossed 1 crore views. Without the love and affection of our students and their parents this would have not been possible. Thanks to our team members, you are the back bone for this great achievement.



PAVANA PUTRA CAMPUS AT GUNTUR (CLASSROOMS FOR CA AND CMA FINAL REGULAR BATCH -COACHING CLASSES)



MEC PRO & CEC PRO

LAUNCHPAD FOR BRIGHT CAREERS IN BUSINESS AND LAW

MASTERMINDS PROUDLY ANNOUNCES

MEC PRO & CEC PRO, A SPECIAL MEC BATCH TO ENRICH

THE STUDENTS WITH THE REQUISITE SKILLS TO LEAD

THE WORLD OF BUSINESS.

- OBJECTIVE: PREPARING STUDENTS TO GET ADMISSION INTO LEADING B-SCHOOLS / LAW COLLEGES.
- MEANT FOR: STUDENTS ASPIRING FOR BBA OR MBA OR CLAT.
- ADMISSION ALLOWED FOR MEC/CEC STREAM ONLY.
- BOTH DAY SCHOLAR AND HOSTEL ADMISSIONS AVAILABLE.

ADVANTAGES OF MEC PRO & CEC PRO:

- 1. A/C CLASSROOMS.
- 2. CLASSROOMS WITH PLEASANT AMBIENCE.
- 3. MODERN PEDAGOGICAL METHODS (AV SYSTEMS, PROJECTORS ETC.,)
- 4. SPOKEN ENGLISH CLASSES 3 MODULES @ 30 HOURS EACH.
- 5. FUNDAMENTALS OF REASONING @ 30 HRS.
- 6. GROUP DISCUSSIONS.
- 7. PERIODICAL INDUSTRIAL TOURS / FIELD TRIPS.
- 8. GUIDANCE TO CAT / MAT AND OTHER MANAGEMENT ENTRANCE EXAMS.
- 9. REGULAR PERSONALITY DEVELOPMENT AND MOTIVATION CLASSES.
- 10. PROFESSIONAL DEVELOPMENT PROGRAMMES TO DEVELOP STUDENT SKILL SETS AND GIVE THEM CONFIDENCE TO FACE THE CORPORATE WORLD.

2023 RESULTS

YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO SREEKANTH KUMAR

ALL INDIA 1ST
IN CMA FINAL
SEPT 2023 RESULTS





YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO VAGDHEVA

ALL INDIA 1ST
IN CMA INTER
SEPT 2023 RESULTS





L. VAGDHEVA HT NO. 340910

2022 RESULTS

YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO RISHAB OSTWAL R

ALL INDIA 1ST
IN CMA INTER
SEPT 2022 RESULTS





YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO GOVARDHAN

ALL INDIA 2ND
IN CMA FINAL
SEPT 2022 RESULTS





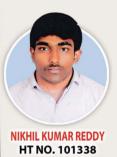
2021 RESULTS

YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO NIKHIL KUMAR REDDY

ALL INDIA 1ST
IN CMA FINAL
MAR 2021 RESULTS





YOU'VE MADE US ALL PROUD!

CONGRATULATIONS TO PADMA RAJU

ALL INDIA 2ND
IN CMA INTER
MAR 2021 RESULTS



FOR FREE DEMO VIDEOS OF OUR LECTURES CALL:9885125025/26

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● Dilshukhnagar: D.No.: 16-11-741/5/1 C&D, Moosh Ram Bagh Road. Vasan Eye Care Lane, Opp: Noble Degree College.

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9 ALL INDIA 1ST RANKS IN JUST 4 YEARS

(2020,2021, 2022 & 2023) CA & CMA RESULTS

ST

ALL INDIA



CMA INTER
ALL INDIA 1ST RANKER
SEP 2023 RESULTS



L. VAGDHEVA H.T. No. 340910

CMA FINAL ALL INDIA 1ST RANKER SEP 2023 RESULTS



M. SREEKANTH KUMAR H.T. No. 307705

SEP 2022 RESULTS

CMA INTER

ALL INDIA 1ST RANKER

RISHAB OSTWAL R Reg.No. 02211116121

CMA FOUNDATION

ALL INDIA 1ST RANKER

DEC 2020 RESULTS

CA INTER (OLD SYLLABUS) ALL INDIA 1ST RANKER FEB 2022 RESULTS



CH. YASWANTH HT NO. 433780

CMA FINAL ALL INDIA 1ST RANKER MAR 2021 RESULTS



NIKHIL KUMAR REDDY HT NO. 101338

CMA INTER

ALL INDIA 1ST RANKER

FEB 2020 RESULTS

RISHAB OSTWAL R Reg.No. SF2020065006

CA FINAL

ALL INDIA 1ST RANKER

JAN 2020 RESULTS

CMA FINAL ALL INDIA 1ST RANKER FEB 2020 RESULTS



D. GURU BASKAR REDDY HT NO. 310860

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