



MAHATMA GANDHI COLLEGE, IRITTY

(Re accredited by NAAC with A Grade)
Keezhurkunnu, Keezhur PO, Kannur Dt., Kerala – 670 703
2023-24

Certificate Course in Quantitative Aptitude for Competitive Examinations

The P.G Department of Mathematics, Mahatma Gandhi College, Iritty in association with IQAC of the college conducts a **Certificate Course in Quantitative Aptitude for Competitive Examinations** that will be beneficial for students as well as those who prepare for competitive examinations like PSC examinations. There will be 30 hours of contact classes. Certificates will be issued to students who submit the assignments and get 40% marks in the final exam, Course will start from January 2024 and come to an end by March 2024

No. of Contact Hours: 30

Text Book: Quantitative Aptitude For Competitive Examinations, R.S Agarwal

Aim of the course

- To update and expand the basic mathematical skills and attitudes and equip the students to effectively utilize this knowledge for various competitive examinations.
- To familiarize the language, symbols and notation of mathematics.
- To develop mathematical curiosity while solving problems.
- To become confident enough in solving mathematical problems.
- To develop logical and critical thinking.

Objectives of the course

- To introduce the basic concepts of Quantitative arithmetic
- To enhance the problem-solving skills.
- To improve the basic mathematics skills.
- To help students who are preparing for any type of competitive examinations.

All further information will be informed through the WhatsApp group.

WhatsApp Group link: <https://chat.whatsapp.com/F8qJabtEc5L8r9OlejANUj>

We expect sincere cooperation and whole hearted support from the faculty in Mathematics fraternity.

Thanking you,

With regards,

Haseena C

Dr Bijumon R

Convener

Head, PG Dept of Mathematics

Faculty Members:

Haseena C, Jimly Manuel, Priyanka P, Maya P V, Vidya T M

Dr. Aneesh Kumar K

Dr. Swarupa R

Convener, IQAC

Principal

For further information:

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Post Graduate Department of Mathematics

CERTIFICATE COURSE IN QUANTITATIVE APTITUDE FOR COMPETITIVE EXAMINATIONS(CCMATQA)

SYLLABUS w.e.f. 2021

No. of contact hours : 30

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- A. To introduce the basics concepts of Quantitative arithmetic
- B. To enhance the problem-solving skills.
- C. To improve the basic mathematics skills.
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Course Code	Theory	Marks		
		External	Internal	Total
CCMATQA	30 Hrs	35	15	50

Course Contents.

Module I

Profit and Loss
Problems on Ages
Chain Rule
Time and Work
Time and Distance
Problems on Trains

Module II

Boats and Streams
Calendar
Clocks
Heights and Distances
Simple Interest
Compound Interest

References

1. R.S. Aggarwal, Quantitative Aptitude for Competitive Examinations, S. Chand Company Ltd, 7th Edition.
2. Abhijit Guha, Quantitative Aptitude for Competitive Examination, Mc Graw Hill Education.
3. Shyam Saraf and Abhilasha Swarup, Quantitative Aptitude and Reasoning, Cengage Learning India Pvt.Ltd.

Mahatma Gandhi College, Iritty

16.12.2023

Course Coordinator

MAHATMA GANDHI COLLEGE, IRITTY

CERTIFICATE COURSE in

Quantitative Aptitude for Competitive Examinations

2023-2024

Sl. No	Reg. No	Name	Class
1	MG22CMSR01	Adithyanath K V	II BSc Mathematics
2	MG22CMSR02	Adwaith P V	II BSc Mathematics
3	MG22CMSR03	Amal Raj M C	II BSc Mathematics
4	MG22CMSR04	Nived Krishnan T	II BSc Mathematics
5	MG22CMSR05	Vaishakh M	II BSc Mathematics
6	MG22CMSR06	Ajisha C	II BSc Mathematics
7	MG22CMSR07	Ajisha T R	II BSc Mathematics
8	MG22CMSR08	Akshaya R P	II BSc Mathematics
9	MG22CMSR09	Anagha A P	II BSc Mathematics
10	MG22CMSR10	Angel George	II BSc Mathematics
11	MG22CMSR11	Sneha Sudhi	II BSc Mathematics
12	MG22CMSR12	Alan Kurian	II BSc Mathematics
13	MG22CMSR13	Amaljith N K	II BSc Mathematics
14	MG22CMSR14	Anand T	II BSc Mathematics
15	MG22CMSR15	Anandu V	II BSc Mathematics
16	MG22CMSR16	Athul E	II BSc Mathematics
17	MG22CMSR17	Liyo Wilson	II BSc Mathematics
18	MG22CMSR18	Shebin M J	II BSc Mathematics
19	MG22CMSR20	Adithyadas C	II BSc Mathematics
20	MG22CMSR21	Anjana M	II BSc Mathematics
21	MG22CMSR22	Anjana Shaji P V	II BSc Mathematics
22	MG22CMSR23	Deependu V	II BSc Mathematics

23	MG22CMSR24	Pooja A	II BSc Mathematics
24	MG22CMSR25	Punnya A	II BSc Mathematics
25	MG22CMSR27	Rifa Fasna K K	II BSc Mathematics
26	MG22CMSR28	Riya Rafna K K	II BSc Mathematics
27	MG22CMSR29	Shamnas	II BSc Mathematics



MAHATMA GANDHI COLLEGE, IRITTY

Affiliated to Kannur University, Re-Accredited with A Grade by NAAC with CGPA 3.22
Kannur Dist-Kerala 670703

Certificate of Completion

This is to certified that ...Vaishakh M.....student of Second Year B.Sc. Mathematics successfully completed the certificate course in '**Quantitative Aptitude for Competitive Examinations**' offered by P.G. Department of Mathematics in association with IQAC, Mahatma Gandhi College, Iritty in the academic year 2023-2024.

Haseena C
Coordinator

Dr. Bijumon R
HOD

Dr. Anēesh Kumar K
IQAC Coordinator

Dr. Swarupa R
Principal



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Certificate of Completion

This is to certify that Athul E.....student of Second Year B.Sc. Mathematics successfully completed the certificate course in '**Quantitative Aptitude for Competitive Examinations**' offered by P.G. Department of Mathematics in association with IQAC, Mahatma Gandhi College, Iritty in the academic year 2023-2024.

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Dr. Swarupa R
Principal

Mahatma Gandhi College, Iritty Certificate Course in Quantitative Aptitude for Competitive Examinations ASSIGNMENT – 1

1. A shopkeeper purchases a table and sells it for Rs. 4200. If he incurs a loss of 20%, find the cost price of table.
a) Rs. 5250 b) Rs. 5150 c) Rs. 5052 d) Rs. 5200
2. After selling 140 apples a fruit seller earns a profit equal to selling price of 20 apples. His profit percentage is:
a) 15.7% b) 16.7% c) 18.7% d) 20%
3. The owner of the cell phone shop charges 23% more than the cost price. If a customer paid 7011 for a cell phone, find the cost price of the cell phone.
a) 5860 b) 5220 c) 5700 d) 6750
4. The present age of Aradhana and Bhadra is in the ratio 3 : 4. Five years back, the ratio of their ages was 2 : 3. What is the present age of Aradhana?
a) 12 b) 15 c) 20 d) 22
5. If the total ages of Iqbal and Ram is 12 years more than the total ages of Ram and Charu. Charu is how many years younger than Iqbal?
a) 11 b) 12 c) Data inadequate d) None of these

6. A father is twice as old as his daughter. If twenty years ago, the age of the father was 10 times the age of his daughter. What is the present age of the father?
- a) 40 b) 32 c) 33 d) 45
7. X and Y can do a piece of work in 20 days and 12 days respectively. X started the work alone and then after 4 days Y joined him till the completion of the work. How long did the work last?
- a) 6 days b) 10 days c) 15 days d) 20 days
8. A is 30% more efficient than B. How much time will they, working together, take to complete a job which A alone could have done in 23 days?
- a) 11 days b) 13 days c) 15 days d) None of these
9. Ravi and Kumar are working on an assignment. Ravi takes 6 hours to type 32 pages on a computer, while Kumar takes 5 hours to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?
- a) 7 hours 30 min b) 8 hours c) 8 hours 15 min d) 8 hours 25 min
10. If the cost of x metres of wire is d rupees, then what is the cost of y metres of wire at the same rate?
- a) Rs. $(\frac{xy}{d})$ b) Rs. (xd) c) Rs. (yd) d) Rs. $(\frac{yd}{x})$
11. Running at the same constant rate, 6 identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could 10 such machines produce in 4 minutes?
- a) 648 b) 1800 c) 2700 d) 10800
12. 39 persons can repair a road in 12 days, working 5 hours a day. In how many days will 30 persons, working 6 hours a day, complete the work?
- a) 10 b) 13 c) 14 d) 15

Quantitative Aptitude for Competitive Examinations

Marks: 35

- 1) If selling price is doubled, the profit triples. Find the profit percent?
A) 100% B) 200% C) 300% D) 400%
- 2) By selling 45 lemons for Rs 40, a man loses 20%. How many should he sell for Rs 24 to gain 20% in the transaction?
A) 16 B) 18 C) 20 D) 22
- 3) If the cost price is 25% of selling price. Then what is the profit percent.
A) 150% B) 200% C) 300% D) 350%
- 4) A father said his son, “ I was as old as you are at present at the time of your birth”. If the father’s age is 38 now, what was the son’s age 5 years back?
A) 14 B) 19 C) 13 D) 38
- 5) In 10 years, A will be twice as old as B was 10 years ago. If A is now 9 years older than B, the present age of B is:
A) 19 B) 29 C) 39 D) 49
- 6) What is Sruthi’s present age, if after 20 years her age will be 10 times her age 10 years back?
A) 6.2 B) 7.7 C) 13.3 D) 10
- 7) Running at the same constant rate, 6 identical machines can produce a total of 270 bottles per minute. At this rate, how many bottles could 10 such machines produce in 4 minutes?
A) 648 B) 1800 C) 2700 D) 10800
- 8) In a camp, there is a meal for 120 men or 200 children. If 150 children have taken the meal, how many men will be catered to with remaining meal?
A) 20 B) 30 C) 40 D) 50
- 9) A flagstaff 17.5 m high casts a shadow of length 40.25 m. The height of the building, which casts a shadow of length 28.75 m under similar conditions will be:
A) 10m B) 12.5m C) 17.5m D) 22.25m
- 10) A can do a work in 15 days and B in 20 days. If they work on it together for 4 days, then the fraction of the work left is:
A) $\frac{1}{4}$ B) $\frac{1}{10}$ C) $\frac{7}{15}$ D) $\frac{8}{15}$

- 11) Dev completed the school project in 20 days. How many days will Arun take to complete the same work if he is 25% more efficient than Dev?
 A) 10 days B) 12 days C) 16 days D) 15 days
- 12) Time taken by A to finish a piece of work is twice the time taken by B and thrice the time taken by C. If all three of them work together, it takes them 2 days to complete the entire work. How much work was done by B alone ?
 A) 2days B) 6days C) 3days D) 5days
- 13) A man walking at the rate of 5 km/hr crosses a bridge in 15 minutes. What is the length of the bridge (in metres)?
 A) 1340 B) 1320 C) 1250 D) 1280
- 14) The distance between two cities A and B is 330 km. A train starts from A at 8 a.m. and travels towards B at 60 km/hr. Another train starts from B at 9 a.m. and travels towards A at 75 km/hr. At what time will they meet?
 A) 10am B) 11am C) 12noon D) 10.30am
- 15) An athlete runs 200 meters race in 24 seconds. What is his speed?
 A) 20 km/hr B) 25 km/hr C) 27.5 km/hr D) 30 km/hr
- 16) Two trains are running in opposite directions in the same speed. The length of each train is 120 meter. If they cross each other in 12 seconds, the speed of each train (in km/hr) is
 A) 42 B) 36 C) 28 D) 20
- 17) A train 125 m long passes a man, running at 5 km/hr in the same direction in which the train is going, in 10 seconds. The speed of the train is ?
 A) 45kmph B) 25kmph C) 30kmph D) 50 kmph
- 18) A train speeds past a pole in 15 seconds and a platform 100 m long in 25 seconds. Its length is:
 A) 50m B) 150m C) 200m D) Data inadequate
- 19) A man rows 24 km upstream in 6 hours and a distance of 35 km downstream in 7 hours. Then the speed of the man in still water is:
 A) 4 kmph B) 4.5 kmph C) 5 kmph D) 5.5 kmph
- 20) A boy can row upstream 10 kmph and downstream 20 kmph. Find the rate of the current?
 A) 4 kmph B) 5 kmph C) 10 kmph D) 15 kmph
- 21) Downstream speed of a boat is 25 km/hr. Speed of the current is 2 km/hr. What is the speed of boat in upstream?

- A) 21 kmph B) 23 kmph C) 25 kmph D) 27 kmph
- 22) January 1, 2007 was Monday. What day of the week lies on Jan. 1, 2008 ?
A) Monday B) Tuesday C) Wednesday D) Sunday
- 23) January 1, 2008 is Tuesday. What day of the week lies on Jan. 1, 2009 ?
A) Monday B) Wednesday C) Thursday D) Sunday
- 24) On 8th Dec, 2007 Saturday falls. What day of the week was it on 8th Dec. 2006 ?
A) Sunday B) Thursday C) Tuesday D) Friday
- 25) How many times do the hands of a clock coincide in a day?
A) 20 B) 21 C) 22 D) 24
- 26) At what time, in minutes, between 3o' clock and 4o' clock, both the hands will coincide each other.
A) $5\frac{1}{11}$ B) $12\frac{4}{11}$ C) $13\frac{4}{11}$ D) $16\frac{4}{11}$
- 27) At what time between 9 and 10 o' clock will the hands of a watch to be together?
A) 45 min past 9 B) 50 min past 9 C) $49\frac{1}{11}$ min past 9 D) $48\frac{2}{11}$ min past
- 7
- 28) The shadow of the tower becomes 60 metres longer when the altitude of the sun changes from 45° to 30° . Then the height of the tower is
A) $20(\sqrt{3} + 1)m$ B) $24(\sqrt{3} + 1)m$ C) $30(\sqrt{3} + 1)m$ D) $30(\sqrt{3} - 1)m$
- 29) An aeroplane when flying at a height of 3125 m from the ground passes vertically below another plane at an instant when the angle of elevation of the two planes from the same point on the ground are 30° and 60° respectively. The distance between the two planes at that instant is
A) 6520 m B) 6000 m C) 5000 m D) 6250 m
- 30) The angle of elevation of the sun, when the length of the shadow of a tree 3 times the height of the tree, is:
A) 10° B) 30° C) 50° D) 70°
- 31) A man invested $\frac{1}{3}$ of his capital at 7%; $\frac{1}{4}$ at 8% and the remainder at 10%. If his annual income is Rs. 561, the capital is:
A) Rs.5400 B) Rs.6000 C) Rs.6600 D) Rs.7200

32) A person invested in all Rs. 2600 at 4%, 6% and 8% per annum simple interest. At the end of the year, he got the same interest in all the three cases. The money invested at 4% is:

- A) Rs.200 B) Rs.600 C) Rs.800 D) Rs.1200

33) A sum of money at simple interest amounts to Rs. 815 in 3 years and to Rs. 854 in 4 years. The sum is:

- A) 650 B) 690 C) 698 D) 700

34) If the simple interest on a sum of money for 2 years at 5% per annum is Rs. 50, what is the compound interest on the same sum at the same rate and for the same time?

- A) Rs. 51.25 B) Rs. 52 C) Rs. 54.25 D) Rs. 50

35) What will be the difference between simple and compound interest at 10% per annum on a sum of Rs. 1000 after 4 years?

- A) Rs. 31 B) Rs. 32.10 C) Rs. 40.40 D) Rs. 64.10