GOVERNMENT DEGREE COLLEGE, RAJAMPETA

(Affiliated to yogi vemana university, Kadapa)
(Re-accredited by NAAC with "B+" Grade in cycle - III)
Rajampet-516115

Quiz Competetion

Department of Mathematics

Target Audience: First-Year B.Sc Mathematics Students

Date: 26-02-2026

Number of Students: 25

Aim

To cultivate a deep appreciation for the logical structure, historical evolution, and practical applicability of mathematics beyond the standard syllabus, while identifying and nurturing analytical talent among first-year degree students.

Objectives

1. **Assess Foundational Knowledge:** Evaluate students' grasp of core mathematical concepts taught at the 10+2 and first-year degree level (Algebra, Calculus, Number Theory, Statistics).
2. **Promote Logical Reasoning:** Enhance problem-solving speed and accuracy through application-based and tricky mathematical puzzles.
3. **Introduce Mathematical History:** Create awareness about the lives and contributions of global and Indian mathematicians (e.g., Ramanujan, Aryabhata, Gauss, Euler).
4. **Bridge Theory & Reality:** Demonstrate how mathematics applies to real-world scenarios (finance, data interpretation, geometry in nature).
5. **Encourage Healthy Competition:** Provide a platform for intellectual rivalry, teamwork (if team-based), and academic excellence within the college.

Govt. Degree college, Rajampet

Dep. of Mathematics

Quiz- competetion

Group A

P. Saavani

O. Divya

B. Shaparvathi

R. Vani

M. Sirisa

P. Sukanya

S. Navya

P. Malleswari

S. Manasa.

M. Anitha.

E. Sireesha

Group B

S. Madiha

S. Mehetk fathima

P. Sivakumari.

T. Arunkumar

M. Venkata Eswar

P. Chaithanya

M. Rithinsai

A. Thirumalesh.

P. NagaBabu.

P. Hemanth.

G. Althaf

Questions for the Quiz

Q1. Which is the smallest prime number?

- A) 0
- B) 1
- C) 2

- D) 3

Q2. If $x+\frac{1}{x}=3$ then find the value of $x^2+\frac{1}{x^2}$?.

- A) 7
- B) 9
- C) 11
- D) 5

Q3. The common difference of the Arithmetic Progression (AP): $\sqrt{2},\sqrt{8},\sqrt{18},\sqrt{32},....$ is:

- A) $\sqrt{2}$
- B) $2\sqrt{2}$
- C) $\sqrt{6}$
- D) 2

Q4. How many ways can the letters of the word "MATH" be arranged?

- A) 12
- B) 24
- C) 36
- D) 18

Q5. The value of $\mathrm{Sin}\,90^0+\mathrm{Cos}\,0^0$ is:

- A) 0
- B) 1
- C) 2
- D) -1

Q6. The famous theorem $a^2+b^2=c^2$ is named after which ancient Greek mathematician?

- A) Euclid
- B) Archimedes
- C) Pythagoras
- D) Thales

Q7. The area of a circle with radius r is:

- A) $2\pi r$
- B) πr^2
- C) $\frac{4}{3}\pi r^3$
- D) πr

Q8. The derivative of x^3 with respect to x is:

- A) $3x^2$
- B) x^2
- C) $3x$
- D) 3

Q9. $\int 2xdx$ is equal to:

- A) $x^2 + c$
- B) $2x^2 + c$
- C) x^2
- D) $2 + c$

Q10. $\lim_{x \to 0} \frac{\text{Sin}\, x}{x}$ is:

- A) 0
- B) 1
- C) ∞
- D) Not defined

Q11. What is the probability of getting a 'heads' when flipping a fair coin once?

- A) 0
- B) 0.25
- C) 0.5
- D) 1

Q12. The mean of the numbers 4, 8, 12, 16 is:

- A) 8
- B) 10
- C) 12
- D) 40

Q13. Which measure of central tendency is most affected by extreme outliers?

- A) Median
- B) Mode
- C) Mean
- D) Range

Q14. Which Indian mathematician wrote "Aryabhatiya" and introduced the concept of zero?

- A) Bhaskaracharya
- B) Brahmagupta
- C) Aryabhata
- D) Ramanujan

Q15. The value of π approximately is:

- A) 3.14
- B) 2.71
- C) 1.618
- D) 0.577

Q16. The imaginary unit i is defined as:

- A) $\sqrt{1}$
- B) $\sqrt{-1}$
- C) $-\sqrt{-1}$

- D) $\frac{1}{\sqrt{-1}}$

Q17. If a shirt priced at ₹800 is sold at a 20% discount, the selling price is:

- A) ₹160
- B) ₹640
- C) ₹960
- D) ₹800

Q18. A clock shows 3:00. What is the angle between the hour and minute hand?

- A) 30°
- B) 60°
- C) 90°
- D) 120°

Q19. Which number is called the "Golden Ratio" (often denoted by ϕ)?

- A) 1.414
- B) 1.618
- C) 2.718
- D) 3.141

Q20. If today is Monday, what day will it be 100 days from today?

- A) Monday
- B) Tuesday
- C) Wednesday
- D) Sunday

Signature of the In-Charge