

MATH Exam Paper

Subjective Questions

- 1. What is the Pythagorean theorem and explain its application?
Answer:
- 2. Derive the quadratic formula from the general form of a quadratic equation.
Answer:
- 3. Explain the concept of limits in calculus.
Answer:
- 4. Solve the following system of equations using substitution method: $2x + y = 10$ and $3x - y = 5$.
Answer:
- 5. What are eigenvalues and eigenvectors? Provide an example.
Answer:
- 6. Describe the difference between permutations and combinations.
Answer:
- 7. What is the fundamental theorem of algebra?
Answer:
- 8. Explain how the binomial theorem can be used to expand expressions.
Answer:
- 9. Find the derivative of the function $f(x) = x^3 + 5x^2 - 2x + 7$.
Answer:
- 10. Explain the concept of mathematical induction and prove the sum formula for the first n integers.
Answer:
- 11. Formula of circle?
Answer:
- 12. What is the formula of a triangle?
Answer:

MCQ Questions

- 13. What is $2 + 2$?
 - a) 3
 - b) 4
 - c) 5
 - d) 6
- 14. What is the derivative of x^2 ?
 - a) 1
 - b) $2x$
 - c) x^2
 - d) $2x^2$
- 15. Solve for x : $5x - 10 = 0$
 - a) $x = 0$
 - b) $x = 2$
 - c) $x = 10$
 - d) $x = -2$
- 16. What is the value of π ?
 - a) 3.14
 - b) 3.1416
 - c) 3.14159
 - d) 3.141
- 17. What is the area of a circle with radius 3?
 - a) 9π
 - b) 6π
 - c) 3π

d) π