

# **BASIC INTELLIGENCE AND REMEMBRANCE TEST**



202- MATHEMATICS

INTERNAL ASSESSMENT

(20 marks)

- Derivation of trigonometric ratios for angles 0, 30, 45, 60 and 90 geometrically. (4 marks)
- Finding Formula For sum of first  $n$  terms of AP. (2 marks)
- Finding Formula to find  $n^{\text{th}}$  term of AP. (1 mark)
- To compare theoretical and empirical probability for following cases: (5 marks)
  - I. When Two coins are tossed 100 times simultaneously:
    - a. Probability of getting heads on both coins
    - b. Probability of getting tails on both coins
    - c. Probability of getting heads on first coin and tails on second coin.
    - d. Probability of getting tails on first coin and heads on second coin.
  - II. When Three coins are tossed 50 times simultaneously:
    - a. Probability of getting heads on all coins
    - b. Probability of getting tails on all coins
- Derivation of section formula and section mid-point formula on a Cartesian plane. (3 marks)
- Derivation of Area of Triangle Formula On a Cartesian plane. (1 mark)
- Derivation of formulas given below: (4 marks)
  - I. Surface area of frustum of a cone
  - II. Volume of frustum of a cone

