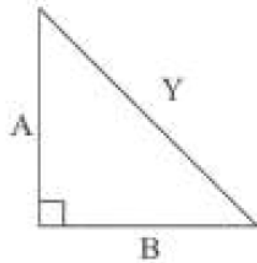# ICS 2371 STRUCTURED PROGRAMMING CAT

Do the CAT and paste the answers in your email body section then email it together with the project answers to jkuatexams@gmail.com not later than 24/03/2023. Submissions past the due date will not be graded. Indicate your admission number as the email subject line

GROUP A CAT

a) The figure below shows a diagram of a triangle. Use it to answer the question that follows.

Write a Pascal program that prompts the user to enter the values of A and B and calculates and outputs the value of Y through the use of a function.

Hint $Y = \sqrt{A + B}$

(7 Marks)

b) The following is a grading system in a particular school. Use it to answer the question that follows.

Score	Grade
80 and above	A
70 – 79	B
60 – 69	C
50 – 59	D
Below 50	E

Write a Pascal program that accepts marks for five subjects, computes and outputs the average and appropriate grade. **(8 Marks)**

GROUP B CAT

a) Write a Pascal program that could be used to generate squares of even integers between 12 and 30. Use *Repeat… Until* loop. **(7 Marks)**

b) The interest accrued I for a principal interest amount P after period of time T at the rate R is given by the formula I=P*R*T. Write a Pascal program that prompts a user to enter the principal amount in the main program and then pass this value to a procedure named compute. The procedure calculates the interest at a rate of 12% per annum for a period of 5 years. The procedure then returns the interest to the main program for output.

(8 Marks)