PANSKURA BANAMALI COLLEGE
DEPARTMENT OF MATHEMATICS

FIRST INTERNAL ASSESSMENT EXAMINATION-2016-17

SUBJECT-MATHEMATICS(HONOURS)   PAPER - VII(NEW) / VIII

Time-1 hour   Full Marks-20

1. Answer any <u>FIVE</u> questions. 5×4

   (a) Write an algorithm to find the roots of a quadratic equation indicating the nature of the roots.

   (b) Draw a flowchart to test a number whether prime or not.

   (c) Any integer is input through the keyboard. Write a program in C to find out whether it is an odd number or even number.

   (d) Write different types of Logical operators and Relational operators in C. What are the basic differences between the operators $' = '$ and $' == '$.

   (e) Write a program in C to convert a Binary Number to equivalent Decimal Number.

   (f) What are the difference between While loop and Do-While loop in C? Briefly discuss about 'for loop' in C.

   (g) Write short notes on (a) break statement, (b) continue statement.

   (h) What are the uses of comma (,) operator and conditional (?) operator?

   (i) Define Boolean Algebra. Why NAND gate and NOR gate are called universal gate?

   (j) Perform the following binary operations: (i) $111011 \div 101$ (ii) $110011 - 10010.11$ using 2's complement method.

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