ADVANCED LEVEL NATIONAL EXAMINATIONS 2013

SUBJECT: COMPUTER SCIENCE

COMBINATIONS: MATHS-COMPUTER SCIENCE-ECONOMICS: MCE
MATHS-PHYSICS-COMPUTER SCIENCE: MPC

DURATION: 3 HOURS

INSTRUCTIONS:

1. Do not open this paper until you are told to do so.
2. This paper consists of three sections: A, B and C.
   - Section A: This section is compulsory. (55 marks)
   - Section B: Attempt three questions. (30 marks)
   - Section C: Attempt any one question. (15 marks)
3. Use only blue pen.
Section A: Attempt all questions  (55 marks)

1. Define a flowchart.  \((2\text{marks})\)

2. What makes up a Visual Application (Project)?  \((7\text{marks})\)

3. What are the three ways for a variable to be declared?  \((3\text{marks})\)

4. What are the three ways to connect to a database in Visual Basic?  \((3\text{marks})\)

5. Define Object Oriented Programming.  \((3\text{marks})\)

6. Distinguish 'while' and 'do – while' statements.  \((8\text{marks})\)

7. List the different types of parameter passing techniques.  \((3\text{marks})\)

8. Define class.  \((2\text{marks})\)

9. Where will you classify a member function?  \((4\text{marks})\)

10. What is the use of a destructor?  \((3\text{marks})\)

11. What is the difference between structure and a class?  \((3\text{marks})\)

12. Define virtual function.  \((6\text{marks})\)

13. What is meant by pointer and null pointer?  \((4\text{marks})\)

14. Give any two error handling functions and their purposes.  \((4\text{marks})\)
Section B: Attempt any three questions from this section. (30 marks)

15. Define the following:
   a) Branching Statements. (2,5 marks)
   b) Looping Statements. (2,5 marks)
   c) if statement. (2,5 marks)
   d) while statement. (2,5 marks)

16. Write a pseudocode of an algorithm that will read the two sides of a rectangle and calculate its area. (10 marks)

17. Convert the binary number 1111011 to decimal number. (10 marks)

18. How does a main () function in C++ differ from main () in C? (10 marks)

19. What is ADO? What are its objects? (10 marks)

Section C: Attempt any one question from this section (15 marks)

20. Write a C program to print fibonacci series (0 1 1 2 3 5 8 13).

21. Write an algorithm to find the sum and average of three given numbers.