



Duration: 1½ Hours

**Date:** 28.09.07

**Time :** 4.00pm to 5.30pm

**Answer all Three Questions**

**Q1.**

- a) Compare the generations of programming languages with procedural and declarative meaning.
- b) Distinguish between *variables* and *constants*.
- c) Discuss three major changes occurred in programming languages, as the generations of programming languages evolved.
- d) Find the errors in the following Pascal expressions.
  - i. XYZ
  - ii. X\*+Y
  - iii. (X-Y)(X+Y)/-10
  - iv. -X + Y<sup>2</sup> -4XY

**Q2.** a) The following programs contains few errors. Identify each error and rewrite the corrected program.

i. `PROGAM TEST PROGRAME(OUTPUT)`  
`begin;`  
`var x,y ; int;`  
`tot; int`

`x = 10;`  
`y = 20`  
`tot = x + y`  
`writeln('tot')`  
`end`

ii. `Program integer()`  
`Begin;`  
`procedure line`  
`Writeln('*****');`  
  
`Begin`  
`Writeln('OPEN UNIVERSITY');`  
`line();`  
`end`

- b) There are three main types of control structures in Pascal. Distinguish between each of them.
- c) Compare and contrast the behavior of value parameters and variable parameters in Pascal using suitable examples.
- d) Write a complete program in Pascal to read 10 marks and to print the total and the average.

Note : Your program should consist of four subprograms to

- 1. read marks
- 2. find the total
- 3. find the average
- 4. output the results

Q3.

- a) What are the advantages of using an array rather than using several variables?
- b) What is a record set? Describe three advantages of a record set.
- c) There are 40 students in a classroom and each student offers 4 subjects. Define a multidimensional array for this description.
- d) Write a complete program to enter marks for the four subjects mentioned above.

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