



DURATION: TWO HOURS

Date: 22nd July, 2010

Time: 10.00 a.m. – 12.00 noon

Answer **FOUR** Questions **ONLY**.

Q1.

- i. Why do we need computer languages to communicate with computers? Explain very briefly.
- ii. What are the three main components of a modern computer?
- iii. What are the two types of memory in a computer?
- iv. Which of the following words are invalid variables names? Give reasons.
 - a. \$amount
 - b. End
 - c. Int-rate
 - d. Force 123
 - e. Gravity

Q2.

- i. The following program contains few errors. Identify each error and rewrite the correct program.

```
PROGRAM TEST EXAMPLE(OUTPUT)
var    number1, number2 ; integer;
begin;
    number1 = 24;
    number2 : = number1 * 4;
    writeln('help)
end
```

- ii. Each of the following expression is incorrect. Rewrite each using correct Pascal statements.
 - a. Firstletter := A;
 - b. StartCount := initial := 0;
 - c. Taxrate := 5%;
 - d. Total := 5 plus 7;
 - e. Efficiency := .35;
- iii. Write arithmetic expressions for the following formulae:

(i) PV/RT

(ii) $Ax^3 + Bx + C$

Q3.

- i. Write a program in Pascal to add the first even numbers from 1 to 100 using the FOR loop.

Hint: sum = 2 + 4 + 6.....+100

- ii. Modify the above program to do the same operation using the REPEAT-UNTIL loop.
- iii. Modify the above program to do the same operation using the WHILE loop.

Q4.

- i. Consider the following Pascal program:

```
PROGRAM write_screen(OUTPUT);  
BEGIN  
    WRITE('Hello');  
    WRITELN('How are you?');  
    WRITELN('Start studying Pascal')  
END.
```

What will be the output of this program?

- ii. Write a program to find the total and average of 100 numbers using the FOR-DOWN-TO loop.

Q5.

- i. Define an Integer type array called 'Number', with 20 elements.
- ii. Write a Pascal procedure to sort the above numbers into ascending order.
- iii. Using your answer above, write a complete Pascal program to print the given numbers in the ascending order.

Q6.

- i. Create an ARRAY to store number of worked sessions of 10 employees.
- ii. Write a PROCEDURE to add values for the above ARRAY.
- iii. Write a FUNCTION to find the SALARY SCALE of a given session.

No.of sessions	Salary scale
>1 and <20	No.of sessions * 400.00
>20	No.of sessions * 500.00
>30	No.of sessions * 575.00

- iv. Write a complete program to implement all the above tasks and display results.

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