

GUJARAT TECHNOLOGICAL UNIVERSITY**M. C. A. Semester - IST Examination –July- 2011****Subject code: 610001****Subject Name: Fundamentals of Programming****Date:06/07/2011****Time: 02:30 pm – 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** State whether true or false with reason. **07**
- 1 F = scanf(“%f %f”) will return F = 3, if we give 54 and 75.50 as an input.
 - 2 The statement char cityname[][]; is valid in C language.
 - 3 The C statement #define S scanf is used to define a symbolic constant S.
 - 4 X += Y*Z; is a valid C statement.
 - 5 The header file stdio.h contains the definition of inbuilt functions printf and scanf used within a C program.
 - 6 The C statement if (2 & 4) {printf(“Both 2 and 4 are nonzero”);} will always print the message Both 2 and 4 are nonzero.
 - 7 If we have defined char *PTR; then sizeof(PTR) will return integer value 4 in Turbo C compiler.
- (b)** Choose the correct option from the given: **07**
- 1 Which one of the following variable names is NOT valid?
 - a) go_cart
 - b) 4season
 - c) choice3
 - d) _what
 - 2 main()
{
printf(“%d, %d”, sizeof(‘0’), sizeof(32765));
}
Assume that Turbo C compiler has been used.
 - a) 1, 2
 - b) 2, 100
 - c) 4, 100
 - d) 4, 4
 - 3 main()
{
if ((0||1) && (1||0))
printf(“FOP exam.”);
else
printf(“Completed my exam.”);
}
 - a) Compile error
 - b) Completed my exam.
 - c) FOP exam.
 - d) None of the above
 - 4 What does the storage class "auto" specify?
 - a) It automatically initializes a variable to 0
 - b) It indicates that a variable's memory will automatically be preserved.
 - c) It automatically increments the variable when used.
 - d) It automatically initializes a variable to NULL.

- (b) Answer the following: 07
- 1 What is the use of pre-processing? Explain the three categories of pre-processors directives with example.
 - 2 Differentiate between a normal variable and a pointer variable.

OR

- Q.5** (a) Answer the following: 07
- 1 Write a note on dynamic memory allocation.
 - 2 Differentiate between ASCII and Binary File

- (b) Answer the following: 07
- 1 “Pointer variables can be defined as void”, comment on this statement.
 - 2 Write a macro WRITE which takes two arguments first being the qualifier for variable type and second the variable whose value is to be printed. This macro should replace an appropriate printf statement. Example WRITE (c, a) should be replaced by printf(“%c”, a);
