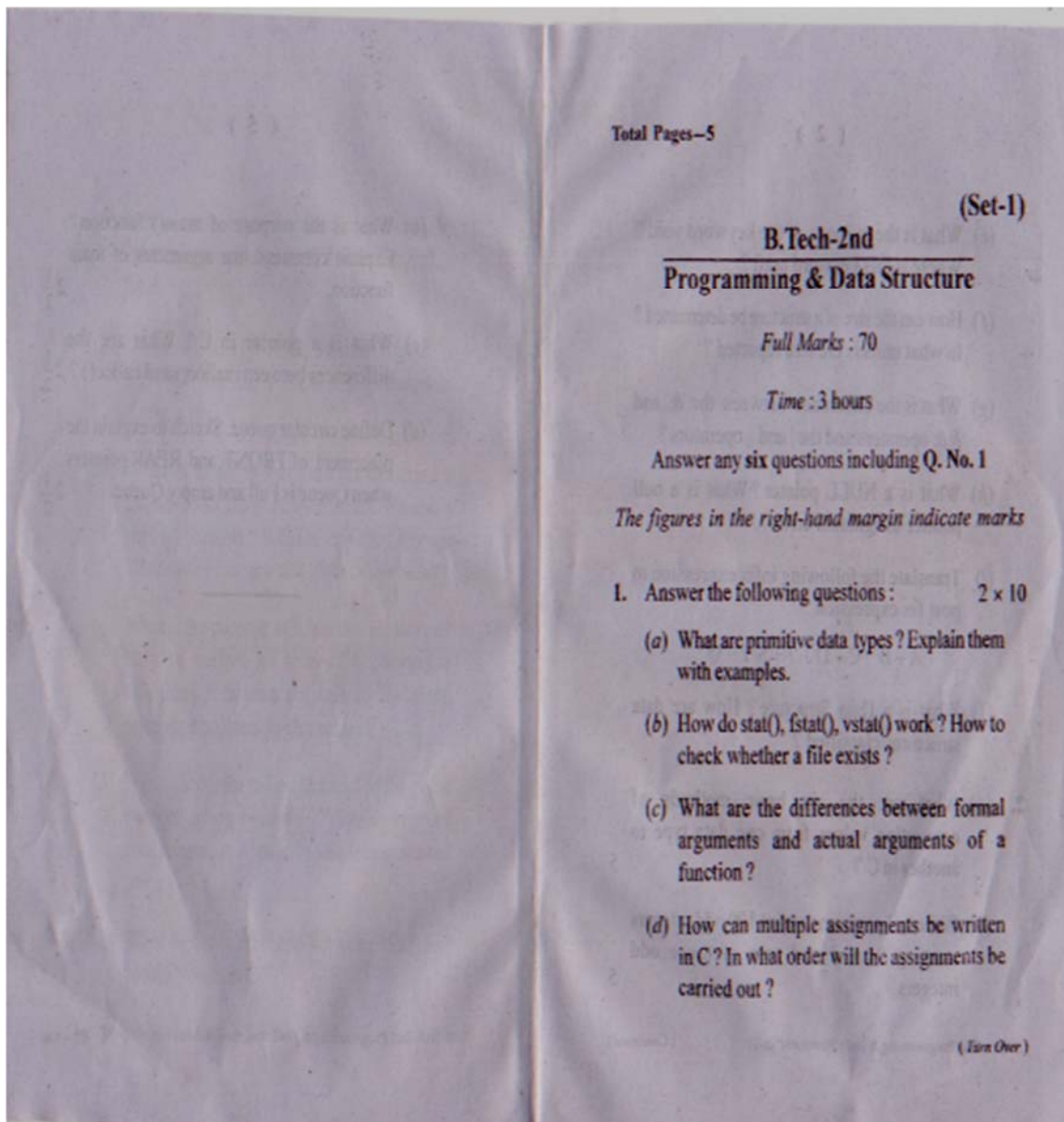


VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
& INFORMATION TECHNOLOGY
SESSION 2014-2015 (EVEN SEMESTER)



(2)

- (e) What is the purpose of the keyword void ?
Where is this keyword used ?
- (f) How can the size of a structure be determined ?
In what units is the size reported ?
- (g) What is the difference between the & and
&& operators and the | and || operators ?
- (h) What is a NULL pointer ? What is a null
pointer assignment error ?
- (i) Translate the following infix expression to
post fix expression :
- $$A - B * C - D \uparrow 7 + S / T + Q$$
- (j) What is a Data Structure ? How are data
structures classified ?
2. (a) What are the six basic methods of
converting values from one data type to
another in C ? 5
- (b) Write a C program to print 100 odd integers
starting from 1 and sum of those odd
integers. 5

(3)

3. (a) What is a NULL pointer ? How is a NULL
pointer defined ? Write a program in C to
exchange the values of *a* and *b* using pointer ? 5
- (b) Define linear queue ? Let QUEUE be a
non-empty Queue implemented using linear
array. Write a C program to inset element to
the Queue ? 5
4. (a) Compare the use of *switch* statement with
the use of nested *if-else* statements. Which
is more convenient ? What is the purpose of
the *break* statement ? 5
- (b) Write a program in C language to compute
sum of the series $S = 2 + 4 + 8 + \dots + 2^n$. 5
5. (a) What is a structure ? A company maintains
the record of their employees as : Name,
designation, Details of the pay like Gross pay,
Provident Fund deductions, Professional tax
and the Net pay. Keep the details of the pay
within a separate structure. Suggest suitable
structure declaration in C for record of the
employees ? 5

(4)

- (b) Write a program to find the number and sum of all integers from 100 to 200 and divisible by 7. 5
6. (a) Define STACK. Write a C function for PUSH and POP for the STACK implemented in linear array. 5
- (b) What is the difference between declaring a variable and defining a variable? What is a register variable? What is scope and storage allocation of extern and global variables? 5
7. (a) What is the purpose of a function prototype? How to declare an array of N pointers to functions returning pointers to functions returning pointers to characters? 5
- (b) Write a program to find factorial of the given number using recursion? Which type of recursions are suitable to be implemented using C? 5
8. (a) What is the difference between 'for' and 'while' loops in C? $2\frac{1}{2}$

(5)

- (b) What is the purpose of main() function? Explain command line arguments of main function. $2\frac{1}{2}$
- (c) What is a pointer in C? What are the differences between malloc() and calloc()? $2\frac{1}{2}$
- (d) Define circular queue. Sketch to explain the placement of FRONT and REAR pointers when Queue is Full and empty Queue. $2\frac{1}{2}$