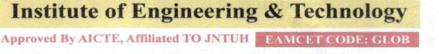






PART - I







AN AUTONOMOUS INSTITUTION

SI No.: 2365

Program

B.TECH

Hall Ticket No.

: 24U61A0106

Name

: BODA ANJI

Examination

: I SEMESTER (GR 24) - II MID TERM

Month-Year

JANUARY 2025

Branch

CIVIL ENGINEERING

Course Code

: CS104ES

Course Name

Problem Solving through C

Date of Exam

10/01/2025

College Code

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Signature of the Controller of Examinations

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Branch

CIVIL ENGINEERING

Course Name

Problem Solving through C

Date of Exam

10/01/2025

Course Code

: CS104ES

I SEMESTER (GR 24) - II MID TERM Examination

Serial No. 8 Last Page Written

Month-Year : JANUARY 2025

| Descriptive Question-wise Marks | | | | | | | | | Descriptive | Objective | Grand | | | |
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INSTRUCTIONS TO STUDENTS

- 1. The Answer Booklet contains 8 pages. Ensure all the 8 pages are in proper order.
- Candidate must verify the details of particulars in the PART 1 i.e Name, Hall Ticket No., Examination, Course Name, Course code etc.,
- 3. In case of any deviation in the above or if the PART 1 is torn / damaged, report to the invigilator and return the damaged booklet.
- You are prohibited from writing on or tampering the PART-1 except affixing the signature and serial number of last page written in the space provided.
- 5. Student is prohibited from:
 - i. Writing their Hall Ticket No. and name in any part of the answer booklet.
 - ii. Addressing the examiner in any manner whatsoever in the answer booklet. If they do so, their script will not be valued.
 - iii. Writing religious symbols.
 - iv. Either seeking or providing any assistance to the fellow students in the examinations.
 - v. Possessing a manuscript or a printed matter, in any form, in the examination hall.
 - vi.Bringing Mobile Phones / Cameras / Bluetooth Devices / Programmable calculators or any electronic gadgets.
- Violation of the above instructions will be viewed as a case of malpractice, which is punishable offence.
- 7. Before beginning to answer any question, the students should write the correct number of that question in the margin provided. Answers written at different places for the same question will not be valued.
- 8. The students should write the answers, within the margins provided on both sides of the paper and on all the lines of each page. It is not necessary to begin each answer in a fresh page. Answers must be legibly written with blue or black pen.
- 9. Do not write anything except Question Number in the margin.
- 10. No loose sheets of papers will be allowed in the examination hall. No paper must be detached from or attached to the answer booklet except graph sheet.
- 11. Strike off all unused pages.
- 12. NO ADDITIONAL ANSWER BOOKLETS/SHEETS WILL BE SUPPLIED.

Objective Type Answers

Multiple Choice Fill in the Blanks x= read; w= write; a = append 1) [A] 11) r=read; w=write; a=append [0] 12) Sub tack task 3) [A] 13) 4) [(] 14) calloc () 5) [] 1 15) mellocc) 6) [A] 16) [3] 17) linear search and Rinary search [3] 18) 19) 10) [[] 20)



Subjective Exam:

6.5

Algorithm of the Bubble sort

of It compare with Given elements to an array.

& sit will set to be small to greater values.

from the given values

when isn # is it the element is small and
the element is greatly than set will comp
the number.

sort will kan sever successfull.

* Bubble sort has a time complexity of in the worst and average cases.

Example:

include < Stdio.h >

include < conio.h >

void main ()

not li, a, i .: temp);

{

printf ("element of an array");

scanf ("1.d, fn);

printf ("enter the size of array");

if (i = 0; icn; i++);

printf ("Bubble sorting");

scant ('Yed, a [i]);



for(i=0; i=n=1; i++);

for(i=0; icn-10; j++); refere so de traverse recipion the surgest to the

a (i) > a [j]; a[j] > temp; my walls with the

temp salj]; 4 and you a se Avenue

print f("Y'd; Bubble Sort");

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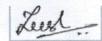
4 Million on the ways and the first the second

5. Binary search

Example !-#include = stdio.h >

include a conio. h>

void main ()



```
int Lmid, Count = 0, a []
     Sa Scanf ("Y'd; (n");
      printf ("enter array element");
     for (i=0; ico; i++);
Seanf ("Y.d", &a [i]");
Williams & water the to be a fit which
  sive mid and a second to the second to
     printf ("enter any element");
   scanf ("Y.d, & a [i]");
  if (log = = a (imd));
     printf ("element of found at index "1.d"a(mid);
     Scanf ("1d; fati)");
   else if ( Key = a [mid]);
    for ("=0; mide"; i++");
      If (key =a[i]);
       Print f (element found at index y'd");
      Count ++;
       else if ('key's i (mid);
    for (i-mid + icn; i++);
  if (key = = a[i]),
```



Level.

y
int count = 0
y

3. Recursion: - A recursion function performs the tasks by dividing it into the sab tasks. There is a termination condition defined in the function which is satisfied by some specific substancs.

Recursion is the process which comes into existance when a function calls a Copy of itself to work on a Smaller problem. Any functions which calls itself is called recursive function calls.

- * Recursion involves several no of securicurside ealls.

 However, it is important to impose a termination

 Condition of recursion.
- A Recursion code is shorter than iteractive code forever it is difficult to under stand.
- * Recursion con't be attend applied to dell'the problem but it is more useful for the tasks that can be defined in terms of similar substances for example, seedursion may be applied to Lorking, searching and traversal problem.
- O Pass by value: provameters passing in this method copies. value: from actual parameter into formal function parameter. # As a result any changes and and



made inside the function do not reflect in the caller's parameters.

Example: # include < stdio. h>

Deass by reference: The calle's actual parameter and
the function actual parameter refer to the some conditions,
So any changes made inside the function are reflected
in the calle's actual parameter.

In call by reference the address of the vancte is passed into the function callors the actual perfameter # In call by reference, the address of the nativariable.

is passed into the function call to as the certual parameter

2 i)a+ :- (appened plus) it is in the modes it can be added record added at the end of tile Syntaxe:

fopen ("data. +x+", "a+")

of the file to read and write and records

of the file is not open so the new file is open

Syntan!

+ open ("data +x+", " + +");

ill, write + Hwrite plus) In this mode wit read and write the file. The file is not existing then compiler between new to the fill pointer then new file is append



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| Syntan: forn("data" -1x +."w") | |
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