

"Dissemination of Education through Knowledge, Science and Culture".
--Shikshanmaharshi Dr. Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's
Padmabhushan Dr.Vasatraodada Patil

Mahavidyalaya, Tasgaon

Tal. Tasgaon. Dist. Sangli-416 312 (Maharashtra)

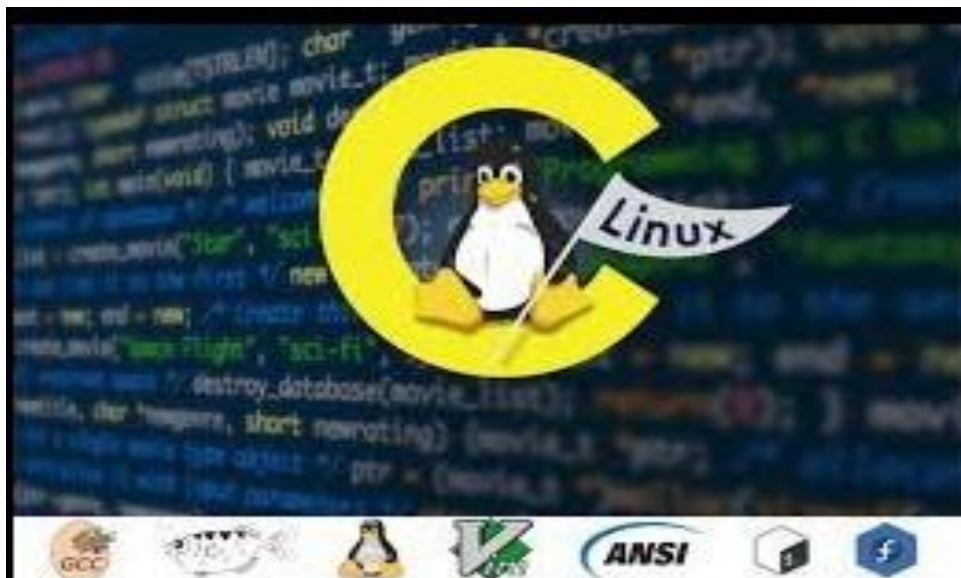
(Affiliated to Shivaji University, Kolhapur)

DEPARTMENT OF COMPUTER

APPLICATION

(B.C.A.)
(2020-21)

A Certificate Course In
Data Structure using C



“Dissemination of Education through Knowledge, Science and Culture”.
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Padmabhushan Dr.Vasatraodada Patil

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(Affiliated to Shivaji University, Kolhapur)

Title of the Certificate Course

“Data Structure using C”

Organizer: Department Of Computer Science & Application

Submitted To

**Internal Quality Assurance cell (IQAC) PDVP College,
Tasgaon**

Total No of Student Participated: 72

Total no of faculty conducted: 02

Kumbhar V.T.
Course Co-ordinator,
Career Oriented Course,

01 AUGUST 2020

To,
The Principal,
P D V P College,
Tasgaon- 416 312.

Sub: - Regarding Permission to commencement of (COC) Certificate course.....


Respected Sir,


With reference to above subject, our college is going to start a certificate course entitled "Data Structure using C" for all B.C.A. students in this current academic year. So, I request you to kindly give me permission to commencement above said course.

Please consider the same and oblige.

Thanking you

Yours faithfully


(Dr. R. R. Kumbhar)
Principal
Padmabhushan Dr. Vasantrodada Patil
Mahavidyalaya, Tasgaon, (Sangli)


HOD
Head,
Department of Computer Science
Padmabhushan Dr. Vasantrodada Patil
Mahavidyalaya, TASGAON, Dist. Sangli

For

“Dissemination of Education for Knowledge, Science and Culture”

-Shikshanmaharashi Dr.Bapuji Salunkhe

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

Padmabhushan Dr. Vasantodada Patil Mahavidyalaya, Tasgaon

DEPARTMENT OF COMPUTER APPLICATION

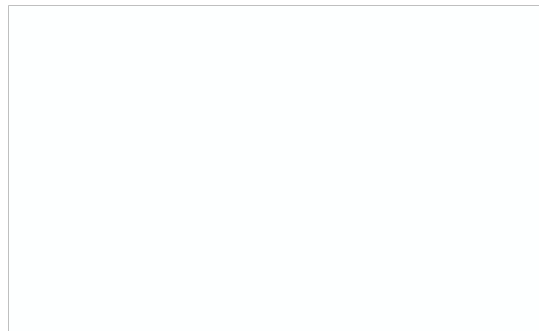
The meeting of C.O.C. for preparation of syllabus of a certificate course Data Structure using C is held on Wednesday 01/08/2020. The following members of the committee we represent for the preparation of Syllabus.

Sr. No.	Name	Designation	College Name	Sign
1	Mr.Kumbhar V.T.	Chairman	P.D.V.P.College, Tasgaon	
2	Mirs.Kumbhar N.V.	Member	P.D.V.P.College, Tasgaon	
3	Mr. Santinath Patil	Member	K.W.C.College, Tasgaon	
4	Mr.Toshif Mulla.	Member	Adarsh College, Vita	
5	Mr. Sandeep Patil.	Member	A.C.S.College, Palus	
6	Mr. Wagh A.A.	Member	P.D.V.P.College, Tasgaon	

The syllabus for said course has been prepared and the copy of the same is enclosed herewith for your kind information and further action.

Thanking you,

MOD
Head,
Department of Computer Sciences
Padmabhushan Dr. Vasantodada Patil
Mahavidyalaya, TASGAON, Dist. Sangli





“ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार”

-शिक्षणप्रदवी डॉ. बापूजी सावंत

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur Sanchalit,

PADMABHUSHAN DR. VASANTRAODADA PATIL MAHAVIDYALAYA

TASGAON, Dist. Sangli, Pin 416 312 ☎ STD : 02346-250 665, 250575 FAX : 02346-250575

(AFFILIATED TO SHIVAJI UNIVERSITY)

E-mail : san.pdvpm.tas@gmail.com Website : pdvpcollegetasgaon.com

Established Year - June 1962 P B. No. 14 Jr.College No. J22-10-001 Sr. College Code No. $\frac{SAAC}{X}$ Jr.-C-8

NAAC Reaccredited "B" Grade (2.76)

Dr. Bapuji Salunkhe
K.A., B.T.
Founder

Mon. Chandrakant (Dada) Patil
President
B.Com.
Western Reserve Department, Maharashtra State

Prin. Abhaykumar Salunkhe
M.A.
Chairman

Prin. Mrs. Shubhangi M. Gawade
M.Sc., B.Ed.
Secretary

Dr. R. R. Kumbhar
M.Sc., M.Phil., P.D.
Principal

Ref. No.: PDVPMT/

Date :

To,
Mr. V. T. Kumbhar,
Assistant Professor,
Department of Computer Application,
P. D. V. P. College, Tasgaon

Subject: - Regarding Meeting of BOS for Syllabus Preparation.....

Respected Sir/Madam,

With reference to the above mentioned subject, you are appointed as Member of Board of Studies (BOS) of Certificate Course entitled "Data Structure using C" to be conducted by The Department of Computer Application in our college during the academic year 2020-21.

The meeting of BOS is conveyed on 01st August 2020 for the preparation of syllabus of Certificate course entitled "Data Structure using C". So, you are kindly requested to attend the meeting at 11:00 a.m. in IQAC Office of the college.

Thanking you,

Yours Faithfully,

(Dr. Alka Inamdar)
IQAC Director

Prin. Dr. Milind S. Hujare
Principal
Padmabhusan Dr. Vasanttraodada Patil
Mahavidyalaya, Tasgaon (Sangli).

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"ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षण प्रसार"

-शिक्षणपट्टी डॉ. बापूजी साठुंबे

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur Sanchalit,

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NAAC Reaccredited "B" Grade (2.76)

शिक्षणसंस्था
Dr. Babuji Salunkhe
F.A., B.T.
Founder

Ron. Chandrakant (Dada) Patil
President
B.Com.
Wheeler Research Department, Maharashtra State

Prin. Abhaykumar Salunkhe
Chairman
M.A.

Prin. Mrs. Shubhangi M. Gawade
Secretary
M.Sc., B.Ed.

Dr. R. R. Kumbhar
Principal
M.Sc., M.Phil., Ph.D.

Ref. No.: PDVPMT/

Date :

To,
Mrs. N. V. Kumbhar,
Assistant Professor,
Department of Computer Application,
P. D. V. P. College, Tasgaon

Subject: - Regarding Meeting of BOS for Syllabus Preparation.....

Respected Sir/Madam,

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Yours Faithfully,

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IQAC Director

Prin. Dr. Milind S. Hujare
Principal
Padmabhusan Dr. Vasantrodada Patil
Mahavidyalaya, Tasgaon (Sangli).



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-शिवमगुहरी डॉ. बापूजी साबुंबे

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur Sanchalit,

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X

NAAC Reaccredited "B" Grade (2.78)

Dr. Bapuji Salunkhe
F.A., B.T.
Founder

Hon. Chandrakant (Dada) Patil
President
B.Com.
Member Revenue Department, Maharashtra State

Prin. Abhaykumar Salunkhe
M.A.
Chairman

Prin. Mrs. Shubhangi M. Gawade
M.Sc., B.Ed.
Secretary

Dr. R. R. Kumbhar
M.Sc., M.Phil, P.D.
Principal

Ref. No.: PDVPMT/

Date :

To,
Mr. Santinath Patil,
Assistant Professor,
Department of Computer Application,
K. W. C. College, Sangli.

Subject: - Regarding Meeting of BOS for Syllabus Preparation.....

Respected Sir/Madam,

With reference to the above mentioned subject, you are appointed as Member of Board of Studies (BOS) of Certificate Course entitled "Data Structure using C" to be conducted by The Department of Computer Application in our college during the academic year 2020-21.

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Thanking you,

Yours Faithfully,


(Dr. Alka Inamdar)
IQAC Director


Prin. Dr. Milind S. Hujare
Principal
Padmabhushan Dr. Vasanttraodada Patil
Mahavidyalaya, Tasgaon (Sangli).



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(AFFILIATED TO SHIVAJI UNIVERSITY)

E-mail : san.pdvpm.tas@gmail.com Website : pdvpcollege.tasgaon.com

Established Year - June 1962 P. B. No. 14 Jr.College No. J22-10-001 Sr. College Code No. SWAC/4
X

NAAC Reaccredited "B" Grade (2.76)

Dr. Bapuji Safunkhe
B.A., B.T.
Founder

Hon. Chandrakant (Dada) Patil
President
B.Com.
Member Service Department, Maharashtra State

Prin. Abhaykumar Salunkhe
M.A.
Chairman

Prin. Mrs. Shubhangi M. Gawade
M.Sc., B.E.
Secretary

Dr. R. R. Kumbhar
M.Sc., M.Phil, Ph.D.
Principal

Ref. No.: PDVPM/

Date :

To,
Mr. Santinath Patil,
Assistant Professor,
Department of Computer Application,
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IQAC Director

Prin. Dr. Milind S. Hujare
Principal
Padmabhushan Dr. Vasanttraodada Patil
Mahavidyalaya, Tasgaon (Sangli).



“ज्ञान, विज्ञान जगति सुसंस्कार वांछनी शिवाय प्रसार”
- विद्यामहर्षि डॉ. बापूजी साठुंबे

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X

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Dr. Babuji Salunkhe
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President

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M.Sc., B.Ed.
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Dr. R. R. Kumbhar
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Principal

Ref. No.: PDVPMT/

Date :

To,
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Assistant Professor,
Department of Computer Application,
A. C. S. College, Palus

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Founder

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President
M.Com.
Member, Technical Education, Maharashtra State

Prin. Abhaykumar Salunkhe
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Chairman

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M.Sc., B.Ed.
Secretary

Dr. R. R. Kumbhar
M.Sc., M.Phil., P.D.
Principal

Ref. No.: PDVPMT/

Date :

To,
Mr. A. A. Wagh,
Assistant Professor,
Department of Computer Application,
P. D. V. P. College, Tasgaon

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Shri Swami VivekanandShikshanSanstha, Kolhapur's

Padmabhushan Dr.vasatraodada Patil Mahavidyalaya, Tasgaon

DEPARTMENT OF COMPUTER APPLICATION

A Certificate Course in Data Structure using C

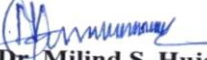
Time Table

Academic year 2020-21

DATE: 08-08-2020

Time	Monday	Thursday	Wednesday	Thursday	Friday	Saturday
9 to 10 am	Theory	Theory	Theory	Theory	Theory	Theory
10 to 11am	Practical	Practical	Practical	Practical	Practical	Practical


HOD
Head,
Department of Computer Science
Padmabhushan Dr. Vasatraodada Patil
Mahavidyalaya, Tasgaon, Dist. Sangli


Prin. Dr. Milind S. Hujare
Principal
Padmabhushan Dr. Vasatraodada Patil
Mahavidyalaya, Tasgaon (Sangli).

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Padmabhushan Dr. Vasantrodada Patil Mahavidyalaya, Tasgaon

Department of Computer Application

A Certificate Course in Data Structure using C

Time Table

Academic year 2020-21


Time Table

08/08/2020

All the students of B.C.A. (Computer application) are hereby informed that, the examination of C programming using Linux certificate course will be held as per following schedule

SR.NO	PAPER	DAY	DATE	TIME
1	Theory	MONDAY	20/09/2017	8 to 11 am
2	Practical	THURSDAY	21/09/2017	8 to 11 am


HOD
Head,
Department of Computer Science
Padmabhushan Dr. Vasantrodada Patil
Mahavidyalaya, TASGAON, Dist. Sangli


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Principal
Padmabhushan Dr. Vasantrodada Patil
Mahavidyalaya, Tasgaon (Sangli).

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Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon

Department of Computer Application

**A Certificate Course in Data Structure using C
(Theory)**

Marks : 50

Course Syllabus

After completion of this course student should be able to :

1. Use and implement appropriate data structure for the required problems using a programming language such as C.
2. Understand various searching & sorting techniques
3. Implementing various data structures viz. Stacks, Queues
4. Implementation of Linked Lists and Trees.

UNIT I Introduction to data structures

- Introduction to Data Structures
- Data and Information
- Data structures and its types
- Data structures operations

UNIT II Sorting and Searching Methods

- Introduction to Sorting and searching
- Bubble Sort
- Insertion sort
- Selection sort
- Merge sort
- Linear search
- Binary search and hashing concept

UNIT III Stacks and Queues

- Concept of Abstract Data types
- Introduction to stack
- Primitive Stack operations: Push & Pop
- Array and Linked Implementation of Stack in C
- Application of stack: Prefix and Postfix

- Expressions, Evaluation of postfix expression
- Definition of queue.
- Operations on queue.
- Types of queue-Linear, Circular.
- Applications of queue

UNIT IV Linked Lists and Trees

- Introduction to linked lists
- Implementation of Linked list
- Operations on linear linked list, circular linked list, doubly linked list
- Sequential and linked lists
- Operations such as o Traversal o Insertion o Deletion o Searching
- Trees : definition, terminologies, representation, types
- Tree Traversal- (Preorder, Inorder, Postorder)

Reference Books: 1.

- 1>Data Structure Through C- By Dr. Sahani.
2. Data Structures Using C Yashwant Kanitkar – BPB Publication
3. Introduction to Data Structures using C-Ashok Kamthane
4. Data Structures using C-Bandopadhyay & Dey(Pearson)
5. Data Structures using C-By Srivastava BPB Publication.
6. Data Structure using C by A.M. Tanenbaum, Yecidyanlang

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Padmabhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon
Department of Computer Application
A Certificate Course in Data Structure using C
Academic year 2020-21
Student List

BCA III Year

6701	SHRI	BANSODE NIRANJAN SUDHAKAR
6702	SHRI	BHOSALE SURAJ SAMBHAJI
6703	SHRI	CHAVAN MAHESH MARUTI
6704	SHRI	KADAM PRAVIN SITARAM
6705	SHRI	KHARADE RUSHIKESH RAMESH
6706	SHRI	KHOT SAGAR NARAYAN
6707	SHRI	KORE PRATIK PRAKASH
6708	SHRI	MALI GURUDAS RAMDAS
6709	SHRI	MALI SAMADHAN APPANNA
6710	SHRI	MANDALE VINAYAK DAGADU
6711	SHRI	MORE SHRISHAIL SHIVAJI
6712	SHRI	NALAWADE VAIBHAV BHAUSO
6713	SHRI	NALAWADE SHUBHAM HANMANT
6714	SHRI	PATIL NIKHIL SHARAD
6715	SHRI	PATIL VAIBHAV RAJARAM
6716	MISS	PATIL YOGITA SANJAY
6717	SHRI	PUJARI SANDIP SAINATH
6718	MISS	RAHIMATPURE MUSKAN JAFAR
6719	SHRI	SALUNKHE SANDESH BATTAS
6720	SHRI	THORAT RAHUL APPASO
6721	SHRI	KAMBLE NIMESH SUBHASH
6722	SHRI	MAHADIK SUDARSHAN DILIP
6723	MISS	SARAVADE VIDYA BALASO
6724	MISS	PAWAR KOMAL JALINDAR

BCA II Year

6601	MISS	JADHAV MAYURI NAMDEV
6602	SHRI	JADHAV NILESHKUMAR BHAUSAHEB
6603	MISS	JADHAV SANJANA JAGADISH
6604	SHRI	JADHAV SANKET RAMCHANDRA
6605	SHRI	JADHAV SOURABH MADHUKAR
6606	SHRI	JAGTAP PRAMOD SURESH
6607	MISS	KADAM VISHAKHA ARJUN
6608	SHRI	KAMBLE VINAY KAKASO
6609	SHRI	KASHID ROHAN SURESH
6610	SHRI	LOKHANDE VINAYAK ASHOK
6611	MISS	LUGADE PRIYANKA SUKHADEV
6612	SHRI	MAHADIK PRAVIN SURESH
6613	SHRI	MANDALE ROHIT SANJAY
6614	SHRI	MANE VIVEK PRAKASH
6615	MISS	MOHITE SNEHAL VINAYAK
6616	MISS	MORE ASHWINI BHASKAR
6617	SHRI	MOTE SOURAV SURESH
6618	MISS	MULLA SANIYA YASIN
6619	SHRI	NALAWADE GURUPRASAD RAJARAM
6620	SHRI	NALAWADE PRATHAMESH ARJUN
6621	MISS	NALAWADE SHITAL AJIT
6622	SHRI	PATIL AMIT ARUN
6623	MISS	PATIL ANKITA SANJAY
6624	SHRI	PATIL PRATHAMESH RAJENDRA
6625	SHRI	PATIL ROHIT DIPAK
6626	SHRI	PATIL ROHIT TANAJI
6627	SHRI	PATIL TEJAS ARUN
6628	SHRI	PATIL VIKAS TANAJI
6629	SHRI	SHINDE OMKAR PRATAP
6630	SHRI	SUTAR RUTIKESH NARAYAN
6631	SHRI	SUTAR SWAPNIL NANDKUMAR
6632	MISS	YADAV SWAPNALI VILAS
6633	SHRI	ZAMBRE PRATIK PRATAP
6634	SHRI	ZAMBRE AKASH UTTAM

BCA I Year

6501	SHRI	BHOSALE ASHUTOSH AVADHUT
6502	SHRI	BHOSALE MAYUR MOHAN
6503	SHRI	BHOSALE SHUBHAM ASHOK
6504	MISS	CHABUKSWAR RUTUJA REVENT
6505	SHRI	CHAVAN OMKAR BALKRUSHNA
6506	SHRI	GHADAGE AKSHAY AJAY
6507	SHRI	JADHAV PRANAV SHARAD
6508	SHRI	JADHAV PRASAD MOHAN
6509	MISS	JAMADADE SHREYA RAJENDRA
6510	SHRI	JAMDADE SURAJ PRAMOD
6511	SHRI	KADAM SOURABH SHIVAJI
6512	MISS	KATKAR RUTUJA VITTHAL
6513	SHRI	KHARADE SANTOSH SHIVAJI
6514	SHRI	KIRPEKAR SAGAR TANAJI
6515	MISS	KUMBHAR AKSHADA SURESH
6516	SHRI	MANE VIJAY JAGANNATH
6517	SHRI	MOHITE ANIKET MOHAN
6518	SHRI	MOHITE SHUBHAM SANJAY
6519	SHRI	NALAWADE PRITAM UTTAM
6520	SHRI	PATIL AKSHAY ANIL
6521	SHRI	PATIL AKSHAY UTTAM
6522	SHRI	PATIL AVINASH ANIL

6523	SHRI	PATIL GAURV KIRAN
6524	SHRI	PATIL JEEVAN BHARAT
6525	SHRI	PATIL ROHAN MAHADEV
6526	SHRI	PATIL SHIVAM RAJENDRA
6527	SHRI	PATIL SURAJ PRAKASH
6528	SHRI	PATIL TUSHAR VIJAY
6529	SHRI	PAWAR RUTURAJ ASHOK
6530	SHRI	PAWAR SHUBHAM ASHOK
6531	SHRI	PAWAR SOMNATH CHANDRAKANT
6532	MISS	RAJMANE AAKANKSHA ASHOK
6533	SHRI	SALUNKHE SATYAJEET SAHEBRAO
6534	MISS	SAWANT NUTAN NAVANATH
6535	SHRI	SHINDE SACHIN MOHAN
6536	MISS	SHINDE SANIKA UDAYKUMAR
6537	SHRI	SURYAWANSHI ANIRUDDHA HANMANT
6538	SHRI	SUTAR KIRAN BALASO
6539	SHRI	TAWARE ADHWARYU SANJAY
6540	MISS	WAWARE GOURI SANJAY
6541	SHRI	YADAV VAIBHAV TANAJI
6542	SHRI	HINGMIRE YOGESH GOVIND

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Department of Computer Application
A Certificate Course in Data Structure using C
Academic year 2020-21

Marks - 50

Question Paper

Q1) Select correct alternative and rewrite the sentence: [10]

- a) _____ is a step by step method for solving the problem under consideration.
- i) Flow chart
 - ii) Error
 - iii) Algorithm
 - iv) Graph
- b) VI editor uses _____ mode to edit Work-Buffer.
- i) Input
 - ii) Command
 - iii) Last Line
 - iv) None of these
- c) _____ is an assembler in GCC package.
- i) as
 - ii) ld
 - iii) gcc
 - iv) epp
- d) _____ represents 32 bits integer in 32 bit GCC.
- i) short int
 - ii) char
 - iii) int
 - iv) long long
- e) _____ is/are labels used in switch statement in C.
- i) case
 - ii) default
 - iii) both (i) and (ii)
 - iv) none of these
- f) Do-while is _____ controlled loop.
- i) entry
 - ii) exit
 - iii) both (i) and (ii)
 - iv) none of these

- g) Switch statement _____ data as input.
- i) interger
 - ii) character
 - iii) both (i) and (ii)
 - iv) none of these
- h) If array is declared as int A[20] then the last valid index of an element in A will be _____.
- i) 19
 - ii) 20
 - iii) 21
 - iv) none of these
- i) _____ is a format specifier for double in printf.
- i) %f
 - ii) %lf
 - iii) %Lf
 - iv) %llf
- j) Double precision floating point number needs _____ bytes memory in C.
- i) 4
 - ii) 32
 - iii) 16
 - iv) 8

[20]

Q2) Attempt Any Two from the following:

- a) What is an algorithm? Explain its properties and write an example.
- b) Explain C program structure with appropriate example.
- c) What is loop? Explain all looping statements in C.

[20]

Q3) Attempt Any Four of the following:

- a) Define error. Explain it with its types.
- b) Explain loop control statements break and continue.
- c) Write a note on formatted input statement (scanf ()) in C with its format specifiers.
- d) Define infinite loop. Explain it with all loops.
- e) What are different representations of integers in C language? What are the different data types which represent unsigned integers in C.
- f) Write a note on nested if-else statement.

• Problem Solving Using Computers [Papers-13]

Q.1) select correct alternatives and rewrite the sentence:

a) Algorithm is a step by step method for solving the problem under consideration.

b) VI editor uses Command mode to edit Work-Buffer.

c) gcc is an assembler in Gcc Package.

d) Case, default is labels used in switch statement in c.

e) int represents 32 bits integer in 32 bit Gcc.

f) Do-While is exit controlled loop.

g) Switch statement integer, character data as input.

h) If array is declared as `int A[20]` then the ~~set~~ last valid index of an element in A will be 19.

i) %f is a format specifier for double in `printf`.

j) Double precision floating point number needs

Page No. _____
Date _____

8 bytes memory in c.

Q2) Attempt any Two from the following.

a) What is an algorithm? Explain properties and write example.

ANS: An algorithm is a step procedure to solve logical and mathematical problems. A recipe is a good example of an algorithm.

Properties of an algorithm:

- Input: The algorithm must have input values from a specified set.
- Output: The algorithm must produce the output values from a specified set of input values. The output values are the solution of a problem.
- Fitness: For any input, the algorithm must terminate after a finite number of steps.
- Definiteness: All steps of the algorithm must be precisely defined.
- Effectiveness: It must be possible to perform each step of the algorithm correctly and in a finite amount of time. That is, its steps must be basic enough so that, for example, someone using a pencil and a paper could carry them out exactly and in a finite amount of time.

b) Explain C program structure with appropriate example.

ANS: structure is a group of variables of different data types represented by a single name.

Let's take an example to understand the need of a structure in C programming. Let's say we need to store the data of students like student name, age, address, id etc, we can solve this problem easily by using structure.

c) What is loop? Explain all looping statements in C.

ANS: A loop executes the sequence of statements many times until the stated condition becomes false. A loop consists of two parts, a body of a loop and a control statement.

1) While loop in C:

A while loop is the most straightforward looping structure. Syntax of while loop in C programming language. It is an entry-controlled loop.

```
syntax: while (condition)
        {
            statements;
        }
```

2) DO-while loop in C:

A do-while loop in C is similar to the while loop except that the condition is always executed after the body of a loop. It is also called an exit-controlled loop.

```
syntax: do
        {
            statement
        }
        (while expression).
```


3) for loop in c:

A for loop is a more efficient loop structure in 'c' programming. The general structure of for loop syntax in c is as follows.

```
for (initial value; condition;
    incrementation or decrementation)
{
    statements;
}
```

4) Break statement in c: The Break statement is used mainly in the switch statement. It is also useful for immediately stopping a loop.

5) Continue statement in c: When you want to skip to the next iteration but remain in the loop, you should use the continue statement.

Q.3) Attempt Any Four of the following.

a) Define error. Explain it with its types.

ANS: An error is something you have done which is considered to be incorrect or wrong, or which should not have been done.

There are three types of error:

- syntax error
- logical error
- run-time error

• syntax error: Just like human languages, computer languages have grammar rules. But while humans are able to communicate with less than perfect grammar, computer can't ignore mistakes, i.e. syntax error.

Date

- Logical Errors :

Logic errors can be the hardest to track down. Everything looks like it is working, you have just programmed the computer to do the wrong thing.

- Run time Errors :

Runtime errors happen as a user is executing your program. The code might work correctly on your machine, but on the webserver, there might be a different configuration.

b) Explain loop control statements break and continue.

ANS: • Break statement :

The Break statement is used to terminate the loop containing it. The control of the program will come out of that loop.

Ex:

Syntax :

```
for char in ' ' break ;
```

The Break statement is almost always used with if... else statement inside the loop

- Continue statements :

The continue statement skips the current iteration of the loop and continue with the next iteration. Its syntax is :

```
continue ;
```

The continue statement is almost always used with the if... else statement.

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Department of Computer Application
A Certificate Course in Data Structure using C
Academic year 2020-21
Attendance Sheet for Academic Year 2020-21(BCA- I,II,III)

Certificate Course from 04/08/2020 to 14/09/2020

Sr. No	Name Of The Student	11/8	12/8	13/8	14/8	15/8	16/8	17/8	18/8	19/8	20/8	21/8	22/8	23/8	24/8	25/8	26/8	27/8	28/8	29/8	30/8	31/8	1/9	2/9	3/9	4/9	5/9	6/9	7/9	8/9	9/9	10/9	11/9	12/9	13/9	14/9		
1	CHAYAN KIRAN VISHWAI	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
2	CHAYAN RUPALI BANGURATH	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
3	DADAR PANKAJ VIJAY	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	GAYAN KESHAVJI NAGI LAXMAN	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
5	GAYAN TAJALI TUKARAM	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
6	GHANESH ASHUT DADAR	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
7	KALPANIKH SONALI MAHE	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
8	MAHARAJAN SURESH KALANAM	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
9	PATE HARSH RAMDAS	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
10	PATE HARSHAD LAXMAN	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
11	PATE KALPA DIPAK	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
12	PATE RITIK SURESH	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	PATE SHREYA ANANDRAJ	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
14	PATIL RUTIK VILAS	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
15	RIKAB ANKABASHA BENKAT	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
16	SAYAN SAHEL DIPRANANMAD	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
17	SHENAI PRITHA NANDESHWAR	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
18	SHREY PRATYAKA HELEKAT	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
19	SHREYASH NILISH LAXMAN	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
20	SUVASHI DIVAN VIJAY	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	TAMBE SACHIN TANAJ	P	P	P		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

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Department of Computer Application
A Certificate Course in Data Structure using C
Academic year 2020-21
Students Mark List

BCA III Year

Roll No	Name Of Students	Marks
6701	BANSODE NIRANJAN SUDHAKAR	40
6702	BHOSALE SURAJ SAMBHAJI	42
6703	CHAVAN MAHESH MARUTI	40
6704	KADAM PRAVIN SITARAM	42
6705	KHARADE RUSHIKESH RAMESH	44
6706	KHOT SAGAR NARAYAN	42
6707	KORE PRATIK PRAKASH	46
6708	MALI GURUDAS RAMDAS	44
6709	MALI SAMADHAN APPANNA	44
6710	MANDALE VINAYAK DAGADU	42
6711	MORE SHRISHAIL SHIVAJI	44
6712	NALAWADE VAIBHAV BHAUSO	40
6713	NALAWADE SHUBHAM HANMANT	42
6714	PATIL NIKHIL SHARAD	40
6715	PATIL VAIBHAV RAJARAM	42
6716	PATIL YOGITA SANJAY	42
6717	PUJARI SANDIP SAINATH	44
6718	RAHIMATPURE MUSKAN JAFAR	40
6719	SALUNKHE SANDESH BATTAS	42
6720	THORAT RAHUL APPASO	40
6721	KAMBLE NIMESH SUBHASH	42
6722	MAHADIK SUDARSHAN DILIP	42
6723	SARAVADE VIDYA BALASO	44

BCA II Year

Roll No	Name Of Students	Marks
6601	JADHAV MAYURI NAMDEV	40
6602	JADHAV NILESHKUMAR BHAUSAHEB	42
6603	JADHAV SANJANA JAGADISH	44
6604	JADHAV SANKET RAMCHANDRA	44
6605	JADHAV SOURABH MADHUKAR	42
6606	JAGTAP PRAMOD SURESH	42
6607	KADAM VISHAKHA ARJUN	44
6608	KAMBLE VINAY KAKASO	40
6609	KASHID ROHAN SURESH	40
6610	LOKHANDE VINAYAK ASHOK	42
6611	LUGADE PRIYANKA SUKHADEV	44
6612	MAHADIK PRAVIN SURESH	40
6613	MANDALE ROHIT SANJAY	44
6614	MANE VIVEK PRAKASH	42
6615	MOHITE SNEHAL VINAYAK	40
6616	MORE ASHWINI BHASKAR	42
6617	MOTE SOURAV SURESH	44
6618	MULLA SANIYA YASIN	40
6619	NALAWADE GURUPRASAD RAJARAM	40
6620	NALAWADE PRATHAMESH ARJUN	42
6621	NALAWADE SHITAL AJIT	44
6622	PATIL AMIT ARUN	44
6623	PATIL ANKITA SANJAY	42
6624	PATIL PRATHAMESH RAJENDRA	40
6625	PATIL ROHIT DIPAK	44
6626	PATIL ROHIT TANAJI	42
6627	PATIL TEJAS ARUN	42
6628	PATIL VIKAS TANAJI	40
6629	SHINDE OMKAR PRATAP	44
6630	SUTAR RUTIKESH NARAYAN	42
6631	SUTAR SWAPNIL NANDKUMAR	44
6632	YADAV SWAPNALI VILAS	40
6633	ZAMBRE PRATIK PRATAP	42
6634	ZAMBRE AKASH UTTAM	42
6635	SAWANT PRANALI NANASO	44
6636	PATHAN SAHIL AHAMAD	44
6637	ZAMBRE LAKHAN SURESH	40
6638	JADHAV MAYURI NAMDEV	44

BCA I Year

Roll No	Name Of Students	Marks
6501	BHOSALE ASHUTOSH AVADHUT	44
6502	BHOSALE MAYUR MOHAN	40
6503	BHOSALE SHUBHAM ASHOK	4
6504	CHABUKSWAR RUTUJA REVENT	44
6505	CHAVAN OMKAR BALKRUSHNA	42
6506	GHADAGE AKSHAY AJAY	44
6507	JADHAV PRANAV SHARAD	44
6508	JADHAV PRASAD MOHAN	40
6509	JAMADADE SHREYA RAJENDRA	42
6510	JAMDADE SURAJ PRAMOD	44
6511	KADAM SOURABH SHIVAJI	46
6512	KATKAR RUTUJA VITTHAL	48
6513	KHARADE SANTOSH SHIVAJI	44
6514	KIRPEKAR SAGAR TANAJI	44
6515	KUMBHAR AKSHADA SURESH	46
6516	MANE VIJAY JAGANNATH	44
6517	MOHITE ANIKET MOHAN	40
6518	MOHITE SHUBHAM SANJAY	42
6519	NALAWADE PRITAM UTTAM	42
6520	PATIL AKSHAY ANIL	46
6521	PATIL AKSHAY UTTAM	44
6522	PATIL AVINASH ANIL	40
6523	PATIL GAURV KIRAN	42
6524	PATIL JEEVAN BHARAT	42
6525	PATIL ROHAN MAHADEV	46
6526	PATIL SHIVAM RAJENDRA	44
6527	PATIL SURAJ PRAKASH	40
6528	PATIL TUSHAR VIJAY	42
6529	PAWAR RUTURAJ ASHOK	42

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Department of Computer Application
A Certificate Course in Data Structure using C
Academic year 2020-21

Top 3 Students

Roll No	Name Of The Students	Marks
6512	KATKAR RUTUJA VITTHAL	48
6525	PATIL ROHAN MAHADEV	46
6707	KORE PRATIK PRAKASH	46



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C PROGRAMMING USING LINUX

CERTIFICATE

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Mr. Vijay . T . Kumbhar

Coordinator

Dr. Milind .S. Hujare

Principal

REPORT SUBMITTED BY
Mr. J. H. Lawand

Prin. Dr. Milind S. Hujare
Principal
Padmabhushan Dr. Vasanttraodada Patil
Mahavidyalaya, Tasgaon (Sangli).