

ANNA UNIVERSITY: CHENNAI – 600 025

B.E/B.Tech Degree Examination –Jan-2014

(Regulation 2013)

First Semester

(Common to all Branches except Marine)

GE6161-Computer Programming Laboratory

Time: 3 Hours

Maximum Marks:100

- 1.**
 - a.** Prepare an FIDE-World Chess Championship Match schedule using Table in MS Word with results for 10 days including the details like date, time, venue, players, round, scores. Format the table with appropriate style **30**
 - b.** Develop a bar chart for the runs scored in a cricket match over by over. **30**
 - c.** Write a C program to find the roots of given quadratic equation **40**

- 2.**
 - a.** Prepare an advertisement to recruit software professional for a company for four different designations with the following Specifications. **30**
 - i) Attractive Page border
 - ii) Name of the company using word art
 - iii) Use at least one clip art
 - iv) Mention the company address and the number of vacancies.
 - v)
 - b.** Prepare a Payroll of a company with minimum of 5 employee with Basic pay (BP), DA (25% of BP), HRA(10% of BP), CCA (Rs.500) and the deduction of LIC(1% of BP), PF(2% of BP) and calculate the Gross pay and net pay. **30**
 - c.** Write a C program to find the factorial of given number using recursive function. **40**

- 3.**
 - a.** Prepare a flowchart using MS-WORD to find the roots of a quadratic equation. **30**

- b. ABC Company shows the sales of different products for five years. **30**
Create a bar graph, 3D, and pie chart for the following.

Year	Product 1	Product 2	Product 3	Product 4
1990	900	500	600	500
1994	1000	200	700	1500
1998	800	300	650	400
2004	1100	520	700	500
2008	1200	380	800	600

- c. Write a C program to perform String operations like Concatenation, Compare etc without using built-in functions **40**
4. a. Create two pages of Curriculum vitae (CV) of a B.E. graduate with the following specifications - Table to show qualifications with proper headings. **30**
 - Appropriate left and right margins.
 - Page number in the footer on the right side.
 - Name each page on the top right side.
- b. Create an electronic spreadsheet in which you enter the following decimal numbers and convert them into octal, hexadecimal and binary and vice versa. **30**
 Decimal numbers: 243, 46, 173, 425, 625
 Binary numbers: 11011, 11101, 10101, 11001, 11111
- c. Write a C program to perform Matrix Multiplication **40**
5. a. Prepare a marriage invitation and send to minimum of 10 persons using mail merge. **30**
- b. Prepare an electricity bill with consumer number, name, bill month, present and previous meter readings, consumed number of units and total amount of minimum 5 consumers. **30**
- c. Write a 'C' Program **40**
 i. To find the largest digit of a number.
 Write a C program to check the given name is palindrome or not without using string function.

6. a. Draw a flow chart to add 'n' values using MS-WORD. 30
- b. Develop a conversion chart using MS-EXCEL 30
- i) Decimal to binary
 - ii) Decimal to hexadecimal
 - iii) Decimal to octal
 - iv) Rupees to Dollar
 - v) Dollar to Rupees
- c. Write a C program to generate Pascal's triangle 40

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1
1 1
1 2 1
1 3 3 1
1 4 6 4 1
1 5 10 10 5 1

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7. a. Create the following equations using MS-WORD 30
- i)
$$S = \frac{1}{1^2} - \frac{2}{2^2} + \frac{3}{3^2} - \frac{4}{4^2} + \dots + \frac{n}{n^2}$$
 - ii)
$$C_{12}H_{22}O_{11} + H_2O \rightarrow 4C_2H_5OH + 4CO_2$$
- b. Prepare a pie-chart of computer system utilization for a week. 30
- c. Write a C program to generate numbers between 1 and 100 which are divisible by 2 and not divisible by 3 and 5. 40

- 8.** a. Design a visiting card for a Managing Director of a company as per the following specifications: 30

Size of the visiting card 3 1/2" * 2" Name of the company with a large font using watermark, phone number, and e-mail address website.

- b. Draw a flow chart to find the reverse the digits in a 6 digit-number. 30
- c. Write a C program to a) Find the biggest of given three numbers. 40
b) Check whether the given year is leap year or not.

9. a. Create a WORD document with 3 pages and apply suitable link between various pages (hyperlink). 30
- b. Prepare an Excel Sheet to calculate the internal marks of six subjects with three model Exams and the weightage of 5 marks for each model and 5marks for the attendance for five students. 30
- c. Write a C program to swap two numbers without using third variable using function concept 40
10. a. Prepare a circular in MS-WORD, to attend a meeting with the Director using mail merge to a minimum of 5 departments. 30
- b. Draw the flowchart to find whether the number is prime or not. 30
- c. Write a C program to calculate and display total cost of 4 models of Pentium PC. Use the single dimensional array for PC codes their price and quantity available. 40
11. a. Create a WORD document to prepare a call letter to invite the students for a graduation day function using mail merge. 30
- b. Draw a flowchart to count the number of times a number is available from a set of numbers. 30
- c. Write a C program to input an array of numbers and sort the array using Bubble sort a) Ascending order b) Descending order 40
12. a. Create a Letter using the following specifications - Name of the Company on the top of the page with big font and good style. 30
- Phone numbers, Fax numbers, E-mail ids with appropriate symbols.
 - Slogans if any should be included in bold at the bottom.
 - Main products manufactured at the bottom
- b. Prepare a bill for different electronics items purchased with the product name, rate quantity and find the total amount of each item, total quantity and net amount. 30

c. Write a C program to transpose the given matrix. 40

13. a. Type the equations in MS-Word 30

$$\varphi(x) = f(x) + \lambda \int_a^x K(x,t) F(x,t, \varphi(t)) dt.$$

$$\int dy K(x,y) \varphi(y) = \lambda \varphi(x)$$

$$\sum_j M_{i,j} v_j = \lambda v_i$$

$$\arccos(x), \text{ and not } (\cos(x))^{-1}$$

$$D_+(x) = F(x) = e^{-x^2} \int_0^x e^{t^2} dt = \frac{1}{2} \int_0^\infty e^{-t^2/4} \sin(xt) dt$$

b. Display the partition of a hard disk drive of capacity 500GB in to five segments like C:, D:, E:, F: and G: @ different GB's in 3 D view with relevant detail with animation using pie chart

c. Write a C program to
(i) Find whether the given number is even or odd.
(ii) Find the square root of a number

14. a. Prepare a university examination schedule for different branches using MS Word 30

b. Create an EXCEL sheet of student mark sheet and compare the marks of 6 students and generate bar and pie chart. 30

c. Write a C program to generate the employee payroll using structures. 40

15. a. Create a WORD document to invite their parents to participate in the Hostel day function 30

b. Prepare worksheet for RK Real Estate for the details about their 5 new projects with details like project name, project place, number of flats, flat area, amount per square feet and total cost by including appropriate clip art, object and word art and protect the sheet 30

c. Write a C program to generate student mark sheets with subject details and the grades using Structure. 40

16. a. Draw the flowchart to find whether the number is prime or not. **30**
- b. Prepare a bar chart for university result of 5 different colleges for a semester **30**
- c. Write a C program to create a structure called employee with name, employee id, name, age designation and salary as data members. Accept five employee details and display it. **40**

17. a. Develop an advertisement to promote the business with some attractive prices. Include necessary pictures and images.. **30**
- b. Create an EXCEL sheet to generate the electricity bill with consumer number, name, type H/C, previous and current reading, chargeable unit, cost/unit. Calculate the total amount to be paid **30**

CU	CT	Cost/Unit
≤ 100	H	2
≤ 100	C	4
>100	H	3
>100	C	6

- c. Write a C program to find the sum of the following series **40**
- $$1 - \frac{x^2}{2!} + \frac{x^4}{4!} - \frac{x^6}{6!} + \dots$$
18. a. Draw a flowchart to arrange 'n' numbers in ascending order. **30**
- b. Prepare loan interest worksheet which contains loan amount, interest rate and duration for 5 different customers. Include appropriate objects and clip arts and protect the sheet. **30**
- c. Write a C program to determine the inverse of a given 3 x 3 matrix. **40**
19. a. Create a table for the Student details and convert the table into a text format. **30**
- b. Develop a conversion chart using MS-EXCEL **30**
- i. Binary to Decimal
 - ii. Hexadecimal to Decimal
 - iii. Meter to centimeter
 - iv. Inches to feet
 - v. Minutes to Hours

- c. Write a C program to 40
 i) Calculate the area of a circle.
 ii) Convert the °C to °F.
20. a. Create the following using MS-WORD 30
 (i)
$$T(x) = \sum_{i=1}^m \sum_{j=1}^n c_{ij} t_{ij} x_{ij}$$

 (ii)
$$2C_2H_6(g) + 7O_2(g) \rightarrow 4CO_2(g) + 6H_2O(l)$$

 (iii)
$$3H_2(g) + N_2(g) \rightarrow 2NH_3(g)$$
- b. Draw the flowchart to generate the Fibonacci series 30
- c. Write a C program to perform the following conversions. 40
 i. Binary code to Gray code
 ii. Gray code to binary code
 iii. BCD to Hexadecimal
 iv. Decimal to Octal.
21. a. Create an EXCEL sheet for comparing the sales percentage of five salesmen and generate line chart 30
- b. Design a national level technical symposium invitation including symposium name, guest name, date, venue and list of events and send it for a minimum of 10 colleges using mail merge 30
- c. Write a program to display all ASCII numbers and their equivalent characters, numbers and symbols using while loops. User should prompt every time to press 'Y' or 'N'. if user press 'Y' display the next alphabet. Otherwise terminate the program. Test your program and report the results obtained 40
22. a. Draw an organization chart of educational Institutions using MS-Word 30
- b. Create a suitable examination database and find the sum of the marks of each student and the respective classes secured by the students. 30

Rules:

1. PASS if marks in each subject ≥ 35 .
2. FAIL if marks in any subject is < 35 .

3. Distinction if average ≥ 75 .
- 4 First class if average ≥ 60 but less than 75.
5. Second class if average ≥ 50 but less than 60.
6. Third class if average ≥ 35 but less than 50.

Display average marks of the class subject-wise and pass percentages

- c. Write a C program to accept any single digit number and print it in words. **40**
Test your program and report the results obtained.
23. a. Create a document by adding shadows and 3D effects to the word Art for the following text. **30**

Examinations

- b. b) Draw the flow chart for the following scenario **30**
- i. Display the question “What is the unit of distance?”
 - ii. Accept the answer
 - iii. If the answer is wrong display ”try again” & continue to answer
 - iv. Otherwise, if it is correct display the message the answer is correct
 - v. If the user gives the correct answer in first two attempts the program will terminate
 - vi. If the user fails to provide the correct answer in three attempts the program itself gives the answer
 - vii.
- c. Write a C program to simulate the calculator using Function. Test your program and report the results obtained **40**

ANNA UNIVERSITY: CHENNAI – 600 025

**B.E/B.Tech Degree Examination –Jan-2014
(Regulation 2013)**

**First Semester
(Common to all Branches)**

GE6161-Computer Programming Laboratory

Time: 3 Hours

Maximum Marks:100

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|-----------|---|-----------|
| 1. | a. Write a C Program to find the roots of given quadratic equation | 50 |
| | b. Prepare a flowchart using MS-WORD to find the roots of a quadratic equation | 50 |
| 2. | a. Prepare a flow chart using MS-WORD to find the largest of 'n' values | 50 |
| | b. Write a C program to calculate and display the total and average of the n student marks | 50 |
| 3. | a. Write a C program to find whether the given number is even or odd | 50 |
| | b. Write a C program to generate numbers between 20 and 100 which are divisible by 2 and not divisible by 3 and 5 | 50 |
| 4. | a. Write a C Program to print the given employee personal details using nested structure | 75 |
| | b. Write a C program to find the area and circumference of a circle | 25 |
| 5. | a. Create a WORD document to prepare a call letter to invite the students for the graduation day using mail merge | 50 |
| | b. Write a C Program to generate Fibonacci series from 1 to n | 50 |
| 6. | a. Write a C program for Matrix addition and Subtraction using two dimensional arrays | 70 |
| | b. Write a C program to determine biggest among two numbers using ternary operator | 30 |
| 7. | a. Write a C program for finding String Length, String Concatenation, String Comparison and String Copy without using Library function | 50 |

- b. Write a C program to check whether the given year is leap year or not 50
8. a. Write a C program to print all combinations of a 4-digit number 50
- b. Write a C program to sort the given names in alphabetic order 50
9. a. Write a C program to find ${}^n C_r$ using recursive function and conversion to its corresponding flow chart. 50
- b. Write a C program to find maximum of given three numbers using parameter passing 50
10. a. Write a C program to find the factorial of given number using recursive function and draw the corresponding flow chart. 50
- b. Write a C program to swap two numbers 50
11. write a C Program to implement payroll application with the given data by using structure. 100
HRA=18% of basic Pay, **DA**=15% of Basic Pay , **PF** =10% of Basic Pay, **LIC** =7% of Basic Pay ,
Deduction= PF + LIC, **Gross Salary** = Basic Pay + HRA + DA **Net Salary** = Gross Salary – Deduction
12. a. Write a C program to find the sum of the following series: $-x + x^3 / 3! - x^5 / 5! + \dots$ Adapt any method for solving the problem 50
- b. Create a bar chart in 3 Dimensional view to display the result analysis detail (Over all Pass percentage) of the students from the given data: 50

Sem's\ Batches	Batch: 2007- 2011	Batch: 2008- 2012	Batch: 2009- 2013
Semester-V	56	61	62.5
Semester-VI	60	74.5	73
Semester-VII	78	82	79
Semester-VIII	92	93	97

13. a. Write a C program to print the Transpose Matrix 50
- b. Create a Graph for displaying the runs scored by India Vs England Cricket Team in each over out of 20 over's as per the given data and present it with an animated results. 50

Overs	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>
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England	3	2	2	6	7	4	8	3	12	2	7	3	2	13	11
India	2	4	4	6	8	1	10	12	6	3	7	4	5	15	10

<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>Total</u>
9	15	13	16	17	155/9
10	10	15	15	9	156/6

14. a. Write a C program to find minimum of given three numbers using parameter passing. **50**
- b. Write a C program to find the min and max number in an array by using Linear Search Technique. **50**
15. a. Write a C program for Matrix multiplications using two dimensional arrays **50**
- b. Create a flow chart using MS-WORD to find the smallest of 'n' values **50**
16. a. Write a C program to find whether the given string is Palindrome or not. **50**
- b. Create a Word document with neat title, boldness, underline, italics, fonts, bullets with proper captions for the following given materials: **50**

Introduction to Computer

In the beginning of the civilization, people used fingers and pebbles for computing purposes. The word digitus in Latin actually means finger and calculus means pebble.

The term computer is derived from the word compute, which means to calculate.

A computer is an electronic machine, devised for performing calculations and controlling operations that can be expressed either in logical or numerical terms.

A computer is an electronic device that performs diverse operations with the help of instructions to process the information in order to achieve desired results.

Applications of Computer - Computer covers huge areas of applications:

- Education
- Industries
- Government
- Medicine
- Scientific Research

Computer have left such an impression on modern civilization that we call this era as the information age.

Characteristics of Computer:

Speed: Computer process data at an extremely fast rate – millions of instructions per second. The speed of a computer is calculated in MHz i.e. one million instructions per second. At present the powerful Computer can perform billions of operations per second.

Accuracy:

Computer are accurate. The level of accuracy depends on the instructions and the type of machine being used. Faulty instructions for data processing may lead to faulty results. This is known as GIGO (Garbage In Garbage Out)

Diligence: Computer does not suffer from tiredness and lack of concentration. If four million calculations have to be performed, then the computer will perform from the first to last calculation with the same accuracy and speed.

Reliability: Reliability is the measurement of performance of a computer. The major reason for this reliability is hardware which does not require any human intervention between its processing operations.

Versatility: Computer are quite versatile in nature. They can perform multiple task simultaneously with great ease. Example: It can draft a letter, play music, print a document simultaneously etc by changing the program.

Resource Sharing: Computer today have the capability to connect with each other. This has made the sharing of costly resources like printers possible. It can also share data and information thus creating a large information and knowledge base.

- 17. a. Write a C program to form the Pascal’s Triangle 50
- b. Display the partition of a hard disk drive of capacity 500GB in to five segments like C:, D:, E:, F: and G: @ different GB’s in 3 D view with relevant detail with animation using pie chart. 50

Name of HDD	C:	D:	E:	F:	G:
Drive Capacity in GB	200	100	100	75	25

- 18. a. Write a C program for sorting an array of N data in both Ascending and Descending Order by using bubble sort. 50
- b. Calculate the pay roll using HRA, DA, TA, PF, GPF, LIC, Gross Salary, Deductions and Net Salary from the below given data in a work sheet using MS Excel. 50

ENO	Name	Basic
1	Ajai	20000

ANNA UNIVERSITY: CHENNAI – 600 025

B.E. / B.Tech. DEGREE EXAMINATIONS, JAN - 2014

(Regulation 2013)

First Semester

(Common to all Branches)

GE6161: COMPUTER PRACTICES LABORATORY

Time: 3 Hours

MaximumMarks: 100

- 1. a.** Using Microsoft Word prepare a time table of your class in the following format: **25**

DAY	S-I	S-II	S-III	S-IV	LUNCH	S-V	S-VI	S-VII	S-VIII
MONDAY									
TUESDAY									
WEDNESDAY									
THURSDAY									
FRIDAY									
SATURDAY									

SUBJECT CODE	SUBJECT NAME	FACULTY NAME

- b. Create an Excel sheet to prepare a mark list for twenty students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. Compute Total and Average. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark	Total	Average

- c. Develop a 'C' program to print first 'n' terms of the Fibonacci series. **30**

- d. *Viva- Voce* **10**

2. a. Using Microsoft Word prepare your Curriculum Vitae. **25**

- b. Create an Excel sheet to store the marks obtained by twenty students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark
AVERAGE				

The average marks of each subject have to be computed.

- c. Develop a 'C' program to check whether a given number is a prime number or not and print the result **30**

- d. *Viva- Voce* **10**

- 3.** a. Prepare a power point presentation highlighting the facilities in your college. **30**
- b. Using Microsoft Word illustrate the use of mail merge **30**
- c. Develop a 'C' program to find the sum of the digits of a given number using while statement. **30**
- d. *Viva- Voce* **10**
- 4.** a. Prepare a power point presentation highlighting the facilities in the school you studied. **30**
- b. Using Microsoft Word illustrate the use of mail merge. **30**
- c. Develop a 'C' program to check whether a string is a palindrome or not and print the result. **30**
- d. *Viva- Voce* **10**

5. a. Create an Excel sheet to calculate the Electricity Bill. The criteria for calculating the bill is as follows: 45

- ✚ If No of Units is from 0 to 50 then Bill Amount=No of Units*1
- ✚ If No of Units is from 51 to 100 then Bill Amount=50+No of Units from (51 to 100)*2
- ✚ If No of Units is from 101 to 200 then Bill Amount=150 + No of Units from (101 to 200) *3
- ✚ If No of Units is from 201 to 300 then Bill Amount=450 + No of Units from (201 to 300)*4
- ✚ If No of Units is more than 300 then Bill Amount =850 + No of Units exceeding 300*5

The sheet should be presented in the following format:

Consumer Number	Name	Previous Reading	Current Reading	Number of Units	Bill Amount

Note: If the Previous Reading is 200 and the current reading is 370 then the Number of Units is 370-200=170. The bill amount should be computed as 50*1+50*2+70*3

b. Develop a 'C' program to add two matrices 45

c. *Viva- Voce* 10

- 6. a.** Prepare a power point presentation to illustrate the structure of a 'C' program with an example. **30**
- b.** Using Microsoft Word illustrate the use of mail merge. **30**
- c.** Develop a 'C' program a 'C' program to read in an array of 'N' integers and print its elements in reverse order. **30**
- d. Viva- Voce** **10**

- 7. a.** Create an Excel sheet to calculate the Gross Pay and Net Pay of ten employees. **30**
The criteria for calculating the Gross Pay and Net Pay are as follows:

DA: 90% of Basic Pay
 HRA: 30% of Basic Pay
 PF: 8% of Basic Pay
 Income Tax: 10% of Basic Pay
 Gross Pay: Basic Pay + DA+HRA
 Deductions: PF+ Income Tax
 Net Pay: Gross Pay - Deductions

The sheet should be presented in the following format:

Employee Number	Name	Basic Pay	DA	HRA	PF	Income Tax	Gross Pay	Deductions	Net Pay

- b.** Develop a 'C' program to store 'N' numbers in an array and print the numbers divisible by five with the array location. **30**
- c.** Develop a 'C' program to find the greatest of 'N' numbers stored in an array and print the result. **30**
- d. Viva- Voce** **10**

8. a. Prepare a power point presentation to illustrate the string functions in ‘C’ language with examples. **20**

b. Create an Excel sheet to store the marks obtained by twenty students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. **20**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark
Pass Percentage				

The pass mark for each subject is 50 marks. Compute the Pass Percentage of each subject and prepare a bar chart.

c. Develop a ‘C’ program to sort ‘N’ numbers in ascending order. **35**

d. *Viva- Voce* **10**

9. a. Prepare a power point presentation to illustrate structures in ‘C’ language with example. **20**

b. Given FOUR strings s1: BE, s2: HELPFUL, s3: TO and s4: OTHERS. Develop a ‘C’ program to concatenate the strings and display the result as BE HELPFUL TO OTHERS. **25**

c. Develop a ‘C’ program to sort ‘N’ names alphabetically. **25**

d. *.Viva- Voce* **10**

- 10. a.** Prepare a power point presentation to illustrate the string functions in ‘C’ language with examples. **20**
- b.** Create an Excel sheet to calculate the Gross Pay and Net Pay of ten employees. **30**
The criteria for calculating the Gross Pay and Net Pay are as follows:

DA: 90% of Basic Pay
 HRA: 30% of Basic Pay
 PF: 8% of Basic Pay
 Income Tax: 10% of Basic Pay
 Gross Pay: Basic Pay + DA+HRA
 Deductions: PF+ Income Tax
 Net Pay: Gross Pay - Deductions

The sheet should be presented in the following format:

Employee Number	Name	Basic Pay	DA	HRA	PF	Income Tax	Gross Pay	Deductions	Net Pay

- c.** Develop a ‘C’ program to sort ‘N’ numbers in descending order. **40**
- d. Viva- Voce** **10**
- 11. a.** Prepare a power point presentation to illustrate entry controlled loops and exit controlled loops in ‘C’ language with examples. **40**
- b.** Given three strings s1: GOD, s2: IS and s3: GREAT. Develop a ‘C’ program to concatenate the strings and display the result as GOD IS GREAT. **25**
- c.** Develop a ‘C’ program to compute the factorial of a given number using recursion. **25**
- d. Viva- Voce** **10**

- 12. a.** Create an Excel sheet to calculate the Electricity Bill. The criteria for calculating the bill is as follows: **45**

- ✚ If No of Units is from 0 to 50 then Bill Amount=No of Units*1
- ✚ If No of Units is from 51 to 100 then Bill Amount=50+No of Units from (51 to 100)*2
- ✚ If No of Units is from 101 to 200 then Bill Amount=150 + No of Units from (101 to 200) *3
- ✚ If No of Units is from 201 to 300 then Bill Amount=450 + No of Units from (201 to 300)*4
- ✚ If No of Units is more than 300 then Bill Amount =850 + No of Units exceeding 300*5

The sheet should be presented in the following format:

Consumer Number	Name	Previous Reading	Current Reading	Number of Units	Bill Amount

Note: If the Previous Reading is 200 and the current reading is 370 then the Number of Units is $370-200=170$. The bill amount should be computed as $50*1+50*2+70*3$

- b.** Develop a 'C' program to perform matrix multiplication. **45**
- c.** *Viva- Voce* **10**

- 13. a.** Create an Excel sheet to prepare a mark list for five students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. Compute Total and Average. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark	Total	Average

- b.** Given two strings s1: GOOD and s2: MORNING. Develop a 'C' program to concatenate the strings and display the result as GOOD MORNING. **25**
- c.** Develop a 'C' program to compute the factorial of a given number. Use recursion. **30**
- d. Viva- Voce** **10**
- 14. a.** Draw a flowchart using Microsoft word to reverse the digits of a given number and print the result. **25**
- b.** Given two strings s1: MAT and s2:LAB. Develop a 'C' program to concatenate the strings and display the result as MATLAB. **25**
- c.** Develop a 'C' program to sort 'N' numbers in ascending order. Use function. **40**
- d. Viva- Voce** **10**
- 15. a.** Draw a flowchart using Microsoft word to exchange the values of three variables . **25**
- b.** Given two strings s1: SQL and s2: SERVER. Develop a 'C' program to concatenate the strings and display the result as SQLSERVER **25**
- c.** Develop a 'C' program to find the transpose of a given matrix. Use function **40**
- d. Viva- Voce** **10**

16. a. Draw a flowchart using Microsoft word to check whether a given number is an even number or not and print the result. **25**

b. Create an Excel sheet to store the marks obtained by twenty students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark
Pass Percentage				

The pass mark for each subject is 50 marks. Compute the Pass Percentage of each subject and prepare a bar chart.

c. Develop a 'C' function that will scan a character string passed as an argument and convert all lower-case characters to their upper-case equivalents. **30**

d. Viva- Voce **10**

17. a. Create an Excel sheet to calculate the Electricity Bill. The criteria for calculating the bill is as follows: **45**

- ✚ If No of Units is from 0 to 50 then Bill Amount=No of Units*1
- ✚ If No of Units is from 51 to 100 then Bill Amount=50+No of Units from (51 to 100)*2
- ✚ If No of Units is from 101 to 200 then Bill Amount=150 + No of Units from (101 to 200) *3
- ✚ If No of Units is from 201 to 300 then Bill Amount=450 + No of Units from (201 to 300)*4
- ✚ If No of Units is more than 300 then Bill Amount =850 + No of Units exceeding 300*5

The sheet should be presented in the following format:

Consumer Number	Name	Previous Reading	Current Reading	Number of Units	Bill Amount

Note: If the Previous Reading is 200 and the current reading is 370 then the Number of Units is $370-200=170$. The bill amount should be computed as $50*1+ 50*2+70*3$

b. Develop a 'C' program to print the number of vowels in a given paragraph **45**

c. *Viva- Voce* **10**

- 18.** a. Draw a flowchart using Microsoft word to check whether a given number is a prime number or not and print the result. **25**
- b. Create an Excel sheet to prepare a mark list for five students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. Compute Total and Average. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark	Total	Average

- c. Develop a 'C' program to compute the roots of a quadratic equation. **30**
- d. *Viva- Voce* **10**
- 19.** a. Draw a flowchart using Microsoft word to find the greatest of three numbers. **25**
- b. Create an Excel sheet to prepare a mark list for five students. The input is Roll Number, Name, Mathematics Mark, Physics Mark and Chemistry Mark. Compute Total and Average. **35**

The sheet should be presented in the following format:

Roll Number	Name	Mathematics Mark	Physics Mark	Chemistry Mark	Total	Average

- c. Develop a 'C' program to read in an array of 'N' integers and print its elements in reverse order. **30**
- d. *Viva- Voce* **10**

20. a. Create an Excel sheet to calculate the Electricity Bill. The criteria for calculating the bill is as follows: **45**

- ✚ If No of Units is from 0 to 50 then Bill Amount=No of Units*1
- ✚ If No of Units is from 51 to 100 then Bill Amount=50+No of Units from (51 to 100)*2
- ✚ If No of Units is from 101 to 200 then Bill Amount=150 + No of Units from (101 to 200) *3
- ✚ If No of Units is from 201 to 300 then Bill Amount=450 + No of Units from (201 to 300)*4
- ✚ If No of Units is more than 300 then Bill Amount =850 + No of Units exceeding 300*5

The sheet should be presented in the following format:

Consumer Number	Name	Previous Reading	Current Reading	No of Units	Bill Amount

Note: If the Previous Reading is 200 and the current reading is 370 then the Number of Units is 370-200=170. The bill amount should be computed as 50*1+ 50*2+70*3

b. Define a structure called cricket that will describe the following information: **45**

- Player Code
- Player Name
- Team Name
- Batting Average

Using cricket, declare an array player with fifty elements and develop a 'C' program to read the information about all the fifty players and print a team wise list containing names of players with their batting average.

c. Viva- Voce **10**
