

List of Sections

PART- A

Marks per question : 8.0 Marks Scored : 9.0

Q No.	Q. Type	Status	Marks	Show marks break down	View Answer
1	File Upload	✓	5.0	Show marks break down	View Answer
2	File Upload	✓	4.0	Show marks break down	View Answer

PART - B

Marks per question : 12.0 Marks Scored : 53.0

Q No.	Q. Type	Status	Marks	Show marks break down	View Answer
3	File Upload	✓	3.0	Show marks break down	View Answer
4	File Upload	✓	9.0	Show marks break down	View Answer
5	File Upload	✓	9.0	Show marks break down	View Answer
6	File Upload	✓	9.0	Show marks break down	View Answer
7	File Upload	✓	6.0	Show marks break down	View Answer
8	File Upload	✓	9.0	Show marks break down	View Answer
9	File Upload	✓	8.0	Show marks break down	View Answer

Marks Break Down



#	Marks criteria	Marks
Q1	Finding the Lowest and Highest Scores	3.0
Q2	Total Score calculation	2.0

[Close](#)
[← Previous](#)

Page: 1 / 42

[Next →](#)

List of Sections

PART- A

Marks per question : 8.0 Marks Scored : 9.0

Q No.	Q. Type	Status	Marks
-------	---------	--------	-------

- | | | | | |
|---|-------------|---|-----|--|
| 1 | File Upload | ✓ | 5.0 | Show marks break down Hide Answer |
|---|-------------|---|-----|--|

In a gymnastics or diving competition, each contestant's score is calculated by dropping the lowest and highest scores and then adding the remaining scores. Write a C program that allows the user to enter eight judges' scores and then outputs the point scored by the contestant. A judge awards point between 1 and 10, with 1 being the lowest and 10 being the highest. For example, if the scores are: 9.2, 9.3, 9.0, 9.9, 9.5, 9.5, 9.6 and 9.8, then the contestant receive a total of 56.9 points.

Your comments

Please type your comments for this question here

- | | | | | |
|---|-------------|---|-----|--|
| 2 | File Upload | ✓ | 4.0 | Show marks break down View Answer |
|---|-------------|---|-----|--|

PART - B

Marks per question : 12.0 Marks Scored : 53.0

Q No.	Q. Type	Status	Marks
-------	---------	--------	-------

- | | | | | |
|---|-------------|---|-----|--|
| 3 | File Upload | ✓ | 3.0 | Show marks break down View Answer |
|---|-------------|---|-----|--|



Marks Break Down



#	Marks criteria	Marks
Q	advantages of using dynamic memory allocation and structures	1.0
Q	syntax and code demonstrating the implementation of dynamic memory allocation	2.0
Q	use of pointers to access and modify data within dynamically allocated	1.0

Close

2 File Upload



4.0

Show marks break down

Hide Answer

Explain the use of dynamic memory allocation and structures in a C program to manage mobile phone brands and their quantities in a mobile shop. Justify the relevance of dynamic memory allocation for handling an arbitrary number of brands. Use appropriate functions for purchasing and selling phones, including the use of pointers to access and modify data within dynamically allocated memory.

i. Discuss the advantages of using dynamic memory allocation and structures in a C program to manage mobile phone brands and their quantities in a mobile shop. (2 Marks)

ii. Provide syntax and code demonstrating the implementation of dynamic memory allocation and functions for purchasing and selling phones.(4 Marks)

iii. Emphasize the use of pointers to access and modify data within dynamically allocated memory. (2 Marks)

Your comments

Please type your comments for this question here



Marks Break Down



#	Marks criteria	Marks
Q1	Step by step explanation and output for (a)	1.0
Q2	Step by step explanation and output for (b)	1.0
Q3	output of the program for (c)	1.0

Close

Trace the execution step by step and write the output of the following code snippets (4+4+4=12 marks)

(i)

```
#include <stdio.h>
#define display printf
int main()
{
    int i=0;
    for(display("%d ",++i);display("%d ",++i);display("%d ",++i))
    {
        display("%d ",++i);
        if(i>8)
            break;
    }
    return 0;
}
```

(ii)

```
#include <stdio.h>
#include <math.h>
int main()
{
    int a=4, b=5, c=6, i, d, s = 0;
    s = (b * (2 * a + (b - 1) * c)) / 2;
    d = a + (b - 1) * c;
    for (i = a; i <= d; i = i + c)
    {
        if (i != d)
            printf("%d + ", i);
        else
            printf("%d = %d", i, s);
    }
    return 0;
}
```



Marks Break Down



#	Marks criteria	Marks
Q1	create a structure Employeeinfo with appropriate members	5.0
Q2	Employee details after increasing the compensation for the employees based on the aforementioned criteria	4.0

Close

PART - B Marks per question : 12.0 Marks Scored : 53.0

Q No.	Q. Type	Status	Marks	
3	File Upload	✓	3.0	Show marks break down View Answer
4	File Upload	✓	9.0	Show marks break down Hide Answer

An engineering company keeps track of its employees' names, IDs, designations, years of experience, and salaries. The corporation decides to increase salaries by 12% for employees with more than or equal to 5 years of experience. Create a salary-increment function to increase salaries by 12% for employees with more than or equal to 5 years' experience.

- i. Write a program in C to create a structure Employeeinfo with appropriate members. (5 Marks)
- ii. Display the employee details after increasing the compensation for the employees based on the aforementioned criteria. (7 marks)

Your comments

Please type your comments for this question here

5	File Upload	✓	9.0	Show marks break down View Answer
6	File Upload	✓	9.0	Show marks break down View Answer

Marks Break Down



#	Marks criteria	Marks
1	Friend class declaration	4.0
2	average marks and print the details of each student and teacher in SchoolRecords.	5.0

[Close](#)
[Break down](#)

5	File Upload	✓	9.0	Show marks break down	Hide Answer
---	-------------	---	-----	---------------------------------------	-----------------------------

In a school management system, there are two classes: Student and Teacher. The Student class contains private data members such as name, age, subjects, and grades (assuming multiple subjects are taught). The Teacher class includes private data members like name, subjects, and teacherID. You need to create a third class called SchoolRecords that is not derived from either Student or Teacher but requires access to their private data members to generate comprehensive reports.

- i. How would you declare the SchoolRecords class so that it can access private members of both Student and Teacher classes to generate reports? (4 Marks)
- ii. Write C++ code for the Student and Teacher classes to calculate the average of grades for each student from array of objects across all subjects. If the average is greater than 50, print the result as "pass"; otherwise, print "fail". Sort the student database in ascending order of average marks and print the details of each student and teacher in SchoolRecords. (8 Marks)

Your comments

Please type your comments for this question here

6	File Upload	✓	9.0	Show marks break down	View Answer
---	-------------	---	-----	---------------------------------------	-----------------------------

7	File Upload	✓	6.0	Show marks	View Answer
---	-------------	---	-----	----------------------------	-----------------------------

Marks Break Down



#	Marks criteria	Marks
Q1	Base classes and derived classes	5.0
Q2	multi-path inheritance	2.0
Q3	class hierarchy	2.0

[Close](#)
[break down](#)

- 6 File Upload ✓ 9.0 [Show marks break down](#) [Hide Answer](#)

As a software developer tasked with designing an online shopping system, you are required to create a class hierarchy to represent various products available for purchase. The system should support different types of products, such as electronics and clothing, each with specific attributes and behaviors.

i. Design and implement a base class named `Product` to represent individual products. This class should contain attributes such as name, price, and quantity in stock. Additionally, create intermediate classes for specific product types, such as `Electronics` and `Clothing`, which virtually inherit from the `Product` class. Identify and implement the appropriate inheritance model for these intermediate classes. (6 Marks)

ii. Create a derived class named `DiscountProduct` that virtually inherits from both `Electronics` and `Clothing` classes, demonstrating multi-path inheritance.(3 Marks)

iii Develop a function named `displayAvailableProducts()` outside the class hierarchy. This function should be responsible for displaying the names and prices of products that are available for purchase, meaning those with a quantity in stock greater than 0. (3 Marks)

Your comments

Please type your comments for this question here

- 7 File Upload ✓ 6.0 [Show](#) [View](#)

Marks Break Down



#	Marks criteria	Marks
1	Class & methods implementation – (4 Marks)	3.0
2	Operator overloading (4 Marks)	1.0
3	essential functions to perform key operations (4 Marks)	2.0

[Close](#)
[Break down](#)

7	File Upload	✓	6.0	Show marks break down	Hide Answer
---	-------------	---	-----	-----------------------	-----------------------------

Develop a Banking Employee Management System in C++ utilizing operator overloading to streamline various employee management tasks. Create a class named ***Employee*** to encapsulate banking employee information, including unique identifiers like ***Employee ID***, ***Name***, ***Position/Role*** (e.g., Manager, Teller, Loan Officer), and ***salary*** using necessary constructors, accessor methods, and necessary member functions to manipulate employee data effectively. **[4 marks]**. Enhance comparison capabilities by overloading the equality (==) and inequality (!=) operators to compare employee objects based on attributes such as ID, name, and salary. Additionally, empower salary increment operations by overloading the plus (+) operator to accommodate percentage-based increments. **[4 marks]**. Develop essential functions to perform key operations within the system, including adding new employees, displaying all employee details, searching for employees by ID, name, or position, and providing salary increments. **[4 marks]**.

Your comments

Please type your comments for this question here

8	File Upload	✓	9.0	Show marks break down	View Answer
---	-------------	---	-----	-----------------------	-----------------------------

9	File Upload	✓	8.0	Show marks	View Answer
---	-------------	---	-----	------------	-----------------------------

Marks Break Down



#	Marks criteria	Marks
6	Template class	5.0
7	Base class creation	4.0

[Close](#)

6 File Upload ✓

7.0

[Show marks break down](#)[View Answer](#)

7 File Upload ✓

6.0

[Show marks break down](#)[View Answer](#)

8 File Upload ✓

9.0

[Show marks break down](#)[Hide Answer](#)

Create a program for managing Teaching Assistants (TAs) at VIT University. This curriculum should concentrate on two major areas: astrobiology and quantum mechanics. Create a configurable 'TA' class with templates that can manage TAs from various departments. Each TA should contain basic information such as name, ID, course assignment, and role. Use template specialization to change department-specific characteristics, such as showing the department's name. The program should allow users to enter TA details, examine all TAs and their attributes depending on department and role, and quit cleanly when required.

Your comments

Please type your comments for this question here

9 File Upload ✓

8.0

[Show marks break down](#)[View Answer](#)

Marks Break Down



#	Marks criteria	Marks
Q1	Constructor	4.0
Q2	Inline function	4.0

[Close](#)
[break down](#)

- 9 File Upload ✓ 8.0 [Show marks](#) [Hide Answer](#) [break down](#)

Consider a scenario where you've (customer) been diligently saving money for 10 years in a bank account named **AddAmount**. You start with an initial deposit of 50 rupees. During the first year, neither you nor the bank adds any money to your account. However, in the second year, you decide to deposit an additional 200 rupees, but the bank doesn't contribute anything. Starting from the third year onwards, you consistently add 100 rupees each year, while the bank supplements your savings by adding 10% of the previous year's balance as interest.

- i. Write a C++ program that implements constructors to handle the money for the first, second, and subsequent years. Compute the final amount in your account after 10 years. (6 marks)
- ii. After 10 years, customer decides to extend the savings scheme for another 5 years with the bank offering the same interest rate. However, the bank imposes a condition: every year, he must add 2 new customers to his bank. If this condition is met, an additional 5 percent interest will be credited to his account annually. Write an inline function named **calculateAdditionalInterest** to calculate the extra interest amount each year. (6 Marks)

Your comments

Please type your comments for this question here

Q.No. 01



Q1

1

(Q1) In a gymnastics or diving competition, each

#include <stdio.h>

void sort_main();

int main()

{

int scores[7];

for (int i=0; i<8; i++)

{

scanf ("%d", &scores[i]);

}

for (int i=0; i<8; i++)

{ for (int j=i; j<8; j++)

{

if (arr[i] > arr[j])

{ swap(arr[i], arr[j])

}

}

}

// take input —①

// bubble sort algorithm.

—②

sumabScores = scores[1] + scores[2] + scores[3] + scores[4]
+ scores[5] + scores[6]; // remove

printf ("%d", sumabScores);

return 0;

Display output
④scores[0] and scores[7]
which are extreme values. —③

In digits

Shade Question No.

Q.No.

01



2

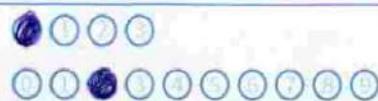
WRITE WITHIN THE BOX



(Q2) Explain the use of dynamic memory allocation in a C program to manage mobile phone brands and their quantities in a mobile shop.

(i) Advantages of using dynamic memory allocation and structures in a C program to manage mobile phone brands and their quantities in a mobile shop:

- ① When we use dynamic memory allocation, the object is made only once, as opposed to deciding the value and creating unnecessary copies of the code.
- ② Since the object is made only once, and there are no unnecessary copies of it, this helps to save memory in the program.
- ③ As the codebase increases, using dynamic memory allocation will save a lot of memory. This is helpful if there are many phone brands in the shop.
- ④ Thus the space complexity of the program is also reduced.



(Q2)

(ii)

```
#include<stdio.h>
```

```
struct Phone {
```

```
    int brand;
```

```
    int quantity;
```

```
};
```

use `typedef` for
easier naming.

```
int main()
```

```
{    scanf("%d", &n); // number of
```

Input numbers of
phones.

```
Phone* P1 = malloc (Phone*) malloc(n * size of(Phone))
```

→ assign memory
for structure using `malloc`.

~~P1~~ → brand

create pointer

```
strcpy(P1->brand, "oppo");
```

store data.

~~P1~~ → quantity

```
P1->quantity = 100;
```

```
printf("%d %.1d", P1->brand, P1->quantity);
```

```
free(P1);
```

→ free the memory,



- (iii) Emphasize the use of pointers to access and modify data within dynamically allocated memory.
- (ii) Pointers point to a particular location in memory. They store the address of the memory block.
- (2) When we use pointers, we pass by reference, the function will only send the address of the object instead of a copy.
- (3) To access the pointer value, we dereference it by appending a * before it.
- (iv) Pointers are used so that there is no need for multiple copies of the objects to be created for every time it is called.
- (5) This helps to save memory and thus reduce the space complexity of the program.

In digits

Shade Question No.

Q.No.

02



6

WRITE WITHIN THE BOX



Trace the execution step by step & write the output of the following code snippet ($4+4+4=12$)

(ii)

→ Answer:

```
#include <stdio.h>
#define display printf // alias printf to display
                     // display = printf.

int main()
{
    int i=0;
    for(i=0; i<10; i++)
    {
        display("%d", i);
        if(i>8)
            break;
    }
    return 0;
}
```

Annotations and notes:

- A callout arrow points from the handwritten note "10 is used to verify break statement" to the condition `i<10`.
- A callout arrow points from the handwritten note "Value of i is being increased by 2 in total." to the increment part `i++`.
- A callout arrow points from the handwritten note "printf("%d", i);" to the line `display("%d", i);`.
- A callout arrow points from the handwritten note "break;" to the `break;` keyword.

Output:

1 3 5 7 9 _____ ∵ break is after print statement.



(ii)

```

#include <stdio.h>
#include <math.h>

int main()
{
    int a=9, b=5, c=6, d, s=0;

    s = (b * (2 * a + (b - 1) * c)) / 2;

    d = a + (b - 1) * c;

    for( i=a, i<=d, i=i+1)
    {
        if(i==d)
            printf("%d\t", i);
        else
            printf("%d = %d", i, s);
    }

    return 0;
}

```

Output:

$$4 \times 5 + 6 = 15$$

Q.No.

03



(iii)

what will be the output of the program?

$$w = 411 \cdot 1110 \therefore w = 4 (\cancel{1110})$$

$$x = 188 \cdot 188 R = 488 - 1880 = 0 (\cancel{1880})$$

$$y = 911 \cdot 188 R ; = \cancel{911} \cancel{188} k = 411 - 1880 = \cancel{1110}$$

$$z = 188 \cdot 11 R ; = 488 - 110 =$$

output : 4, 0, 0, 4.

Assuming 0 \Rightarrow true & Non zero = false.

Output in terms of Boolean is

False, True, True, True

Answer

In digits

Shade Question No.

Q.No.

03



10

WRITE WITHIN THE BOX

In digits

Shade Question No.

Q.No.

03

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>					

11

WRITE WITHIN THE BOX

Q.No.	04	<input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
		<input type="radio"/> <input checked="" type="radio"/> <input type="radio"/>

(Qu) An engineering company. Reps. track all its employees' names & ID's . . .

- i) Write a program in C to create a structure EmployeeInfo with appropriate members
- ii) Display the employee details after increasing the compensation for the employee based on the aforementioned criteria.

=>

```
#include <stdio.h>
#include <string.h>
```

```
struct EmployeeInfo{
```

```
char name[50];
int ID;
char designation[15];
int yearsOfExperience;
int salary;
```

```
} EmployeeInfo;
```

```
void Salary_Increment(struct Employee E);
void displayDetails(struct Employee E);
int main()
```

```
struct EmployeeInfo E1, E2;
```

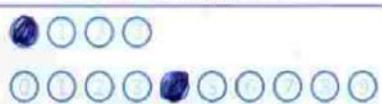
```
E1.ID = 1001;
```

```
E2.ID = 1002;
```

(i)

Q.No.

09



E1 designation

E1 - years of Experience = 4;

E2 - years of Experience = 5;

E1 - salary = 2000;

E2 - salary = 2000;

strcpy(E1.name, "Ranu");

strcpy(E2.name, "Shyam");

strcpy(E1.designation, "Project Manager");

strcpy(E2.designation, "Project Lead");

salaryincrement(E2);

salaryincrement(E1);

salaryincrement(E2);

display details(E1);

display details(E2);

return 0;

// call salary increment
function// call display function to
display employee details.

3.

dot void salaryincrement(struct Employeeinfo E)

{ if (E.years of Experience >= 5)

{ E.salary += E.salary * 0.12; // increment by
12% }

{ else {

printf("Not enough work experience"); }

3 4

Q.No.

04

- 4 1 2 3
0 1 2 3 4 5 6 7 8 9

```
void displaydetails(struct Employee E);
{ printf ("%s %d %s %d %d", E.name, E.ID,
         E.designation, E.yearsOfExperience, E.salary);
```

In digits

Shade Question No.

Q.No.

09

<input checked="" type="radio"/>	<input type="radio"/>								
0	1	2	3	4	5	6	7	8	9

15

WRITE WITHIN THE BOX

VIT

Vellore Institute of Technology

Q.No.

05



(Q5) In a school management system, there are 2 classes.

(i) How would you declare the SchoolRecords class so that it can access private members of both Student and Teacher classes to generate report (4marks)

→ ① If we are unable to use derived classes or inheritance due to the presence of private variables, then we can use the concept of "Friend classes"

② By declaring the class SchoolRecords, we can access the variables, both private and public. We need to declare friend within class Student and class Teacher

③ Class student {

private :

int age ;

string name ;

int subjects(10) ;

int grades(10) ;

public :

friend class SchoolRecords ;

}

Q.No.

Op



④ class Teacher {
private:

string name ;

int subject [10] ;

int teacherID ;

public :

friend class SchoolRecords ;

};

⑤ By doing this we will have full access of
"Teacher" & "Student" classes' functions and variables.

(ii) Assuming 3 subjects for each student

```
#include <iostream>
```

```
#include <string>
```

```
class Teacher;
```

```
class Student {
```

```
private:
```

```
string name;
```

```
int age;
```

```
string status;
```

```
int subjects[3];
```

```
int grades[3];
```

```
int avggrades;
```

```
public:
```

```
void calculate average();
```

```
{
```

```
avggrades = (grades[0] + grades[1] + grades[2]) / 3;
```

```
? cout << avggrades.
```

```
void passORfail()
```

```
{ if (avggrades >= 50)
```

```
? { strcpy(status, "Pass");
```

```
? else
```

```
? strcpy(status, "Fail");
```

```
?
```

```
cout << status;
```

```
.
```

```
friend class StudentRecord;
```

```
}
```

→ declared on last page
end of code

} declaration

} average grade calculation

} pass / fail status



class StudentRecords {

public:

void sort (student S[], n); // per an array
of students

{ for (int i=0; i<n; i++)

{ for (int j=1; i<n; j++)

{ if (S[i].avggrades > S[j].avggrades)

swap (SE

student temp;

temp = ~~student~~ S[i];

S[i] = S[j];

S[j] = temp;

{ } } }

No of students.

// sort in

ascendig order,

void printDisplay (student S[], n, Teacher T[], m);

{

for (int i=0; i<n; i++)

No of teachers.

{ cout << S[i].age << " " << S[i].name << " " <<

S[i].status << " " << S[i].subjects << " " <<

S[i].grades << " " << S[i].avggrades;

cout << T[i].name << T[i].teacherID;

for (int i=0; i<n; i++)

{ cout << S[i].subjects << S[i].grades;



```

for (int i = 0 ; i < m ; i++)
{
    cout << T[i].subject ;
}

```

class Teacher {

private:

string name (50);
int subject (10);

int teacherID;

public:

friend class SchoolRecord;

};

In digits

Shade Question No.

Q.No.

05

- | | | | | | | | | |
|----------------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> |

21

WRITE WITHIN THE BOX



VITTM

Vellore Institute of Technology
Chennai - 600022, Tamil Nadu, India
CHENNAI



(i)

class Product {

public:

int price, quantity ~~1000~~;

String name;

Product(name , price , quantity)

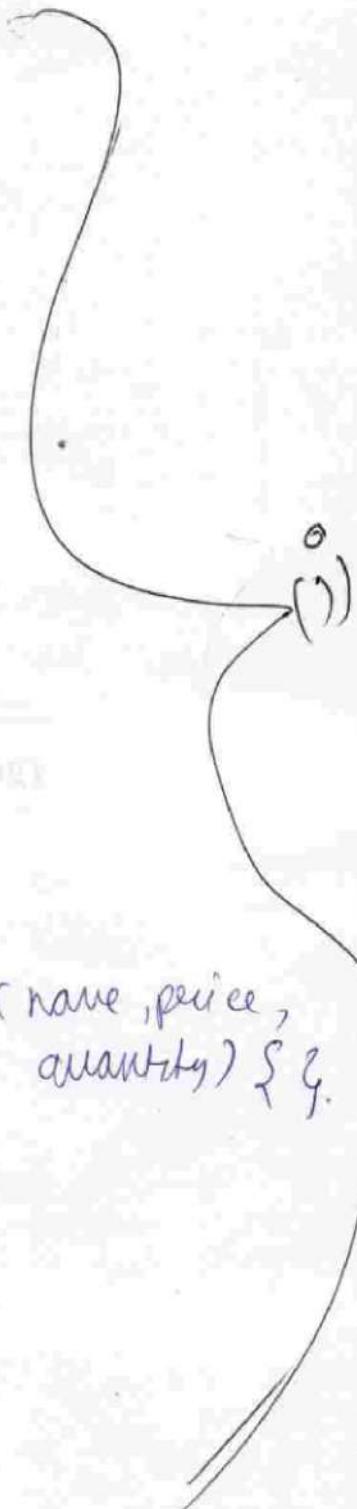
{

this->name = name;

this->price = price

this->quantity = quantity,

},



class DiscountProduct ;

class Electronics : public Product {

public

Electronics(name , price , quantity) : Product(name , price ,
quantity) {}.

↑ // constructor.

{},

},

class Clothing : public Product {

public

public:

✓ // constructor

Clothing(name , price , quantity) : Product(name , price , quantity) {}.

{

class DiscountProduct : public Electronics & public Clothing { } 11

public :

int discountProduct;

DiscountProduct (name, price, quantity, discountProduct)
: Product (name, price, quantity){
this->discountProduct = discountProduct; }

{ } 2, 3

@ void displayAvailableProducts (Product [] P, Electronics [] E,
Clothing [] C, DiscountProduct [] D,
a, b, c, d){
for (int i = 0; i < a; i++) // quantity of Product, Electronics,
{ if (Product [i].quantity > 0) clothing & DiscountProduct)
cout << Product [i].name << Product [i].price;
} respectively,{
for (int i = 0; i < b; i++){ if (Electronics [i].quantity > 0),
cout << Electronics [i].name << Electronics [i].price;
}



```

for(int i=0; i<c ; i++)
{
    if (D[i].quantity > 0)
        cout << D[i].name << D[i].price ;
}

for(int i=0, i<d ; i++)
{
    if (D[i].quantity > 0)
        cout << D[i].name << D[i].price ;
}

```

In digits

Shade Question No.

Q.No.

06

1 2 3

4 5 6 7 8 9

25

WRITE WITHIN THE BOX

VIT

Vellore Institute of Technology

Autonomous University

#include <iostream>

take input, declare variable,
identifiers

class Employee {

public:

int ID, salary;
string Name, Role;

Employee (ID, salary, Name, Role)

{

this->ID = ID;

this->salary = salary;

this->Name = Name;

this->Role = Role;

}

// constructor.

void display employee details()

{ cout << ID << salary << Name << Role;

{

const Employee& overload for int ^{employee} int

void operator + (int salary) to add % salary.

{

~~Salary = Salary *~~

, percentage

Employee~~int~~ percentage;

Salary = (Salary * percentage) / 100; } add % salary using +

{

~~void~~ operator == (const &Employee)

void {

Employee test;

~~ID =~~ cmp(ID, test.ID)~~cout << strcmp (ID, test.ID);~~~~cout << strcmp (salary, test.salary);~~~~cout << strcmp (Name, test.Name);~~~~cout << strcmp (Role, test.Role);~~~~cout << strcmp (to_string(ID), to_string(test.ID));~~~~cout << strcmp (to_string(salary), to_string(test.salary));~~

}.

} compare
using
strcmp.

~~void~~ operator != (const &Employee) compare
by converting

Employee test

cout << strcmp (Name, test.Name);

cout << strcmp (Role, test.Role);

cout << strcmp (to_string(ID), to_string(test.ID));

cout << strcmp (to_string(salary), to_string(test.salary));

}

{,

to string

to string

to string

to string

to string

convert resig.
to string method.

In digits

Shade Question No.

Q.No.

07

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28

WRITE WITHIN THE BOX

VIT

Vitthal Institute of Technology

E-mail: VIT@VIT.EDU.IN

In digits

Shade Question No.

Q.No.

02

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29

WRITE WITHIN THE BOX

(Q8) Teaching Assistant (TA).

```
#include <iostream>
```

```
#include <string>
```

```
class astrobioLOGY;
class quantumPHYSICS;
```

```
class <template T> TA<T> {
```

```
public:
```

```
int ID;
```

```
string name, course, assignment, score;
```

```
department name T. ; → 'T' type
```

```
TA( ID, name, course, assignment, score, <T> );
```

```
{ this → ID = ID;
```

```
this → name = name;
```

```
this → course = course;
```

```
this → assignment = assigned;
```

```
this → score = score;
```

```
this → T = T.
```

```
this. department name <T> = department name <T>;
```

```
.
```

```
class astrobioLOGY {
```

```
public:
```

```
int species;
```

```
int stars;
```

```
astrobioLOGY( species, stars ) { this → species = species; this → stars = stars }.
```

{,

class quantummechanics {

public :

int qbit;

int qstates;

quantummechanics(qbit, qstates)

{ this → qbit = qbit;

this → qstates = qstates; }

},

?

declaration
of our
custom data
types to use in
template for TA.

{,

int main()

{
TA

cout << "Input details for TA 1";

cin << ID << name << course << assignment <<
role << species << status;

cout << "Input details for TA 2";

TA2
cin << ID, name, course, assignment, role, qbit << qstates;

Q.No.

08



TA TA1 < astrobiology> (ID, name, course, assignment, etc)

↳ call the constructor

TA1 • species = species;

TA1 • stars = stars;

// since both are public
members.

TA TA2 < quantummechanics> (ID, name, course, assignment,
etc);

↳ call constructor

TA2 • qbit = qbits;

TA2 • qstates = qstates;

return 0.

// public members.

exit cleanly.

allow users to enter TA
details and their
specific attributes.

In digits

Shade Question No.

Q.No.

8

<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

33

WRITE WITHIN THE BOX

VII

#include <iostream>

class AddAmount {

int deposit = 500;

int firstyearout, secondyearout, thirdyearout;

AddAmount(firstyearout, secondyearout, thirdyearout);

} (this → firstyearout → firstyearout,

this → secondyearout → secondyearout;

this → thirdyearout → thirdyearout)

{ deposit = deposit + firstyearout + secondyearout
+ thirdyearout;

}

void finalamt() → remaining 7 years,
out of 10

{ for (int i=0; i<7; i++)

repeat
007
years

deposit += deposit * 0.01 → (10% interest)

deposit += 100 → ₹100 deposit each year

3.

```
void printFinalamt()
```

```
{ cout << deposit ;  
 }
```

```
inline void calculateAdditionalInterest()
```

interest

→ another 5 years.

```
{ for(int i=0; i<5; i++)
```

{ interest = deposit * 0.05; → calculate interest

cout << interest; → print interest of

each year
 }.

repeat 5 times.

3-

```
int main()
```

{

AddAmount A;

A(0, 200, 100); → first 3 years.

A. finalamt(); → calculate final amount.

A. printfinalamt(); → print final deposit after
10 years

A. calculateAdditionalInterest();

return 0.

print interest for 5 years,
every year.

3

In digits

Shade Question No.

Q.No.

09

- 1 2 3
 4 5 6 7 8 9

36

WRITE WITHIN THE BOX

VIT

Vellure Institute of Technology

Coimbatore - 641 047, Tamil Nadu, India

CHENNAI

In digits

Shade Question No.

Q.No.

- | | | |
|-------------------------|-------------------------|-------------------------|
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| <input type="radio"/> 4 | <input type="radio"/> 5 | <input type="radio"/> 6 |
| <input type="radio"/> 7 | <input type="radio"/> 8 | <input type="radio"/> 9 |

37

WRITE WITHIN THE BOX

In digits

Shade Question No.

Q.No.

1 2 3

1 2 3 4 5 6 7 8 9

38

WRITE WITHIN THE BOX



VIT

Vellore Institute of Technology

Autonomous Institute of National Importance

CHENNAI - 600 022

In digits

Shade Question No.

Q.No.

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>						
<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>							

39

WRITE WITHIN THE BOX

In digits

Shade Question No.

Q.No.

- | | | | | | | | | | |
|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

40

WRITE WITHIN THE BOX



VIT
Vellore Institute of Technology

In digits

Shade Question No.

Q.No.

- | | | | | | | | | |
|-----------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | | | | | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

41

WRITE WITHIN THE BOX

In digits

Shade Question No.

Q.No.

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>						
<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>						

WRITE WITHIN THE BOX

.....

VIT

Vellore Institute of Technology

The world's first institution for the Design

CHENNAI



The Litq.io Assessment & Review Report

Name: Evan Ferrao

Email: Evan.ferrao2023@vitstudent.ac.in

Phone: 7977330408

Date: October 28, 2023

Work Performance and you

Effective work performance results from the right combination of knowledge and skills, cognitive abilities, emotional intelligence, work place behavioural style (rooted in personality), alignment to work culture and key work competencies. Knowing these personal success drivers will equip you with the understanding of what makes you unique, what your strengths are and what areas of development will help you in launching a successful and rewarding career.

The litq.io smart assessment

The litq.io smart assessment is a scientifically designed immersive game that takes roughly 30 minutes to complete. Designed by experts with over 50 years of experience in assessing and aligning human potential, the Litq assessment stitches together a series of game-based work simulations with situational judgment scenarios and cognitive games to provide useful insights into work potential.

How to read, interpret and get the best out of this report

The liq.io smart assessment report has 5 sections:

1. Your behavioural work style preference
2. Your learnability quotient (cognitive abilities)
3. Your emotional quotient
4. Your culture preferences
5. Your work competencies

Each section provides you a brief note on what the parameter means for work success. The section also reports your strengths in that area.



Your Work Behavioural Style

Sheds light on how you are likely to behave on the job, interact and work with others, overcome challenges and handle/ resolve issues.



Ace
Cheerleader

Bigtime
Boss

You are a team player and prefer to let others initiate action and resolve problems. While you are focussed on the end goal you are more than happy to share the limelight of decisions and success with everyone around.



Hardcore
Introspector

Smooth
Operator

It is fun to have fun but you have to know how.' Looks like Dr. Seuss was talking about you when he wrote this line because you my friend, know how to have fun. You are persuasive, passionate and are excited by possibilities and new experiences.



Loyal
Wingman

Master of
Integration

Being always on the move! Constantly being on the move comes naturally to you and thus the need to be actively engaged in a variety of situations and tasks. This facilitates work and activities being completed with a sense of urgency and therefore efficient outcomes.



Dynamite
Disruptor

Lord of all
Logic

Being logical and systematic is right up your street; while getting things done. You are disciplined and precise while going about your tasks and activities, ensuring that no unnecessary risks are taken.



Your Learnability Quotient (Cognitive Abilities)

Helps you decipher the quality of the tasks and activities that you will thrive on and the kind of roles that will get the best out of you.

Numerical Ability



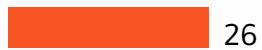
11

Logical Reasoning



10

Verbal Ability



26

You have the ability to evaluate and process complex information and are more likely to thrive in an intellectually stimulating environment. You get accustomed quickly to novel situations and are well suited to roles that require independent thinking, problem solving and interpreting complex information.



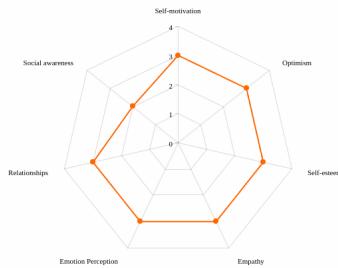
Suited for roles that:

- Have tasks that are not repetitive/ monotonous.
- That have a wide set of problems and challenges that are incremental in nature and need to be solved quickly.
- Keep you constantly challenging yourself with the need to learn and develop faster and quicker to ensure success in all outcomes.



Your Emotional Quotient

Provides information that helps you recognize, understand, and manage both one's own emotions and that of others.



You have a positive outlook on life and yet aware of the setbacks/ challenges that can occur/ arise. You are aware of your abilities, achievements and are open to self-improvement/ feedback and growth. You are able to recognise the reason behind other people's feelings and emotions and at the same time, are also able to maintain a boundary and take care of your own emotional needs. You are able to accurately identify and label your own emotions, as well as understand and empathize with the emotions of others. You forge relationships but need to focus on forming close and meaningful bonds. You are fairly perceptive of social cues and dynamics and can adjust in a variety of social situations/ settings if needed. You are intrinsically driven to complete tasks and achieve goals and are not easily influenced by external rewards.



Your Culture Preferences

We found out the perfect working environment that draws out and nurtures your passion while at work:

Your passion at work is driven by working for process driven organisations that emphasis on standardization, making work smooth and efficient and emphasises on continuous improvement.

Gain a better understanding of the environment that the role operates in. Environments in which work processes are efficiently organised, are places you will feel the most driven. When understanding more about the environment check to see if the recruiter mentions something on the lines of, 'we all need to follow the well defined structures, processes, policies that we have in place'.



Your Work Competencies

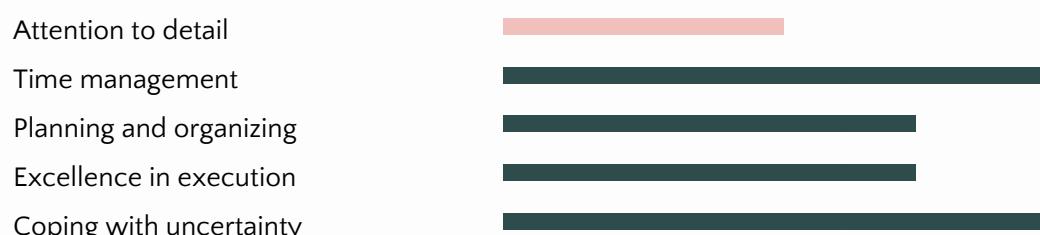
These are what will determine your success and growth in an organization.

Keep honing your strengths while ensuring that the areas of improvement are also simultaneously worked on.

Results



Execution



Teams



Self



Strength



Development Area



Note: The report is generated as a result of assessment(s) answered by the respondent. Paprika Maps Private Limited and Litwork can accept no liability for the consequences of the use of this report and this includes liability of every kind (including negligence) for its contents.