



Dharampeth M. P. Deo Memorial Science College, Nagpur

B. Sc. (Computer Science) SEMESTER -II Paper-I (Object Oriented Programming using 'C ++')

UNIT I

Object Oriented Programming Concept: Elements of Object-Oriented programming, Objects, Classes, OOPs features.

https://youtu.be/AGrcyWV7hL8?si=a5Oi_EaOOy2erF6K

Class and Object in C++, Declaration of Class, specifying a Class, Creating Objects, Accessing Class members, Defining member function: -

<https://www.youtube.com/watch?v=unZ3YYvvyuEA>

<https://youtu.be/unZ3YYvvyuEA?si=bfa09V042-PdxJt0>

https://youtu.be/zY55x7ATfr8?si=_tpJ4p88YuEXCj1y

https://youtu.be/YYeRTNNzgsE?si=ru_h30vILr-_dbyD

Abstraction, Encapsulation, Inheritance:

<https://youtu.be/nvrylVckaLU?si=t3FRBRDhReEiIxls>

https://youtu.be/mfenDVnl8M0?si=qVRUz8fIwg9m1h_a

C Programming Introduction:

<https://youtu.be/Iz-HOwaiqP8?si=-DW5Mr6D2LuInPbE>

<https://youtu.be/CFtlAg7Ydv4?si=aRX0P76Z3dq1tdQ7>

Access Specifiers: Public, Private and Protected:

<https://youtu.be/2m9aX2ntBWw?si=-Eevh-g-Z9zVk5XS>

https://youtu.be/sSQx3BCBni0?si=Z9WaBa_3L82uj1c0

UNIT II

Constructor and Destructor in C++: -Introduction, Parameterized Constructors, Constructor Overloading, Constructors with Default Arguments, Copy Constructor, Destructor, Order of Construction and Destruction:

<https://www.youtube.com/watch?v=y9KRmJAmmN4>

<https://youtu.be/TrX3T2sdxO4?si=T2mP1FnKX9t1Q9uD>

<https://youtu.be/dO2SVzJLFt4?si=xeA4YmTSPheEEECn7>

https://youtu.be/4OYL4bAowwQ?si=AoMBeHEeKN_r6GCz

OPERATOR OVERLOADING: Definition, Overloadable Operators, Unary Operator Overloading, Binary Operator overloading:

<https://youtu.be/1adXrSMaO-k?si=6DSeZbiU-VPjNfeL>

https://youtu.be/cPfcLaP_DqA?si=Xk0oef_dN2Yl0trp

https://youtu.be/BO2KagRMS3M?si=VW7Vm1rawS9R_SEw

UNIT III

Inheritance in C++: -

<https://youtu.be/OwpL28AEfNk?si=BAAn9-KE1qylEXSSR>

<https://youtu.be/U3YQyvBFjkg?si=xy9Dn6VhZncgWiuU>

Single and Multiple Inheritance: -

<https://youtu.be/0-AN9jO3m8o?si=sq9io4TrrU26JNYF>

Multilevel Inheritance: -

<https://youtu.be/unxUx10-rSE?si=a-KZhCAswK60Mhu3>

Hierarchical, Hybrid Inheritance: -

<https://youtu.be/teZnFzaJW3c?si=CYHW5gA6XBCYr9LA>

UNIT IV

Virtual Functions in C++: - Need for Virtual Functions, definition, Pure Virtual Functions, Abstract Classes, Rules for Virtual Functions.

<https://youtu.be/ky6GqjBIHS4?si=0wa3cxAo7tbvK17j>

<https://youtu.be/AbsNVnEh9Mc?si=vYoV6T3hm2DFU8cX>

https://youtu.be/84yOn9_rLy4?si=RBwjibR22Q36qddqZ

Static Polymorphism:

<https://youtu.be/2DJYVq4qhBg?si=zyw3SjEYI0199hvT>

Concept of Exceptional Handling:

https://youtu.be/TQgVck8094I?si=DZ4vE6isT8n_yCur

<https://youtu.be/mVXdmGqBaMo?si=eFOpnaEPOOE0TRbu>

https://youtu.be/6T9ZbrHXtY8?si=dSpyyELVK1nGe_8-