GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **105**   SUBJECT NAME : **Computer & Information Technology**

FACULTY NAME : **ASHOK AGARWAL**   DESIGNATION : LECTURER (COMPUTER SC. & ENGG.)

TOPIC	CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
Computer: An Introduction	1	AUGUST			
Generation of Computers & Types : PC, PC/XT, PC/AT, Main	1	AUGUST			
Data Representation, Bit, Nibble, Byte, Word	1	AUGUST			
Number System : Decimal, Binary, Hexadecimal & their Conversions	2	SEPTEMBER			
Arithmetic Operations (Addition, Subtraction using Binary Number System	2	SEPTEMBER			
1s , 2s Compliment, Coding Technique : BCD, EBCDIC, ASCII	1	SEPTEMBER			
Idea of: Hardware, Software, Firmware, Free ware, Human ware	1	SEPTEMBER			
Computer Languages and Translators: Machine, Assembly, High Level Language, Scripting Language, Object Oriented Language, Platform Independent Language	2	SEPTEMBER			
Translators: Assembler, Interpreter, Compiler	1	OCTOBER			
Introduction to Computer: Central Processing Unit (CPU), Memory Unit, Input/ Out Devices : Keyboard, Mouse (Optical), Digitizer, Scanner, Web Camera,	2	OCTOBER			
Monitor (CRT, TFT) , Printers, Plotters, Bar Code Reader, Secondary Storage Devices : Floppy, Hard Disk, CD, DVD, Flash Drive	1	OCTOBER			
Block Diagram Showing Interconnection of Computer Parts	1	OCTOBER			
Operating System : Definition of Operating System (OS), Types of OS Single user, Multi user, Multi Programming, Time Sharing, Multi Processing,	2	OCTOBER			
Introduction to Windows XP: Introduction to Windows Environment, Parts of Windows Screen, Icon, Menu, Start Menu, Minimising, Maximising, Closing Windows	2	OCTOBER			
Windows Explorer, Recycle Bin, Clipboard, My Computer, My Network Places, Control Panel : Adding New Hardware and Software, Display, Font, Multimedia, Mouse, International System, Accessories: Paint, Media Player, Scan disk, System Information	2	NOVEMBER			
Information Concepts and Processing, Definition of Data, Information , Need of Information, Quality of Information	2	NOVEMBER			
Concepts of Data Security, Privacy, Protection, Computer Virus and their types, Scanning & Removing Virus	2	NOVEMBER			

Computer and Communication: Need of Data Transmission, Data Transmission Media, Baud rate and Bandwidth, Digital and Analog Transmission Serial and Parallel Data Transfer, Protocols, MODEM.	2	NOVEMBER			
Networking of Computers : LAN, WAN, MAN, Blue tooth, LAN Topologies: Bus, Star, Ring, Hybrid Introduction to Ports : RS232, IEEE 488, PS2, USB, UTP	2	DECEMBER			
Internet: Introduction to Internet, Bridges, Routers, Switch, Gate way, www, Web Site, URL, e-mail, e-Commerce Web browsing, Web page	2	DECEMBER			
Introduction to Hyper text & HTML and Introduction to http & ftp Protocol	2	JANUARY			
Information Processing: Word processor Introduction to MS-Word Starting MS-Word Special Features of MS-Word Using Help, Opening Document, Typing and Editing	2	JANUARY			
Copying, Inserting, Moving, Deleting, Copying from One Document to Others . Undo, Redo, Spell Check, Find and Replace Formatting, Characters and Fonts Spacing	2	JANUARY			
Inserting Symbols, Paragraphs. Page Setting, Header and Footer, Page Breaks, Borders and Shading, Print Preview and Printing	2	JANUARY			
Tables and Columns, Mail Merge, Auto Text and Auto correct, Introduction to Macro, Electronic Spread Sheet, Introduction to MS-Excel , Working with Spread Sheet, Editing the Worksheet , Worksheet Formatting	2	FEBRUARY			
Formula Entering, Function Wizard, Saving and Printing Work Book, Analysis Tools, Data Tools, Charts	2	FEBRUARY			
Linking Work Sheets, Report Wizard, Data Base Application	2	FEBRUARY			
Data Base Components, Working with Database, Creating Excel Database, Adding Records using Data Form, Deleting Records using Menu Command, Deleting Records using Data Form Editing Records, Finding Records based on Criteria	2	FEBRUARY			
Power Point: Introduction to Power Point, Creating a Presentation/Slide, Adding Animation in Slide, Running a Slide Show	2	MARCH			
revision classes and class test	10	MARCH & APRAIL			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **CS 302** SUBJECT NAME : **Object Oriented Programming Through**

FACULTY NAME : **ASHOK AGARWAL** DESIGNATION : LECTURER (COMPUTER SC. & ENGG.)

TOPIC	CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
The need of object oriented programming	1	AUGUST			
Characteristics of OOPs: Objects, Classes, Inheritance, Reusability, New data types, Polymorphism and overloading	2	AUGUST			
Benefits of OOPs AND An overview of C++ Programming	1	SEPTEMBER			
Data Types, Operators, Manipulators, "cin" and "cout" usages	2	SEPTEMBER			
Statements : Comments, Assignments, if, switch and loops	2	SEPTEMBER			
Functions and its default arguments and Inline functions	2	SEPTEMBER			
Class and its members, Access Specifier : public, private, protected	2	OCTOBER			
Array of objects, Static data member and static functions	2	OCTOBER			
Object as function arguments , Constructors and Destructors , Friend function , Copy constructor	3	OCTOBER			
Overloading of Functions and Operators : Function overloading, Defining operators over loading	3	NOVEMBER			
Rules of overloading operators, Overloading unary operators, Overloading binary operators, Operator overloading using friend functions	4	NOVEMBER			
Inheritance and Polymorphism : Inheritance: Using public, private and protected access specifiers	4	DECEMBER			
Types of inheritance, Virtual base classes, Virtual and pure virtual functions	4	JANUARY			
Abstract classes, Reusability considerations	4	JANUARY			
Templates and Exception Handling : Generic functions, Generic classes	3	JANUARY			
Basics of exception handling, Exception handling mechanism	2	FEBRUARY			
Throwing and catching mechanism, Rethrowing an exception	2	FEBURARY			
Managing Console I/O and File I/O : C++ streams and stream classes	2	FEBURARY			
Unformatted I/O operations, Formatted console I/O operations, Managing output with manipulators	2	FEBURARY			
Classes for file stream operations, Opening and closing a file, File modes and file pointers, Put ( ), get ( ), read ( ), and write ( ) functions	3	MARCH			
Revision class and TEST	10	MARCH & APRAIL			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE **CS 302**   SUBJECT NAME : **Object Oriented Programming Through C++**

FACULTY NAME **ASHOK AGARWAL**   DESIGNATION : **LECTURER (COMPUTER SC. & ENGG.)**

TOPIC	PRACTICLE CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
Practice for Classes and Object Creation	2	AUGUST			
Practice for constructors and deconstructors	4	SEPTEMBER			
Practice for static and friend functions for a	4	SEPTEMBER			
Practice for Function overloading	6	OCTOBER			
Practice for Operator overloading	4	NOVEMBER			
Practice for Copy constructor	4	NOVEMBER			
Practice for inheritance	6	DECEMBER			
Practice for virtual function	6	JANUARY			
Practice for exception handling template	4	FEBRUARY			
Practice for read( ) and write( )	4	FEBRUARY			
Revision classes	16	MARCH & APRAIL			
TOTAL	60				

GOVERNMENT POLYTECHNIC COLLEGE, KOTA (RAJ.)

SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **CS 202**   SUBJECT NAME : **Computer System Architecture**

FACULTY NAME : **ASHOK AGARWAL**   DESIGNATION : **LECTURER (CS)**

TOPIC	CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
Overview of Computer Organization:	1	AUGUST			
Evolution of computer, Von Neumann architecture, Computer generations, Microprocessors and micro-computers design methodology	3	SEPTEMBER			
Register and Micro -Operations: Register, Register transfer, Arithmetic micro operations	2	SEPTEMBER			
Logic micro operations, Shift micro operations, Control functions.	2	SEPTEMBER			
Basic Computer Organization : Instruction codes, Computer Instructions	2	SEPTEMBER			
Timing and Control, Execution of instructions, I/O and interrupt	2	SEPTEMBER			
Central Processor Organization : , Processor Bus organisation	2	OCTOBER			
ALU : Simple and floating point, Stack Organisation	2	OCTOBER			
Instruction formats modes, Addressing schemes, Data transfer and manipulation, Program control	3	OCTOBER			
Arithmetic Processor Organization : Comparison and subtraction of unsigned binary numbers	4	NOVEMBER			
Addition and subtraction Algorithm, Multiplication and division Algorithms, Floating point operations.	4	NOVEMBER			
Input / Output Organization : Peripheral devices, I/O processors	3	DECEMBER			
DMA, Interrupt handling, Data communication, Multiprocessor organizations	5	JANUARY			
Memory Organization: Concept of primary and secondary memory, Memory hierarchy	5	JANUARY			
Cache memory, Associative memory (CAM), Virtual memory concept, Memory management unit	4	FEBRUARY			
Introduction to Parallel Processing: Flynn's Classification, Pipelining	2	FEBRUARY			
Vector Processor, Parallel Processors	4	FEBRUARY			
Revision class and TEST	10	MARCH & APRAIL			
TOTAL	60				

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SYLLABUS BREAK-UP (SESSION 2015-16)

SUBJECT CODE : **CS 302**   SUBJECT NAME : **Object Oriented Programming Through C++**

FACULTY NAME : **ASHOK AGARWAL**   DESIGNATION : **LECTURER (CS)**

TOPIC	PRACTICLE CLASSES REQUIRED TO COVER TOPIC	MONTHS IN WHICH THE TOPIC WILL BE COVERED	ACTUAL DATE OF COVERING OF THE TOPIC	REASON FOR NOT COVERING THE TOPIC IN DUE TIME	E-CONTENTS PROVIDED TO STUDENTS RELATED TO TOPIC
Study of Computer Components	2	AUGUST			
Practice of Computer Booting Process in XP	1	SEPTEMBER			
Demonstration of Windows Environment	2	SEPTEMBER			
Practice of using My Computer, Windows Explorer	2	SEPTEMBER			
Practice of using Control Panel	2	SEPTEMBER			
Practice of My Network Places	2	OCTOBER			
Practice of CD and DVD Writing	1	OCTOBER			
Practice of Paint	2	OCTOBER			
Installation of Windows XP by using NTFS File System.	2	OCTOBER			
Demonstration of Network	2	OCTOBER			
Visit to Internet Site, Creating e-mail Account , Sending and Receiving e-mails. Sending e-mail with Attachment & Signature, Searching Web Page/ Site using Search Engine : (eg. google.com, yahoo.com, altavista.com etc.)	8	NOVEMBER			
Exercise Based on MS-Word: Document Preparation, Printing Document, Mail Merge usage Draw Table	8	DECEMBER			
Exercise Based on Ms-Excel : Work Book Preparation, Printing Workbook , Data-base usage Draw Charts	8	JANUARY			
Exercise Based on Power Point : Creating Slide Adding, Animations in Slide, Running Slide	4	FEBRUARY			
Creating Simple Web Page using HTML.	4	FEBRUARY			
revision and class test	10	MARCH & APRAIL			
TOTAL	60				