

SANT GADGE BABA AMRAVATI UNIVERSITY GAZETTE



Official Publication of Sant Gadge Baba Amravati University

PART TWO

Thursday, the 27th June, 2019

NOTIFICATION

No. 56 / 2019

Date: 27/6 /2019

- Subject : I) Introduction of new syllabi for the subject Geology at B.Sc. Part-III (Sem. V & VI) level, which to be implemented from the academic session 2019-20.**
II) Introduction of new syllabi for B.Sc. Part-III (Semester-V & VI) Computer Science / Computer Application/ Information Technology/Computer Application(Vocational)which to be implemented from the academic session 2019-20.

I) It is notified for general information of all concerned that the authorities of the University has introduced new syllabi for the subject Geology at B.Sc. Part-III (Sem. V & VI) level, which to be implemented from the academic session 2019-20. Hence, the page Nos. 42 to 46, appearing in prospectus No. 2016123 be substituted respectively by the "**APPENDIX-A**", which is appended with this notification.

II) It is notified for general information of all concerned that the authorities of the University has introduced new syllabi for B.Sc. Part-III (Semester-V & VI) Computer Science / Computer Application/ Information Technology/Computer Application(Vocational), which to be implemented from the academic session 2019-20. Hence, the page Nos. 88 to 97, appearing in prospectus No. 2016123 be substituted respectively by the "**APPENDIX-B**", which is appended with this notification.

Sd/-
(Dr. T.R.Deshmukh)
Registrar,
Sant Gadge Baba Amravati University

APPENDIX-A

SYLLABI PRESCRIBED FOR B.SC. FINAL TO BE IMPLEMENTED FROM THE A.S. 2019-20 SEMESTER- V 5S : GEOLOGY

ECONOMIC GEOLOGY AND MINERAL EXPLORATION

- UNIT I :** Economic geology: Introduction, purpose and scope; Metallic and non metallic minerals, ore, ore deposits, gangue minerals, tenor and grade of the ore; Processes of ore formation, types of deposits, distribution of mineral deposits in space and time, metallogenic epochs and provinces, geological thermometers; Classifications of mineral deposits, magmatic concentration deposits, contact metasomatic deposits.
- UNIT II :** Sedimentary deposits, hydrothermal deposits (cavity filling and replacement), evaporation deposits, colloidal deposits, residual and mechanical concentration deposits, oxidation and supergene sulphide enrichment deposits, metamorphic and metamorphosed deposits.
- UNIT III :** Mineralogy, properties, uses, origin, mode of occurrence, types of deposits, geological and geographical distribution in India of the metallic mineral deposits like gold, iron, copper, lead, zinc, manganese, aluminium and chromite.
- UNIT IV :** Mineralogy, properties, uses, origin, mode of occurrence, types of deposits, geological and geographical distribution in India of non-metallic deposits like asbestos, mica, gypsum, barite, magnesite and limestone. Properties, classifications, origin, uses, geological and geographical distribution of coal deposits of India. Origin and migration of oil, oil trap and its types, geological and geographical distribution of Petroleum deposits of India.
- UNIT V :** Mineral exploration and prospecting, definition and scope, surface methods of exploration and their applications, sub surface methods of exploration like, gravity, magnetic, electrical, seismic, radiometric, geochemical and geobotanical methods and their applications in Geology.
- UNIT VI :** Guides and controls of ore localization, sampling-Its types, calculations and computation of grade and ore reserves, geochemical cycle and dispersal; Strategic, critical and essential minerals.

Practicals

- Identification of ore minerals by Physical properties (40 to 60 specimens)
- Identification of industrial Minerals by physical properties (20 to 30 specimens)
- Exercises showing major metallic and non metallic minerals on India map (6 to 10 maps)
- Exercises on calculations on grade and ore reserves (6 to 10 problems)
- Laboratory exercises in solving exploration problems (8 to 10 problems)

Practical Examination

Practical Examination will be of four hours duration and carries 50 Marks. The distribution of Marks will be as follows,

I.	Identification of ore minerals (5 nos.)	10 Marks
II.	Identification of industrial minerals (5 nos.)	10 Marks
III.	Exercises of metallic and non-metallic deposits of India on maps (2 maps)	4 Marks
IV.	Laboratory exercises in solving exploration problems (2 problems)	8 Marks
V.	Exercises on calculations and grades of ore reserves (2 problems)	8 Marks
VI.	Practical record	5 marks
VII.	Viva – voce	5 marks

Total- 50 Marks

Books Recommended :

1. McKinsty, H.E. (1972) Mining Geology. Prentice – Hall Inc.
2. Arogyaswamy, R.N.P. (1995) Courses in Mining Geology. Oxford and IBH publishing Co., New Delhi.
3. Bagchi, T. C., Sen Gupta, D. K. and Rao, S.V.L.N.(1979) Elements of Prospecting.
4. Jensen, M.L. and Bateman, A.M.(1981) Economic Mineral Deposits. John Wiley and Sons, New York.
5. Deb, S. (1980) Industrial Minerals and Rocks of India. Allied Publishers, New Delhi.
6. Howel, B.F. (1959) Introduction to Geophysical prospecting. McGraw Hill.
7. Lowrie, W. (1997) Fundamentals of Geophysics. Cambridge University Press.
8. Sen, A.K. and Guha, P.K. (1993) a handbook of Economic Geology. Dynamic printers, Kolkata.
9. Banerjee, D.K. (1992) Mineral resources of India. The World Press Pvt. Ltd., Kolkata.
10. Sharma, N.L. and Ram, K.S.V. (1964) Introduction to India's Economic minerals, Dhanbad Publishers.
11. Dobrin, M.B. (1952) Introduction to Geophysical Prospecting. McGraw Hill.
12. Park, C. F. and MacDiamid, R.A Ore Deposits. Freeman and company, Saint Francisco.
13. Sinha and Sharma . Mineral Economics.
14. Krishnaswamy, S. (1979) India's Mineral Resources. Oxford IBH, Pub. Co. New Delhi.
15. Prasad Umeshwar. Economic deposits of India. CBS Publishers, New Delhi.

SEMESTER – VI

CS : GEOLOGY

HYDROGEOLOGY, REMOTE SENSING, ENGINEERING GEOLOGY AND GEOLOGICAL SURVEILLANCE

- UNIT I :** Concept of hydrology, hydrogeology and ground water, Hydrologic cycle and its components, Occurrence and distribution of ground water, Water Table; Aquifer and its types – confined, unconfined and semi-confined; Properties of aquifer- porosity, permeability, specific yield, safe yields, storage coefficient, storativity and transmissivity.
- UNIT II :** Recharge and discharge, Cone of depression, Influent and affluent seepages, Springs and its types. Ground water Provinces of India. Geophysical investigations for groundwater exploration, Groundwater and water quality services, Hydrochemical parameters of ground water (Acidity, Alkalinity, Hardness, pH, Conductivity). Recharge through wells and its types. Rain water harvesting,
- UNIT III :** Aerial photographs and its types, Satellite imageries. Methods of studying aerial photographs in the form of stereo-pairs and mosaic. Pocket and mirror stereoscopes, Overlap and sidelap, Drift and crab. Photogeology and elements of photorecognition- tone, texture, shape, size, pattern; Scale of photograph and vertical exaggeration. Guidelines for lithological, structural and geomorphic interpretations. Applications of photogeology. "Introduction and scope of photogeology".
- UNIT IV :** Concept of remote sensing, types of remote sensing systems (active and passive), Elements of passive remote sensing system (data acquisition and data analysis); applications of remote sensing in studying the natural resources like minerals, ground water, soil and forests. Satellites and Satellite data - introduction and brief history, types of satellites, information obtained with reference to latest IRS & LANDSAT satellites. Sensors – types and their applications.
- UNIT V :** Engineering Geology – introduction, scope and significance; engineering properties of rocks - specific gravity, porosity, crushing strength, compressive strength, and tensile strength. Tunnels - terminology, geological conditions for tunnel sites, tunnels in folded rocks and bedded rocks. Dams – terminology, geological conditions for the selection of dam, Types of dams - Masonary dams (Gravity buttress and Arch types), earthen dams. Landslides - causes, types and prevention of landslides.
- UNIT VI :** Geological skill developement - Role of geological expertise in local natural resources investigation, exploration and mining, beneficiation of minerals; Rocks and minerals thin section making, Civil engineering services, Environmental services, . Soil quality testing and conservation services, Laboratory and Research Technician. Geoheritage.

PRACTICALS: SEMESTER – VI

1. Plotting of ground water provinces on outline map of India.
2. Problems on determination of aquifer parameters, ground water table maps.
3. Interpretation of aerial photographs and satellite imageries.
4. Field work : Field work is an Integral part of Geology Syllabus. Every student should attend field work for a short duration and submit field diary, geological specimen collected and a report.

PRACTICAL EXAMINATION:

The Practical Examination will be four hour duration and carries 50 marks. The distribution of marks will be as follows-

I	Plotting of Ground water provinces on outline map of India.	08 Marks
II	Ground water table contour maps	06 Marks
III	Problems on determination of Aquifer Parameters.	10 Marks
IV	Interpretation of Aerial Photographs and Satellite Imageries.	06 Marks
VI	Field Work.	10 Marks
VII	Practical Record	05 Marks
VIII	Viva Voce	05 Marks

50 Marks

Text Books for Sem VI :

1. Todd, D.K. (1980) Ground Water Hydrology. John Wiley and Sons Inc. New York.
2. Karanth, K.R. (1989) Hydrogeology. Tata McGraw Hill Pub.Co.Ltd., New Delhi.
3. Nagabhushaniah, H.S. (2001) Groundwater in Hydrosphere (Groundwater Hydrology) CBS Publisher, New Delhi.
4. Karanth K.R. Groundwater, Assessment, Development and Management. Tata McGraw Hill Pub. Co. Ltd., New Delhi.
5. Raghunath : Ground Water Hydrology, New Age Publication, Pune.
6. P. Arul Murugan, R.R. Krishnamurthy, .in groundwater targeting and coastal hydrogeological studies"
7. Pande, S.N. (1987) Principles and Applications of Photogeology . Wiley Eastern Limited.
8. . Sabisin, F.F. (2000) Remote Sensing Principles and Interpretations. W.H. Freeman and Company, USA
9. . Lilesand, T.M. and Kiefer, R.W.(2000) Remote Sensing and Image Interpretation. John Wiley and Sons Inc.,New York.
10. Drury, S.A. (1997) Image Interpretaton in Geology. Chapman and Hall, London.
11. Dr.AFZAL An Introduction to Remote Sensing ;SHARIEFF ;Sarup book Publishers PVT.LTD. , New Delhi.
12. Text Book of Engineering Geology - Parbin Singh, Katson Publishing, Ludhina.
13. R B Gupte, Text Book of Engineering Geology,Published by Pune Vidyarthi Griha Prakashan
14. Hand book of analysis of water sample

APPENDIX-B

Syllabus prescribed for B.Sc. Part III (Semester-V & VI) Computer Science to be implemented from the Academic Session 2019-20 & onwards.

B.Sc.Part-III (Semester-V)

The Examination in Computer Science of Fifth Semester shall comprise of one theory paper of 80 Marks of three hours duration and internal assessment of 20 Marks. The practical examination will be of 4 Hrs. duration and carry 50 Marks.

The distribution of marks for practical examination is as under:

1. Program writing / execution (on group A & B)	: 30 Marks
2. Practical record	: 10 Marks
3. Viva Voce	: 10 Marks

Total 50 Marks

5S: Computer Science

. Net Technology and Java Programming

Unit I: Introduction to .NET Framework: NET framework, MSIL, CLR, CLS, CTS, Namespaces, Assemblies The Common Language Implementation, Assemblies, Garbage Collection, The End to DLL Hell - Managed Execution

Unit II: Introduction to visual programming : Concept of event driven programming - Introduction to VB.Net environment, The .NET Framework and the Common Language Runtime. Building VB.NET Applications, The Visual Basic Integrated Development - Basic Language - Console application and windows application, Data types, Declaring Variables, scope of variables, operators and statements.

Unit III: Decisions and loop : Making Decisions with If . . . Else Statements, Using Select Case, Making Selections with Switch and Choose, Loop statements - Do Loop, for, while - The With Statement - Handling Dates and Times - Converting between Data Types - Arrays - declaration and manipulation - Strings & string functions - Sub Procedures and Functions.

Unit IV : Introduction to JAVA : History and evolution ,Feature, JDK, JVM, Difference between C++ and Java, Structure of Java Program, Keywords, Variable, Data types and Literals, Operators Control of Flow, (Selection Statements, Iteration Statements),Command Line Argument, One dimensional and two dimensional array.

Unit V : Classes and inheritance: Class, Object, Method, Overloading Method, Constructor, Constructor Overloading, this Keyword, **Inheritance:** Introduction to Inheritance, Super, Multilevel Hierarchy, method overriding, Abstract class, Using Final (variables, methods and classes).

Unit VI : String, Package and Interface: **String:** String operation, String comparison, Searching and modifying string, **Package:** Package concept, Defining Package, Finding Package, Java In-built Packages **Interface:** Interface concept, Defining, and Implementing of Interface.

Books Recommended:

- 1) .NET Framework, OREILY Publication.
- 2) Steven Holzner, Visual Basic .NET Black Book
- 3) Rebecca Riordan, VB.NET for Developers, Keith Franklin, SAMS
- 4) Jason Beres, Sams Teach Yourself Visual Studio .NET 2005 in 21 Days,
- 5) Jesse Liberty, Learning Visual Basic .NET
- 6) The Complete Reference JAVA2 by Herbert Schildt (Tata McGraw)
- 7) The Complete Reference JAVA by Patrik Noughton
- 8) Programming with JAVA - A Primer : By E.Balguruswamy (Tata McGraw)
- 9) Programming in JAVA : By S.S.Khandare (S.Chand)
- 10) Teach Yourself 'Java' in 2 Hrs : By Sams.
- 11) Java for You : By P. Koparkar

Practical : Minimum 16 Practical base on

A: Unit II and Unit III (Minimum 8 practical)

B: Unit IV, Unit V and Unit VI (Minimum 8 practical)

B.Sc.Part-III (Semester-VI)

The Examination in Computer Science of Sixth Semester shall comprise of one theory paper of 80 Marks of three hours duration and internal assessment of 20 Marks. The practical examination will be of 4 Hrs. duration and carry 50 Marks.

The distribution of marks for practical examination is as under:

- | | |
|---|------------|
| 1. Program writing / execution (on group A & B) | : 30 Marks |
| 2. Practical record | : 10 Marks |
| 3. Viva Voce | : 10 Marks |

Total 50 Marks

**S: Computer Science
Advanced Java and VB.net**

Unit I : Exception Handling and Multithreading : **Exception Handling:** Concept of Exception handling, Type of Exception, Try, Catch, and Finally. Multiple Catch blocks, Nested Try Statements, throw, throws. **Multithreading:** Multithreading concept, life cycle, creating and running thread, thread priority.

Unit II : Applet: Introduction to Applet, Applet life cycle, HTML applet tag with all attributes, Running the applet, Passing parameters to applets, Displaying using applet viewer, getDocumentBase() and getCodeBase() methods, Applet context, Applet vs Application, Graphics introduction, Graphic class, draw lines, circle, rectangle, ellipse.

Unit III: Event Handling and AWT: Introduction, Event delegation model, Java AWT event description, sources of event, Event listener interfaces, Adapter classes, Inner classes. AWT (Abstract Window Toolkit): Introduction, AWT Controls Label, Button, Checkboxes, Lists, ScrollBar, TextField, TextArea, Layout manager.

Unit IV: Windows Applications: Forms: Adding Controls to Forms, Handling Events, MsgBox, InputBox, Working with Multiple Forms, Setting the Startup Form, SDI & MDI Forms, Handling Mouse & Keyboard Events, **Common controls:** Text Boxes, Rich Text Boxes, Labels, Buttons, Checkboxes, Radio Buttons, Group Boxes, List Boxes, Checked List Boxes, Combo Boxes, Picture Boxes, Scroll Bars, Tool Tips, Timers, properties – methods

UNIT V: Object Oriented Programming: Classes and Objects: Class definition, Creating objects, Defining Member functions, Methods and Events, Attaching a class with form, Delegates. **Exceptions Handling:** Exception classes in .net framework, Structured and Unstructured exceptions, tracing errors, breakpoints, watch, Quick watch.

UNIT VI: Data Access with ADO.Net, accessing data with Server Explorer, Accessing Data with data Adaptors and Data sets, Creating a new data connection, creating and populating Data set, displaying data in Data Grid, selecting a data provider, Data accessing using Data adapter Control, Binding Data to Controls.

Books Recommended:

1. Steven Holzner, Visual Basic .NET Black Book
2. Rebecca Riordan, VB.NET for Developers, Keith Franklin, SAMS
3. Jason Beres, Sams Teach Yourself Visual Studio .NET 2005 in 21 Days,
4. Jesse Liberty, Learning Visual Basic
5. The Complete Reference JAVA2 by Herbert Schildt (Tata McGraw)
6. The Complete Reference JAVA by Patrik Noughton
7. Programming with JAVA - A Primer : By E. Balguruswamy (Tata McGraw)
8. Programming in JAVA : By S.S. Khandare (S. Chand)
9. Teach Yourself 'Java' in 2 Hrs : By Sams.
10. Java for You : By P. Koparkar

Practical : Minimum 16 Practical base on

A: Unit I, Unit II and Unit III (Minimum 8 practical)

B: Unit IV, Unit V and Unit VI (Minimum 8 practical)

Syllabus prescribed for B.Sc. Part III (Semester-V & VI) Computer Application /Information Technology to be implemented from the Academic Session 2019-20 & onwards.

B.Sc. Part-III (Semester-V)

The Examination in the subject Computer Application/Information Technology of Fifth Semester shall comprise of one theory paper of 80 Marks of three hours duration and internal assessment of 20 Marks. The practical examination will be of 4 Hrs. duration and carry 50 Marks.

The distribution of marks for practical examination is as under:

- | | |
|--|------------|
| 1. Program based on Computer lab I | : 15 Marks |
| 2. Program based on Computer lab II | : 15 Marks |
| 3. Practical record | : 10 Marks |
| 4. Viva Voce (based on lab I & lab II) | : 10 Marks |

Total 50 Marks

**5S: Computer Application/ Information Technology
.Net C#**

- UNIT-I :** Introduction to C # : Evaluation of C#, characteristics of C#, application of C#, difference between C++ and C#, Introduction to C# environment : The .NET strategy, the origins of the .NET technology, the .NET framework, .NET, .NET languages, benefits of the .NET approach, C# and .NET.
- UNIT-II:** Overview of C#: Programming structure of C#, editing, compiling and executing C# programs, namespace, comments, using aliases for namespace classes, using command line argument, maths function.
Literals, variables and data types : literals, variables, data types, value types, reference type, declaration of variables, initialization of variables, default values, constant variables, scope of variables, boxing and unboxing.
- UNIT-III:** Operators and expression : arithmetic operators, relational operators, logical operators, assignment operators, increment and decrement operators, conditional operators, Bitwise operators, special operators, arithmetic expressions, evaluation of expression, precedence of arithmetic operators, type conversions, operator precedence and associativity, mathematical functions.
Decision making and branching : if statement, if...else statement, nesting of if...else statement, the else if ladder, switch statement, the ?: operator, Decision making and looping : while statement, do statement, for statement, for each statement, jumps in loops.
- UNIT-IV :** Methods in C# : declaring methods, the main method, invoking methods, nesting of methods, method parameters, pass by value, pass by reference, the output parameters, variable arguments list, method overloading, Arrays : 1-D array, creating an array, 2-D array, variable size arrays, the system, array class, array list class, String handling: creating strings, strings method, inserting strings using systems, comparing strings, finding substrings.
- UNIT-V:** Structures and enumeration: structures, structs with methods, nested structs, difference between classes and structs, enumerations, enumerator initialization, enumerator type conversion, common program errors, Classes and Objects : Basic principles of OOP's, class, objects, constructors, static members, static constructors, private constructors, copy constructors, destructors, member initialization, the this reference, nesting of classes, constant members, read only members, properties, indexers.

UNIT-VI : Interfaces : MultipleInheritance: defining an interface, extending an interface, implementing interface, interface & inheritance, explicit interface implementation, abstract class and interface, Operator overloading : overloadable operators, need for operator overloading, defining Operator overloading, overloading unary operators, overloading binary operators, overloading comparison operator. Delegates and Events : Delegate, delegate declaration, delegate methods, delegates instantiation, delegate invocation, using delegates, multicast delegates, events, Managing Console I/O operations : console class, console input, console output, formatted output, numericformatting, standard numeric format, custom numeric format.

Text Books:-

- 1.Programming in C# : E. Balguruswamy
- 2.Mastering in C# : BPB Publication
- 3.Programming C# : TMH Publication
- 4.Programming C# : PHI Publication

Practical: Minimum 16 programs should be prepared on above syllabi.

B.Sc.Part-III (Semester-VI)

S: Computer Application/ Information Technology

Computer Graphics, Multimedia & Animation

Unit-I : Overview of Graphics Systems: Refresh Cathode-Ray Tubes (CRT), Raster-Scan Display, Random-Scan Display, color CRT monitor, Flat-Panel Displays,3D viewing system, stereoscopic and virtual realitysystem, raster scan system, graphics monitor and workstations, Input Devices, keyboards, mouse, trackball and spaceball, joysticks, image Scanners, Touch panels, light pen, voice system

Unit-II : Output Primitives: Points and lines, line drawing algorithm, DDAalgorithm, Bresenham's LineAlgorithm, parallel line algorithm, loading the frame buffer, line function ,circle generating algorithm, Attributes: line Attributes ,line type, line width, pen and brush option, line color, curve Attributes, color and grayscale level, color tables, grayscale

Unit-III : Areas fill Attributes, character Attributes, basic transformation, matrix representation, composite transformation: translation, rotation and scaling

Unit-IV : IntroductiontoMultimedia:Whatismultimedia,multimedia and hypermedia, overview of multimedia, software tools: music, sequencing and notation, digital audio, graphics and imageediting,videoediting,Animation, multimediaauthoring, fileformat:GGIF, JPEG,PNG,TIFF,EXIF, graphics,animation files, PS and PDF, WindowWMF, Window BMP.

Unit-V : Multimedia Compression: IZW,DCT run length coding, JPEG MPEG, Hypertext, MHEG, Hypermedia, Document architecture, SGML, ooa Augmentedand virtual realityand multimedia: Concept, VR devices, VR chair, CCD, VCR, 3D Sound System, head mounted display.

Unit-VI : Animation: Introduction, History of Animation, Anatomy study, Basic Sketching, Introduction to 2D animation, Animation with flash –Tweening,Motion tweening, Shape twining

Text Books:-

- 1.Computer graphics – C Version”, Hearn D and Baker M.P , 2nd Edition, Pearson Education
- 2.Multimedia Computing, Communications andApplications , Ralf Steinmetz, Klara steinmetz, Pearson education, 2004.
- 3.Multimedia in Practice: TechnologyandApplication –Judith (PHI)
- 4.Fundamental of Multimedia byDREW-Pearson(Practical Ap- proach)
- 5.Multimedia : Making it Work: T. Vaughan
- 6.Multimedia programming :Siamon J. Gibbs and Dionysios C. Tsichritzis, Addison Wesley, 1995.
- 7.Multimedia Graphics : John Villamil, Casanova and Leony Fernanadez, Eliar, PHI, 1998.

Practical: Minimum 16 programs should be prepared on above syllabi.

Syllabus prescribed for B.Sc. Part III (Semester-V & VI) Computer Application (Vocational) to be implemented from the Academic Session 2019-20 & onwards.

B.Sc.Part-III (Semester-V)

The Examination in vocational subject Computer Application of Fifth Semester shall comprise of one theory paper of 80 Marks of three hours duration and internal assessment of 20 Marks. The practical examination will be of 4 Hrs. duration and carry 50 Marks.

The distribution of marks for practical examination is as under:

- | | |
|--|------------|
| 1. Program based on Computer lab I | : 15 Marks |
| 2. Program based on Computer lab II | : 15 Marks |
| 3. Practical record | : 10 Marks |
| 4. Viva Voce (based on lab I & lab II) | : 10 Marks |

Total 50 Marks

5S: Computer Application (Vocational)

.Net Technology

Unit I: Introduction to VB.NET, Programming Platform -.NET Framework,.NET Architecture, CLR, MSIL, The Just-in-time compiler, CTS, .NET framework class library, VB6 and VB .NET Differences

UNIT II: VB.NET Development Environment, Creating Application, Introduction to Controls in VB.NET: Label, TextBox, Button, Checkbox, RadioButton, ComboBox, ListBox, ImageList, PictureBox, Timer

UNIT III: VB.NET Language –datatypes, Variables, Declaring variables, scope of variables, Constants, and Operators, Functions and Subroutine.

UNIT IV: Programming Styles: Array in VB.NET, Types of array, controlling program flow, Conditional Statements:- if and select-case statements, Looping Statements:- The while, do, for, and for Each statements, flow control Statements:- goto, break, continue, and exit statements, Exception Handling- Unstructured Error Handling, Structured Exception Handling.

UNIT V: Object Oriented Programming: Class basics, Class Properties, Inheritance, Interface, Polymorphism, Constructors and Destructors, Introduction to Multithreaded Programming.

UNIT VI: Data Access with ADO.Net: What are Database, Overview of ADO.Net, ADO.NET object-Connection object, Command Object, Data Adapter Object, Dataset object, Data Reader Object.

Books Recommended :

- 1) Beginning Visual Basic 2005 - Thearon willis, bryan Newsome - Wiley Publishing, INc
- 2) A Programmer's Introduction to Visual Basic.NET - SAMS
- 3) "Beginning VB.NET 2005", WROX Publication Books :

Practical : Minimum 16 Practical base on

Lab I: Unit II and Unit III (Minimum 8 practical)

Lab II: Unit IV, Unit V and Unit VI (Minimum 8 practical)

B.Sc.Part-III (Semester-VI)

The Examination in vocational subject Computer Application of Sixth Semester shall comprise of one theory paper of 80 Marks of three hours duration and internal assessment of 20 Marks. The practical examination will be of 4 Hrs. duration and carry 50 Marks.

The distribution of marks for practical examination is as under:

- | | |
|--|------------|
| 1. Program based on Computer lab I | : 15 Marks |
| 2. Program based on Computer lab II | : 15 Marks |
| 3. Practical record | : 10 Marks |
| 4. Viva Voce (based on lab I & lab II) | : 10 Marks |

Total 50 Marks

S: Computer Application (Vocational)

PHP Programming

UNIT I: Introduction to PHP: Evolution of PHP, Features of PHP, Server Introduction of PHP, Installation & Configuration of PHP, PHP Ethics, **Fundamentals of PHP:** Keywords in PHP, Variables (Predefined, User defined), Constants, data types in PHP ,

UNIT II: Operators: Arithmetic/math operators, Assignment Operators, Comparison Operators, Logical Operators, Bitwise Operators, String Operator **Control Structures:** if, if..else, if..else..if, Loops in PHP: while, do.. while, for.

UNIT III: Introduction to arrays: What is array, Declaration of array, **Types of array:** Numeric array, Associative array, Multidimensional Array, Array Functions: print_r(), explode (), implode(), array_merge(), array_sum(),array_search(), array_push(), array_pop()

UNIT IV: Functions in PHP: Introduction to Functions in PHP, function Declaration, Function calling, predefined functions in PHP (crypt (), move_uploaded_file (), isset(), empty(),include(), require())

UNIT V: String Handling: Introduction to strings in PHP, Manipulation on string: Concatenation Operator for string, strlen(), strtolower(), substr(), strpos(), Date Function, Math Function

UNIT VI: Cookies: Anatomy, Setting Cookies with PHP, Accessing Cookies, Deleting Cookies, Session – Starting PHP session, Destroying PHP Session, Sessions without Cookies, Error Handling, Sending Emails.

Books Recommended :

1. The Complete Reference PHP :
2. Learning PHP , My SQL & Java Script – Robin Nicson (Orelly)
3. PHP for Web – Visual Quickstart Guide- Larry Ullman
4. PHP & My SQL Web Development – A.Martin, S. Mathews
5. Beginning PHP5
6. PHP Bible
7. Professional PHP5

Practical : Minimum 16 Practical base on

Lab I: Unit I , Unit II and Unit III (Minimum 8 practical)

Lab II: Unit IV, Unit V and Unit VI (Minimum 8 practical)

NOTIFICATION

No. 57 / 2019

Date: 27 / 6/2019

Subject : Additional chances for the failure students of old course

It is notified for general information of all concerned that the authorities of the University has provided the three additional chances for the failure students, in the subjects Geology and Computer Science/Computer Application/ Information Technology/Computer Application(Vocational) of B.Sc. Part-III Sem-V & VI, which will be as given below :

Sr.No.	Examination	Subjects	Additional Chances Provided
1	B.Sc.-III Sem-V	Geology	Winter-2019 to Winter-2020
2	B.Sc.-III Sem-VI	Geology	Summer-2020 to Summer-2021,
3	B.Sc.-III Sem-V	Computer Science/Computer Application/Information Technology/ Computer Application (Vocational)	Winter-2019 to Winter-2020
4	B.Sc.-III Sem-VI	Computer Science/Computer Application/Information Technology/ Computer Application (Vocational)	Summer-2020 to Summer-2021,

Sd/-
(Dr.T.R.Deshmukh)
Registrar
Sant Gadge Baba Amravati University
