SHIVAJI UNIVERSITY, KOLHAPUR

"A++" Accredited by

NAAC(2021) with CGPA

3.52

Faculty of Interdisciplinary Studies Structure,

Scheme and Syllabus

for Bachelor of Vocation (B.Voc)

Diploma

COMPUTER PROFRAMMING

Part I- Sem. I & II

(Subject to the modifications that will be made from time to time)

Syllabus to be implemented from 2022-2023 onwards.

As per National Education Policy 2020

PROPOSED STRUCTUCTURE AND SYLLABUS (SEMESTER PATTERN)

Bachelor of Vocation (B. Voc.) Part I computer Programming

1. TITLE: B. Voc. Part I (Diploma in computer programming)
Syllabus (Semester Pattern)

2. YEAR OF IMPLEMENTATION : Syllabus will be implemented from-2022-2023

3. DURATION: B. Voc. Part I, II and III (ThreeYears)
B. Voc. Part I - Diploma (First Year)
B. Voc. Part II - Advanced Diploma (Second Year)
B. Voc. Part III – Degree (Third Year)

4. PATTERN OF EXAMINATION – Semester Pattern
• Theory Examination – At the end of semester
as per Shivaji University Rules
• Practical Examination–

i)   In the 1st, 3rd and 5th semester of B. Voc. there will be internal assessment of practical record, related report submission and project reports.

ii)   In the second semester of B. Voc. I there will be internal practical examination.

iii)   In the 4th and 6th semester of B. Voc. There will be external practical examination at the end of the semester.

5. MEDIUM OF INSTRUCTION : English /Marathi

6. STRUCTURE OF COURSE : B. Voc. Part – I, II and III
Two Semester Per Year
Two General Papers per year / semester
Three Vocational Papers per Year /
Semester Three Practical papers per
Year / Semester
One Project / Industry Visit/ Study Tour / Survey

7.SCHEME OF EXAMINATION – A) **THEORY**–

• The theory examination shall be at the end of the each semester.

• All the general theory papers shall carry 40 marks and all the vocational theory papers shall carry 50marks.

• Evaluation of the performance of the students in theory shall be on the basis of semester examination as mentioned above.

. Question paper will be set in the view of entire syllabus preferably covering each

● unit of the syllabus.

● Nature of question paper for Theory examination (excluding Business
● Communication paper)–

● There will be seven questions carrying equal
   Students will have to solve any five marks questions.
Q. No. 1 : Short answer type question with internal choice (Two out of Three)
Q. No. 2 to Q. No. 6 : Long answer type questions
Q. No. 7 : Short Notes with internal choice (Two out of Three)

B) PRACTICAL

Evaluation of the performance of the students in practical shall be on the basis of semester examination (Internal assessment at the end of I, III and IV and V Semester and external examination at the end of IV and VI semester as mentioned separately in each paper.

STANDARD OF PASSING –
As per the guidelines and rules of B. Voc

STRUCTURE OF THE COURSE

B. Voc. Part I (Diploma computer Programming) Semester – I

SrNo	Paper No	Title	Theory/practical/ project	Marks(Total)	Theory	Practical
1	I	Business communication part-I	Theory/practical	50	40	10
2	II	Basic computer operating system-I	Theory/practical	50	40	10
3	III	Fundamental of IT	Theory	50	50	-
4	IV	Programming with c .	Theory	50	50	-
5	V	Web Designing	Theory	50	50	-
6	VI	Laboratory Work Paper No.III	practical	50	-	50
7	VII	Laboratory Work Paper No.IV	practical	50	-	50
8	VIII	Laboratory Work Paper No.V	practical	50	-	50
9	IX	Project	practical	50	-	50

B. Voc. Part I (Diploma) Semester – II

SrNo	Paper No	Title	Theory/practical/ project	Marks(Total)	Theory	Practical
10	X	Business communication part-II	Theory/practical	50	40	10
11	XI	Basic computer operating system-II	Theory/practical	50	40	10
12	XII	Data structure with c	Theory	50	50	-
13	XIII	Data Base management system	Theory	50	50	-
14	XIV	Cyber Security	Theory	50	50	-
15	XV	LaboratoryWor kPaperNo.XII	practical	50	-	50
16	XVI	Laboratory Work Paper No.XIII	practical	50	-	50
17	XVII	Laboratory Work PaperNo.XIV	practical	50	-	50
18	XVIII	Industrial Visit/Study tour	practical	50	-	50

SCHEME OF TEACHING :

B. Voc. Part I (Diploma) Semester – I

Sr No.	Paper No.	Title	Distribution of workload		
			Theory	Practical	Total
1	I	Business Communication - I	4	2	6
2	II	Basic computer operating system-I	4	2	6
3	III	Fundamental of IT	4	-	4
4	IV	Programming with c	4	-	4
5	V	Web Designing	4	-	4
6	VI	Laboratory Work Paper No. III	-	4	4
7	VII	Laboratory Work Paper No. IV	-	4	4
8	VIII	Laboratory Work Paper No. V	-	4	4
9	IX	Project	-	-	-
			20	16	36

B. Voc. Part I (Diploma) Semester – II

Sr No.	Paper No.	Title	Distribution of workload		
			Theory	Practical	Total
10	X	Business Communication – II	4	2	6
11	XI	Basic computer operating system-II	4	2	6
12	XII	Data structure with c	4	-	4
13	XIII	Data Base management system	4	-	4
14	XIV	Cyber Security	4	-	4
15	XV	Laboratory Work Paper No. XII	-	4	4
16	XVI	Laboratory Work Paper No. XIII	-	4	4
17	XVII	Laboratory Work Paper No. XIV	-	4	4
18	XVIII	Industrial Visit /Study Tour	-	-	-
			20	16	36

Eligibility for Admission : 10 + 2 from any faculty or equivalent Diploma /

- **ElligibilityforFaculty:**

Below Qualified Teachers are eligible for Degree in Computer Programming
1) Diploma inComputer Programming
2) Advanced Diploma in Computer Programming.
3) Bachlelor Of Vocation in computer Programming.

- **Eligibility for Lab Assistant**: Graduation with related field

- **Staffing Pattern**

Teaching:Inthe1styearof B Voc–One Full Time one C. H. B. for Business Communication
Lab. Assistant : For 1stYear ofB Voc– 1 CHB
For2nd (Inclusiveof1stYear)ofB Voc.–2 Full Time

Paper – I: Business Communication-I

Total Workload: 06 lectures per week of 60 mins.

Distribution of Workload:

Theory: 04 lectures per week
Practical: 02 lectures per week per batch of 20 students
Units Prescribed for Theory: 40
Marks.

Unit 1: Use of English in Business
 Environment
 Topics:
 Business Vocabulary: Vocabulary for banking, marketing and for
 maintainingpublic relations
 What is a sentence?
 Elements of a sentence
 Types of sentence: Simple, compound, complex

Unit 2: Writing a Letter of Application and CV/
 Resume
 Topics:
 Structure of a letter of application for various
 postsCV/ Resume and its essentials

Unit 3: **Presenting Information/Data**
 Topics:
 Presenting information/data using graphics like tables, pie charts, tree
 diagrams, bardiagrams, graphs, flow charts

Unit 4: Interview Technique
 Topics:
 Dos and don'ts of an
 interviewPreparing for an
 interview Presenting
 documents Language used
 in an interview

Practical: Based on the theory units   10 Marks.

 Reference Books:

- Sethi,Anjanee&BhavanaAdhikari.*Busin ess Communication*. New Delhi: Tata McGraw Hill
- Tickoo, Champa& Jaya Sasikumar.*Writing with a Purpose*. New York: OUP, 1979.
- Sonie, Subhash C. *Mastering the Art of Effective Business Communication*. New Delhi: Student
- Aid Publication, 2008.

Herekar, Praksh.*BusinessCommunication.* Pune: Mehta Publications, 2007.

Herekar, Praksh. *Principals of Business Communication.* Pune: Mehta Publications, 2003

Rai, Urmila& S. M. Rai.*BusinessCommunication.* Himalaya PublishingHouse, 2007.

Pradhan, N. S. *BusinessCommunication.* Mumbai: HimalayaPublishing House, 2005.

Pardeshi, P. C. *Managerial Communication.* Pune: Nirali Prakashan,2008

Pattern of a Question Paper

Paper I: Business Communication-I
Semester –I Paper: I

Time -2 hours

Total Marks- 40

Q. 1 Do as directed. Question items on **Unit 1** to be asked.
                                  10
(10 out 12)

Q. 2 Write a letter of application.
                                  10
OR
Draft a CV/ Resume for a particular post.

Q. 3 Present a given information or data using a table/ chart/ pie
                        diagram, etc.10
(Any one diagram to be drawn.)

Q. 4 Fill in the blanks in the given interview.
                                  10

Practical Evaluation: 10 Marks
    Oral and Presentation based on the units prescribed.

B.VOC Part I - Sem. I

Paper No. II: Computer Operating System I

Theory : 4 lectures / week

 Practical : 2 lectures/week/batch

Total Marks : 50 (Theory 40 + Practical10)

UNIT I- Knowing computer:

What is Computer, Basic Applications of Computer; Components ofComputer System, Central Processing Unit (CPU), VDU, Keyboard and Mouse, Otherinput/output Devices, Computer Memory, Concepts of Hardware and Software; Concept ofComputing, Data and Information; Applications of IECT; Connecting keyboard, mouse, monitorandprintertoCPUandchecking powersupply.

UNIT II- Operating System

What is an Operating System; Basicsof Popular Operating Systems; The User Interface, Using Mouse; Using right Button of theMouse and Moving Icons on the screen, Use of Common Icons, Status Bar, Using Menu andMenu-selection, Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows; Using help;Creating Short cuts, Basics ofO.S Setup

UNIT III- Understanding Word Processing:

 Word Processing Basics; Opening and Closing of documents;Text creation and Manipulation; Formatting of text; Table handling; Spell check, languagesettingand thesaurus; Printing of word document

UNIT IV –Using Spread Sheet:

Basics of Spreadsheet; Manipulation of cells; Formulas and Functions;EditingofSpread Sheet,printing ofSpread Sheet..

> ➢ **Practicals (Based on the above Units)** :
1. Visit to Industry/ Retail Mall
2. Oral / Seminar

ReferenceBooks:

1.operatingsystem:Author**:Dr**RajeshKadu,Publisher:TechKnowledge.

2.operatingsystem: Author**:ManojKavedia**Publisher:Tech-Neopublication.

Paper No. III: Fundamental of IT

Theory : 4 lectures / week

Total Marks : 50

Unit I- Computer System Characteristics And Capability

Basic structure, ALU, memory, CPU, I/O devices. Development of computers.Classificationofcomputers:(Micro,miniframe,supercomputer,pc,server, workstations)

Unit II- Input Devices and Output Devices & Memory Devices

Keyboard, Direct Entry: Card readers, scanning devices (BAR CODE,OMR, MICR),Voice input devices, Light pen, Mouse, Touch Screen,Digitizer,Scanner CRT,LCD/TFT,Dotmatrixprinter,Inkjetprinter,Drumplotter,Flatbedplotter. RAM, ROM, PROM, EPROM, EEPROM. - Base memory, extendedmemory,

UnitIII- Introduction To Programming Environment
Historyoflanguages,high-level,Lowlevel,Assemblylanguagesetc. ,Compilers, Interpreters,Assemblers,Linkers,Loaders

Unit IV- Algorithm & Flowcharts
Definition and properties, Principles of flowcharting, Flowcharting symbols,Convertingalgorithmsto flowcharts

Referance Books-

Computer Science: A Structured Programming Approach Using C, B.A.Forouzan and R.F. Gilberg, Third Edition, Cengage Learning. 2. The C Programming Language by Brian Kernighan and Dennis Ritchie 2nd edition

Paper No. IV: Programming with c

Theory : 4 lectures / week

Total Marks : 50

Unit I -Introduction and Basic elements of C programming
Introduction to problemsolving
through algorithm and flowchart, Overview, Character set, Keywords
andIdentifiers,Constants   and Variables, Data types, Operators and
Expressions,Operatorprecedenceand associativity, Typecasting

Unit II –DataI/O,ControlStructures
Basic structure of Cprogram, Formatted and Unformatted Input andOutput, Conditional
branching - if, switch statement, Iterative loops–while, do while and forstatement, break and
continue statement, gotostatement

Unit III –Arrays
Introduction,DeclarationandInitialization,AccessingArrayelements,Memory,representation of
Array, One dimensional Arrays, TwodimensionalArrays,Character ArraysandStrings.

Unit IV – Function
Introduction, Standard Library Functions, User Defined Functions (UDF) –Declaration,
Definition, Function call, Parameter Passing - by value and byreference,Recursion, Storage
Classes.

Referance Books-
Starting Out with Python - 3rd Edition - Tony Gaddis Optional (free online resources): A
Byte of Python - Swaroop C H. How to Think Like a Computer Scientist - Jeffrey Elkner,
Allen B. Downey, and Chris Meyers Course Dynamics

Paper No. V: Web Designing

Theory : 4 lectures / week

Total Marks : 50

Unit I- Web Design Principles

Basicprinciplesinvolvedindevelopingawebsite,Planningprocess,rulesofweb

designing,designingavigationbar,Pagedesign,HomePageLayout,Design

Concept,BriefHistoryofInternet,whatisWorldWideWeb,Whycreateawebsite,
Web Standards

Unit II – Introduction to HTML

WhatisHTML,HTMLDocuments,BasicstructureofanHTMLdocument,CreatinganHTMLdocument,MarkupTags,Heading-Paragraphs,LineBreaks,
IntroductiontoelementsofHTML,WorkingwithText,WorkingwithLists,TablesandFrames,
WorkingwithHyperlinks,ImagesandMultimedia,WorkingwithFormsandcontrols.

Unit III- Algorithm & Flowcharts

Definition and properties, Principles of flowcharting, Flow chart in symbols,
Converting algorithms to flow charts

Unit IV – JAVA Script

Introduction variable function web page dynamic web page graphics

Referance Book

C++ Programming: Program Design Including Data Structures, 6 th Ed. D.S. Malik, Course
Technology, 2011 (ISBN 978-113352632

Paper No. VI: Laboratory Work Paper No. III

Total Marks – 50
Practical : 4 lectures / week/perbatch

1. Introduction to Microsoft Word
2. Presentation ,DOS, DIA & Linuxis divide to four sections.

3. .Microsoft Word & Presentation DOS,.
4. DIA ,
5. Linux

6. Microsoftpower point preasention In this section,

7. Ms-OfficeAcess

8. Ms- Excel

Paper No. VII: Laboratory Work Paper No. IV

Total Marks – 50
Practical : 4 lectures / week/perbatch

1. Hello World Programing C

2. Cprogram to check whetherthe given number is positive or negative

3. Reverse an input number using recursion

4. Program to find greatest of three numbers

5. C Program to print Fibonacci series in a given range

6. C Program to find fact orial of a given number

7. Find Prime numbers in a given range

8 Array Programs

Paper No. VIII: Laboratory Work Paper No. V

Total Marks – 50
Practical : 4 lectures / week/perbatch

1.   HTML(Getyourselffamiliarwithalltheseandcode)

   * Tags

   * Attributes

   * Links

   * Images

   * Tables

   * Layouts

   2. BasicJavascript,gettoknowthefollowingthings.(Javascriptwillbringlifetoyourwebpages)

      * BasicJS(DontjumpintoNode.JSandframeworksfornow)

      * Datatypes:String,Number,Arrays,Objectsetc.

      * Functions,Conditionals,Loops,Operators,etc.

      * Eventhandling

      * JSON

      * jQuery(**OnlyifyoufeelreallycomfortablewithJS**)

3. Write an HTML code to display your CVon a web page.

4.Write an HTML code to create a Home page having three links: About Us, Our Services and Contact Us.

5.Create separate web pages for the three links.

6.Write an HTML code to create a Registration

Paper No-IX. PROJECT

Total Marks– 50

  i) Submission of practical record book=20marks
  ii) Submission of visit report=15 marks
  iii)Viva-voce 15=marks

SEMESTER II

Paper – X: Business Communication-II

Total Workload: 06 lectures per week of 60 mins.

Distribution of Workload:

Theory: 04 lectures per week
Practical: 02 lectures per week per batch of 20 students

Units Prescribed for Theory: 40
Marks

Unit 1: Group Discussion

Topics:
- Preparing for a Group DiscussionInitiating a Discussion
- Eliciting Opinions, Views, etc. Expressing Agreement/ Disagreement
- Making Suggestions; Accepting and Declining Suggestions Summingup.

Unit 2:Business Correspondence
Topics:
- Writing Memos, e-mails, complaints, inquiries, etc.Inviting Quotations
- Placing Orders, Tenders, etc.

Unit 3:English for Negotiation

Topics:
- Business Negotiations Agenda for Negotiation Stages of Negotiation

Unit 4:English for Marketing

Topics:
- Describing/ Explaining a Product/ Service Promotionof a Product
- Dealing/ bargaining with Customers
- Marketing a Product/ Service: Using Pamphlets, Hoardings, Advertisement, Public FFunction/Festival

➢ **Reference Books:**

1. Herekar, Praksh. *Business Communication.* Pune: Mehta Publications, 2007.
2. Herekar, Praksh. *Principals of Business Communication.* Pune: Mehta Publications, 2003.3.John, David. *Group Discussions*.New Delhi: Arihant Publications.

Theory : 4 lectures / week

Practical : 2 lectures/week/batch

Total Marks : 50 (Theory 40 + Practical10)

Unit I-Introduction to Internet, WWW and Web Browsers:

Basic of Computer networks;LAN, WAN; Concept of Internet; Applications of Internet; connecting to internet;What is ISP; Knowing the Internet; Basics of internet connectivity relatedtroubleshooting, World Wide Web; Web Browsing softwares, Search Engines;UnderstandingURL; Domainname;IP Address;Using e-governancewebsite

Unit II- Communications and collaboration

Basics of electronic mail; Getting an emailaccount; Sending and receiving emails; Accessing sent emails; Using Emails;Documentcollaboration; Instant Messaging; Netiquettes.

Unit III - Making Small Presentation:

Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation /handouts.

Unit IV -Financial Literacy for Banking Scheme

Banking products-ATM card, Banking Instruments-Cheque, Demand Draft (DD), Banking Services Delivery Channels, Know Your Customer (KYC), Opening of bank account and documents required, Types of bank accounts, Bank's services including remittances, loan, mobile banking, Overdraft, Pension etc.

Reference Books:

1 Operating system: Author:**Dr**RajeshKadu,Publisher:TechKnowledge.

2.operatingsystem: Author:**ManojKavedia**Publisher:Tech-Neopublication

➢ **Practicals (Based on the above Units)** :
1.Visit to Industry/ Retail Mall

2.Oral / Seminar

Paper No. XII: Data Structure with-C

Theory : 4 lectures / week

 Total Marks : 50

Unit I - Introduction

Introduction: Data Structures types, Importance of Data Structure, Abstract data Type. Algorithms: Complexity, Time space Trade-offs, Arrays: Operation Performed on array Dynamic Memory Allocation

Unit II – Searching Techniques

Searching Techniques: List Searches using Linear Search, Binary Search, Sorting Techniques: Basic concepts, Sorting by: Bubble, Insertion and selection. Hash Function: Address calculation techniques, CommonhashingFunctions,Collisionresolution,Linearprobing,quadraticprobing

Unit III - Stack
Stack: LIFO structure,

PUSH and POP operations,

Polish Notation, Queue: FIFO structure,

Unit IV - Link List

Introduction, single linked list, Operations on a Single linked list, Advantages and disadvantages of single link list, circular linked list, Double linked list

Referance Book

C++ Programming: Program Design Including Data Structures, 6 th Ed. D.S. Malik, Course Technology, 2011 (ISBN 978-113352632

Paper No. XII: Database Management System

Theory : 4 lectures / week

Total Marks : 50

Unit I – Database Concepts:
A Relational approach: Database – Relationships – DBMS – Relational DataModel – IntegrityRules –Theoretical Relational Languages

Unit II - Oracle9

Overview: Personal Databases – Client/Server Databases – Oracle9i an introduction– SQL*Plus Environment –SQL–Logging into SQL*Plus-SQL *Plus Commands – Errors & Help – Alternate Text Editors - SQL *Plus Worksheet - *i*SQL *Plus. Oracle Tables: DDL: Naming Rules and conventions –Data Types – Constraints – Creating Oracle Table – Displaying Table Information – Altering an Existing Table – Dropping, Renaming, Truncating Table – Table Types

Unit III - Data Types –

Constraints – Creating Oracle Table – Displaying Table Information – Altering an Existing Table – Dropping, Renaming, Truncating Table – Table Types

Unit IV - PL/SQL AProgrammingLanguage:History–Fundamentals–BlockStructure–Comments–
DataTypes– OtherDataTypes–Declaration–Assignmentoperation – Bind variables – Substitution Variables– Printing – Arithmetic Operators. Control Structures and Embedded SQL: Control Structures – Nested Blocks–SQL in PL/SQL–Data Manipulation–

Referance Book

C++ Programming: Program Design Including Data Structures, 6 th Ed. D.S. Malik, Course Technology, 2011 (ISBN 978-113352632

Paper No. XIII: Cyber security

Theory : 4 lectures / week

 Total Marks : 50

Unit I – Foundations of. Cyber Security

Essential Terminologies: CIA, Risks, Breaches, Threats, Attacks, Exploits.Information Gathering (Social Engineering, Foot Printing & Scanning).OpenSource/Free/TrialTools:nmap,zenmap,PortScanners,Networkscanners

Unit II - Cypher Text

Introduction to Cryptography, Symmetric key Cryptography, Asymmetric key Cryptography, Message Authentication, Digital Signatures, Applications of Cryptography.

Unit III - Overview of Firewalls-

Types of Firewalls, User Management,VPN Security, Security Protocols: - security at the Application LayerPGP andS/MIME, Security at Transport Layer- SSL and TLS, Security at Network Layer-IPSec

, Host based Intrusion preventionSystems, Security Information Management, Network Session Analysis, SystemIntegrity Validation

 Unit IV - OsSecurity

Introduction to System Security, Server Security, OS Security, Physical Security,Introduction to Networks, Network packet Sniffing, Network Design Simulation.DOS/ DDOS attacks. Asset Management and Audits, Vulnerabilities and Attacks.Intrusion detection and Prevention Techniques

Paper No. XV: Laboratory Work Paper No. XII

Total Marks – 50
Practical : 4 lectures / week/perbatch

1. Write a program to demonstrate insertion, deletion, search and displaying of an element in an array.
2. Write a program to demonstrate sorting algorithm.(using any one of the set Techniques: bubble, insertion, selection)
3. Write a program to demonstrate operation performe donstack.
4. Program to convert in fix expression to post fix and infix to postfix.
5. Writeaprogram todemonstrateoperations onqueue.

6. Perform the following operation for demonstrating the insertion , updation anddeletion.

7. Using the referential integrity constraints

8. Writethequeryfor creatingtheusersandtheir role.

Paper No. XV: Laboratory Work Paper No. XII

Total Marks – 50

Practical : 4 lectures / week/perbatch

1. Design a Data base and create required tables. For e.g.Bank,CollegeDatabase

2. .Apply the constraints like Primary Key, Foreign key,NOTNULLtothetables.

3. Write a SQL statement for implementing ALTER ,UPDATEand DELETE.

4. Write the queries to implement the joins.

5. Write the query for implementing the following functions: MAX (), MIN (), AVG () and COUNT()

6. Write the query to implement the concept of Integrity constrains.

7. Write the query to create the views.

8. Perform the queries fortriggers.

9. Perform the following operation for demonstrating the insertion , updation and deletion. Using the referential integrity constraints

10. Write the query for creating the user sand their role.

Paper No. XV: Laboratory Work Paper No. XII

Total Marks – 50
Practical : 4 lectures / week/perbatch

1. Study of different wireless network components and features of any one of the Mobile SecurityApps.

2. StudyofthefeaturesoffirewallinprovidingnetworksecurityandtosetFirewallSecurityin windows.

3. Steps to ensure Security of any one webbrowser(Mozilla Firefox/GoogleChrome)

4. Study of different types of vulnerabilities for hacking a websites

5. Analysis the Security Vulner abilities ofMobile Security Apps.

6. Analysis the security vulner abilities of E-Mail Application

7. E-commerce services

8. WebApplications

PaperNo. XVIII   Project

Total Marks– 50

iii)   Submission of practical record book=20marks
iv) Submission of visit report=15 marks
iii) Viva-voce 15=marks

Annexure I

Standard of passing:

A. For B.Voc. programme total credits shall be 180 with 30 credits for each semester. There shall be 12 credits for theory and 18 credits for practical per semester.
B. Subject wise credits are mentioned in the concerned syllabus of every B.Voc. Program.
C. The standard of passing shall be 35 % where the student will have to score 18 marks out of 50, 14marks out of 40 and 4 marks out of 10.
D. Rules for ATKT are mentioned below:

I. Internal examination will be compulsory for all students. If the student is absent/fail inthe internal examination then he/she will have to clear the internal examination.HoweverATKT rules will be followed in respect of theory and practical papers only. Then thestudent is allowed to keep term in the third fifth semester even if he/she has failed in thethree less than three beads (ie. theory and practical) of passing each semester.However he/she shall have to clear all the papers of semester I & II before takingadmission to the fifth semester.

II. In the B.Voc. Part II, every student has to complete internship of concerned industry

Award of degree:

- B.Voc. is a six semester integrated course spread over the period of 3 years. The course of B.Voc. will be 3 years integrated course commencing from the years as mentioned below:
a. B.Voc. Part-I: Semester I & II- Diploma
b. B.Voc.Part-II: Semester III & IV-Advanced diploma
c. B.Voc. Part-III: Semester V & VI-B.Voc. Degree

- The candidate may take exit after one year of successful completion of the course. After successful completion of one year (Semester I & II) the candidate will get Diploma. After successful completion of two years (Semester III & IV), the candidate will get Advanced Diploma. The students those who have completed the entire three years (Semester V & VI) integrated course shall be awarded B.Voc. Degree programme, inclusive of Diploma and Advanced Diploma.

- The candidate admitted for direct second year or third year will get Class (First/Second/Passclass) as per their performance for B.Voc.

- **Scheme of mark:**

Grading chart:

A. Grading chart of 50 points:

Sr.No.	Marks Obtained	Numerical grade (grade point)	CGPA	Letter grade
1	Absent	0 (Zero)	-	-
2	0-17	0 (Zero)	0.0-4.99	F (Fail)
3	18-22	5	4.50-5.49	C (Satisfactory)
4	23-27	6	5.50-6.49	B (Average)
5	28-32	7	6.50-7.49	B+ (Good)
6	33-37	8	7.50-8.49	A (Very Good)
7	38-42	9	8.50-9.49	A+ (Excellent)
8	43-50	10	9.50-10.00	O (Outstanding)

Note:

i. Marks obtained 0.5 shall be rounded off to next higher digit.
ii. The SGPA & CGPA shall be rounded off to 2 decimal points.
iii. Marks obtained in 50 marks or 200 marks paper shall be converted to 100 marks.

Calculation of SGPA & CGPA

1. Semester Grade Point Average **(SGPA)**

SGPA= Σ (Course Credits X Grade Points Obtained) of a semester

Σ(course credits) of respective semester

2. Cumulative Grade Point Average **(CGPA)**

CGPA = Σ(Total Credits of A Semester X SGPA f Respective Semester) of all semesters

Σ (Total Course Credits) of all semester