**THEORETICAL ASSESSMENT**

**Class : 10 Time: 2 Hour Full Marks:50**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Unit** | **Type of Questions** | **Q. No.** | **Area** | **No. of Questions** | **Marks** |
| **1.** | **Short Questions** | **Group A (Short questions and Objective)10 Marks** | | | |
| **1.a.** | Computer Fundaments |  | 2 |
| **1.b** |
| **1.c** | Database Management System | 2 | 2 |
| **1.d** |
| **1.e** | Modular Programming in QBASIC | 1 | 1 |
| **1.f.** | C-Language | 1 | 1 |
| **Objectives** | **2**  **3** | Technical terms  Full Forms  (Both from Computer Fundaments) | 2  2 | 2  2 |
| **2.** | **Subjective** | **Group B**  **(Question Answer & Programs)-24 Marks** | | | |
| **4.a** | Networking and Tele communication | 1 | 2 |
| **4.b** | Ethical and Social Issues in ICT | 1 | 2 |
| **4.c** | Computer Security | 1 | 2 |
| **4.d** | E-commerce | 1 | 2 |
| **4.e** | Contemporary Technology | 1 | 2 |
| **4.f**  **4.g** | DBMS-Introduction  Creating database  Entering and Editing data | 22 | 4 |
| **4.h**  **4.i** | Querying database  Creating and using forms  Creating and printing reports | 22 | 4 |
| **5**  **6**  **7** | Output(Dry run) of the given program code  Debug a program  Analytical Question [Q.i,ii]  (based on the given program code) | 12  12  2 | 2  2  2 |
| **3.** | **Subjective** | **Group C**  **(Modular Programming in QBASIC & Programming in C)-16 Marks** | | | |
| **8** | Number System  i.ii. Conversion  iii.iv. Binary Calculation | 4X1 | 4 |
| **9. a,b,** | Write QBASIC program  (two question from the 2 section;)   1. Creating user-define function   Creating Sub program   1. Sequential data file handling | 2 | **8** |
| **10** | Write a C-Program  -Using IF statement  -Using a looping statement  (Any one out of two questions) |  | **4** |
|  | **Total** | **30** | **50** |

**EXTERNAL PRACTICAL ASSESSMENT**

**Time: 1 Hour Full Marks:25**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unit** | **Group/Area** | **Topics** | **No of Questions** | **Marks** |
| 2 | MS-Access (8 marks) | Structure of table and data entry | 12 | 2 |
| Query | 22 | 4 |
| Form/Report | 12 | 2 |
| 3 | Modular Programming in QBASIC (11 Marks) | Create a user defined function | 13 | 3 |
| Create a sub program | 13 | 3 |
| File Handling | 2 | 5 |
| 4 | Introduction to C language (6 marks) | if Statement | 13 | 3 |
| Looping Statement | 13 | 3 |
|  |  | Total | 10 | 25 |

**INTERNAL PRACTICAL ASSESSMENT**

**Full Marks:25**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Unit** | **Group/Area** | **Topics** | **No of Questions** | **Marks** |
| 2 | MS-Access | Project Work |  | 5 |
| Practical Exam: Create table/query/forms/report | 22 | 4 |
| 3 | Modular Programming in QBASIC | Project Work |  | 10 |
| 4 | Introduction to C language (6 marks) | Practical exam: if Statement/  Looping Statement | 3 | 6 |
|  |  | Total | 10 | 25 |

**THEORETICAL EVALUATION**

**Subject: Computer Science Full Marks:50**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Questions Planning and Mark Weight age Distribution** | | | | | | | | | | | | | | | | | |
| **Unit** | **Area/Unit** | **Weight age** | **Knowledge** | | | **Understanding** | | | **Application** | | | **High Ability** | | | **Marks Weight age** | | |
| **V S** | **S** | **L** | **V S** | **S** | **L** | **V S** | **S** | **L** | **V S** | **S** | **L** | **V S** | **S** | **L** |
| 1. | Computer Fundamental | 34 | 3 | 3 |  | 1 |  |  | 2 | 2 | 1 |  |  |  | 6 | 5 | 1 |
| 2. | Database management System | 42 | 2 | 2 |  |  |  |  |  | 2 |  |  |  |  | 2 | 4 |  |
| 3. | Programming in QBASIC | 61 | 1 |  |  |  | 2 |  | 2 |  |  |  |  | 2 | 3 | 2 | 2 |
| 4. | Introducing to C Language | 29 | 1 |  |  |  |  |  |  |  |  |  |  | 1 | 1 |  | 1 |
|  | **Total** | **170** | **7** | **5** |  | **1** | **2** |  | **4** | **5** | **1** |  |  | **3** | **12** | **11** | **4** |

**TYPES OF QUESTIONS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Types of Questions** | **Asked No.** | **Time Division** | **Full Marks** |
| Very Short Questions | 12 | 25 minutes | 12 |
| Short Questions | 11 | 35 minutes | 22 |
| Long Short Questions | 4 | 30 minutes | 16 |
| **Total** | **27** | **1 hour 30 minutes** | **50** |

**First Terminal Examination**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Periods** | **Teaching  Methods** | **Teaching  Materials** | **Evaluation  Techniques & Tools** | **Remarks** |
| 1 | **Computer Fundamentals**  **Networking and Telecommunication** Requirement of network-Hardware/software/devices  Communication media/protocols  Data communication mode/components Client and Server Types of Network LAN,MAN,WAN  Elements of network  Transmission Media- Guided ,Unguided  Internet and its services  LAN topologies/protocols  Network architecture-centralized, client server, peer to peer  Network devices-switch, hub ,router, bridge, modem, gateway  Repeater, Connector, Mode of communication -Simplex, half duplex, full duplex | 16 | Explanation, Discussion, Drawing, Slides | References books pictures  Multimedia  devices | Homework unit test viva drawings |  |
| 2 | **Ethical and Social issues in ICT** Introduction ,Computer Ethics,  Cyber bullying, Cyber law, Digital Citizenship Digital Footprint IT policy 2072/ETA Opportunities and threat in Social Media | 8 | Explanation, Discussion, slides | References books pictures  Multimedia  devices | Homework unit test viva drawings |  |
| 3 | **Number System** Introduction Base of a number system Types of Number System Conversion of Number system Binary Addition, Subtraction, Multiplication, Division Some basic terms related to number system | 10 | Explanation, Discussion, Drawing, Slides | References books pictures  Multimedia  devices | Homework unit test |  |
| 4 | **Programming Language Qbasic** Modular Programming,  Advantages of procedure, Main and Sub Module Types of Procedure: Sub Procedure and  Function Procedure Global and Local Variables, parameters and arguments Arguments pass by value and pass by reference Differentiate between built in function and user defined function Function /Procedure declaration  Define and call procedures(FUNCTION..END FUNCTION ,SUB...END SUB,CALL) Types of function and procedure  Use of def..fn function, declare function. and sub..end sub | 23 | Explanation, Discussion, Drawing, slides, practical lab | References books pictures  Multimedia  devices | Homework Unit test viva, practical file, practical test. |  |
|  | **Revision** | 10 | Discussion | Questions  collection | viva |  |
|  |  | 67 |  |  |  |  |

**For Practical exam**

Time: 1hrs F.M =25 P.M=10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | Qbasic (25 marks) | SUB..End SUB | 1+1+1 | 5X3 |
| Function..End Function | 1+1 | 5+5 |
|  |  | Total | 5 | 25 |

**Mid-Terminal Examination**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Per**  **iods** | **Teaching  Methods** | **Teaching  Materials** | **Evaluation  Techniques & Tools** | **Remarks** |
| 5 | **E-COMMERCE** Introduction  Technology used in E-Commerce  Traditional Commerce vs. E-Commerce Benefits and limitation of E-Commerce Types of E-Commerce E-Commerce in Nepal M-Commerce Online payment. | 9 | Explanation discussion | References books | Homeworks, Unit test and Viva |  |
| 6 | **Contemporary Technology** Cloud Computing AI Virtual Reality E-governance Mobile Computing IOT | 9 | Explanation Discussion, Newspaper | References books | Homeworks, Unit test and Viva |  |
| 7 | **Database management System** Introduction Advantages of database, DBMS, elements of database, Records, fields, data and data types, table, primary key,relation,attributes,fields,sorting,indexing,filtering,queries,form,report | 24 | Explanation Discussion and Practical lab | Computer  System | Homeworks, Unit test and Viva and practical test |  |
| 8 | **Computer Security** Introduction Hardware security/Software security Security Threats Malicious Codes Security Mechanism Antivirus Software | 7 | Explanation and Discussion | References books | Homeworks, Unit test and Viva |  |
|  | **Revision** | 10 | Discussion | Questions  collection | viva |  |
|  |  | 59 |  |  |  |  |

**For Practical exam**

Time: 1hrs F.M =25 P.M=10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | Ms-access  (10 marks) | Structure of Table and Data entry | 1+1 | 2+2 |
| Query | 1+1+1 | 2+2+2 |
| form/report | 1+1 | 3+2 |
| 2 | Qbasic  (15 marks) | Sub/Function… End Sub/Function | 1+1 | 5X2 |
|  |  | Total | 9 | 25 |

**Pre-Qualifying Examination**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Per**  **iods** | **Teaching  Methods** | **Teaching  Materials** | **Evaluation  Techniques & Tools** | **Remarks** |
| 9 | **Qbasic**  Sequential File Handling  Classification of Files  File modes  Creation of Sequential File in Output and Append mode, read data from file, add to the file, delete unnecessary records, use of input mode. | 22 | Explanation discussion and practical lab | References  books and Computer System | Home  work ,Unit  Test  and Viva |  |
| 10 | **Programming in C** Introduction Features /Structure of C program C tokens/Keywords in C language Data types in C Statements-simple and compound statements Operators and Expressions Input/output functions | 10 | Explanation discussion and practical lab | References  books and Computer System | Home work , Unit  Test  and Viva |  |
| 11 | **Control Structures In C Programming** Introduction Sequence Decision looping | 18 | Explanation discussion and practical lab | References  books and Computer System | Home work , Unit  Test and  Viva and presentation |  |
| 12 | **Project work Guidance** (algorithm, flowchart, coding, processing and control module) Menu base, modular concept ,data organization  in file and manipulate as per need ,cover page, preface, table of contents, theoretical aspects of the project, objectives, design the system and module, write the code, testing and debugging, get  the output and write the conclusion | 12 | Discussion and  Practical lab | Computer System | Viva , Presentation practical  test |  |
|  | **Revision** | 14 | question  collection + Student  Question | VIVA | Presentation , VIVA |  |
|  |  | 76 |  |  |  |  |

**For Practical exam**

Time: 1hrs F.M =25 P.M=10

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | Qbasic (10 marks) | SUB /FUNCTION… END SUB/ FUNCTION | 1+1+1 | 2+2+2 |
| File handling | 1+1 | 2+2 |
| 2 | C-programming (10 marks) | IF..Else Statement | 1+1 | 2+2 |
| Looping Statements | 1+1+1 | 2+2+2 |
| 3 | Ms-Access (5 marks) | Structure of table and data entry | 1 | 3 |
| Form/Report/Query | 1 | 2 |
|  |  | Total | 12 | 25 |