**THEORETICAL ASSESSMENT**

**Class : 9 Time: 2 Hour Full Marks:50**

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| --- | --- | --- | --- | --- | --- |
| **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 System |  | 2 |
| **1.b** |
| **1.c** | HTML & CSS |  | 2 |
| **1.d** |
| **1.e** | Internet and Social Media | 1 | 1 |
| **1.f.** | Cyber Security and Digital Citizenship | 1 | 1 |
| **Objectives** | **2**  **3** | Technical terms(2)  Full Forms(2)  (Both from Computer Fundaments) | 2  2 | 2  2 |
| **2.** | **Subjective** | **Group B (Question Answer & Programs)-24 Marks** | | | |
| **4.a** | Computer System | 12 | 2 |
| **4.b** | 12 | 2 |
| **4.c** | Web Technology | 12 | 2 |
| **4.d** | 12 | 2 |
| **4.e** | Internet and Social Media | 12 | 2 |
| **4.f** | Cyber security and Digital Citizenship | 12 | 2 |
| **4.g** | Block programming | 12 | 2 |
| **4.h**  **4.i** | Programming Concept  Python | 12  12 | 2  2 |
| **5**  **6**  **7** | Output (Dry run) of the given program code  Debug  Analytical Question(based on the given program code) | 12  12  2 | 2  2  2 |
| **3.** | **Subjective** | **Group C(16 Marks)**  **(Number system, HTML or CSS, Scratch and Python)** | | | |
| **8** | Number System  i.ii. Conversion iii.iv. Binary Calculation | 4X1 | 4 |
| **9** | HTML or CSS | 1X4 | 4 |
| **10** | Write scratch script using different components | 1 | 4 |
| **11** | Write a program in python  (Any one out of two questions) |  | 4 |
|  |  |  | **Total** | **30** | **50** |

**PRACTICAL ASSESSMENT/WORK**

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

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| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of quest.** | **Marks** |
| 1 | **Block Programming** | Students prepare a simple game or story-telling based project with the guidance of the teacher applies control, events, operator, variables, and sound components of scratch and publish the project on Scratch. | 1 | 6 |
| 2 | **HTML (5 marks)** | Develop simple webpage using notepad or similar tools including the features of html tags (basic and text formatting tags), lists, picture embedding, table and hyperlink. | 1 | 5 |
| 3 | **CSS (5marks)** | Demonstrate the use of inline and internal CSS (include it in basic text formatting tags) | 1 | 5 |
| 4 | **Programming Concept (python)** | Develop a simple real life project using Python programming and libraries such as calculators, mathematical operations, etc. | 1 | 9 |
|  |  | Total | 4 | 25 |

**Project work (Internal Assessment) [25]**

**First Term Examination**

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| **S.No** | **Topics** | **Periods** | **Teaching  methods** | **Teaching  materials** | **Evaluation  techniques & tools** | **Remarks** |
| 1 | **Computer Fundamentals** -Introduction to Computer -Working principle of computer with diagram -Features of Computer -Capabilities/Limitations of Computer -Advantages/Disadvantages of Computer -Application areas of computer | 12 | Explanation Discussion, Drawing | References books pictures devices | Home works ,  Unit test, Viva and drawings  presentation,  exit slip  Peer evaluation |  |
| 2 | **General Concept of Computer Programming** -Introduction -Qualities of Good Program -Programming and Programmer, Syntax -Programming Language -Language translator -Program design tools  algorithm and flowchart | 12 | Explanation, Discussion and  Practical Lab  \* if needed | References books and computer system | Home works , Unit test, Viva ,  Peer evaluation,  Presentation, |  |
| 3 | **Block Programming**  -Describe concept of block programming and its purpose.  -Demonstrate online or offline-based block programming and tools, their features, interfaces, and blocks.  -Construct simple applications using block-based programming languages and components of the MIT Scratch programming tools.  -Describe the concept of a micro bit and its applications.  -Define the concepts of Arduino and UNO. | 32 | Explanation, Discussion and  Practical Lab | References books and computer system | Evaluation of develop game and logics Quizzes  Presentation Develop project  Home works ,Unit test, Viva and Practical test And Practical file |  |
|  | Revision | 11 | Discussion | Question Collection | viva |  |
|  | Total | 67 |  |  |  |  |

**For Practical exam**

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

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| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | **Block Programming**  (25) | Create simple games using different components of Scratch | 1+1+1 | 5x3 |
| Show the working mechanism of Microbit and Arduino using an online simulator. | 1+1 | 5+5 |
|  |  | Total | 5 | 25 |

**Mid- Terminal Examination**

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| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Per**  **iods** | **Teaching  methods** | **Teaching  materials** | **Evaluation  techniques & tools** | **Remarks** |
| 4 | **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 | 16 | Explanation, Discussion, Drawing, Slides | References books pictures  Multimedia  devices | Homework unit test  Peer evaluation,  Presentation, |  |
| 5 | **Computer Hardware**  -Demonstrate the major input devices of a computer system.  -Explain the function and components of a computer system.  -Describe the basic concept of the mother board and its bus structure.  -Explain the concept of primary and secondary memory and its types and functions.  -Explain the common storage devices used in computer systems and their comparison.  -Demonstrate the major output devices: monitor, printer, and speaker.  -Explain the peripheral devices and demonstrate the different ports in a computer system. | 16 | Explanation Discussion, Drawing | References books pictures devices | Home works ,  Unit test, Viva and drawings  presentation,  exit slip  Peer evaluation |  |
| 6 | **HTML**  -Describe the concept of web technology.  -Define the web development life cycle. -Explain the concept of user interface (UI) and user experience (UX) in web design.  -Explain HTML and its tags.  -Demonstrate text formatting, an anchor, a list, a table, and an image tag on a web page.  -Apply the form and div tags to the web page. | 18 | Explanation Discussion, Computer System | References books pictures devices | Home works, Unit test, Viva and drawings.  Presentation of web pages |  |
|  | **Revision** | 9 | Discussion | Question Collection | VIVA |  |
|  | **Total** | 59 |  |  |  |  |

For Practical exam

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

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| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | HTML(25 marks) | Structure of HTML page | 1 | 3 |
| Formatting/inserting text , image, table, order and  unordered list | 1+1+1+1 | 4+4+4+4 |
| Apply form and div in HTML | 1+1 | 4+2 |
|  |  | Total | 7 | 25 |

**Second Terminal Examination**

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| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Periods** | **Teaching  methods** | **Teaching  materials** | **Evaluation  techniques & tools** | **Remarks** |
| 7 | **Internet and social media**  -Describe concept of WWW, web browser, search engine and URL  - Explain concept of remote login  -Describe email and its uses  - Describe the use of social media in different purpose in safety way  -Demonstrate video online meeting using online virtual tools  -Explain a blog and its features | 20 | Explanation Discussion. | References books pictures devices | Home works, Unit test, Viva and drawings. |  |
| 8 | **Computer Software** -Introduction -Define computer software and explain its types.  -Describe the open and proprietary software concepts.  -Compare the features of system software and application software.  -Define the mobile software and web applications. | 15 | Explanation Discussion, Practical Lab | References books pictures devices | Home works, Unit test, Viva and drawings. |  |
| 9 | **Cascading style sheets** -Introduction -Advantages of using CSS -Types of CSS, CSS syntax -CSS measurement units | 16 |  |  |  |  |
| 10 | **Programming Concept (python)**  -Draw a basic flow chart and algorithm to understand the programming logic.  -Explain the basic structure of a Python program with data types and variables.  -Describe the type of casting concept.  -Demonstrate the use of operators in Python, including arithmetic, relational, logical, and assignment operators. | 16 | Explanation Discussion and Practical Lab. | References books and  Computer System. | Home works, Unit test, Viva and drawings.  Rating Scale  Demo  Presentation |  |
|  | **Revision** | 9 | Discussion | Question  collection | viva |  |
|  | **Total** | 76 |  |  |  |  |

For Practical exam

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

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| --- | --- | --- | --- | --- |
| **S.No** | **Group/Area** | **Topic** | **No of questions** | **Marks** |
| 1 | **Cascading style sheets** | Develop simple webpage using notepad or similar tools including the features of html tags and demonstrate the use of inline and internal CSS (include it in basic text formatting tags) | 1 | 10 |
| 2 | **Programming Concept (python)** | Demonstrate the use of I/O statements. Demonstrate the concept of constant, variable and data types.  Demonstrate the use of various operators. | 1+1+1 | 5+5+5 |
|  |  | Total | 4 | 25 |

**Annual Examination**

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| --- | --- | --- | --- | --- | --- | --- |
| **S.No** | **Topics** | **Periods** | **Teaching  methods** | **Teaching  materials** | **Evaluation  techniques & tools** | **Remarks** |
| 11 | **Cyber Security and Digital Citizenship**  -Describe the concept of cyber security and cybercrime.  -Explore the prevention methods for cybercrime.  -Describe the safe browsing techniques.  -Define the concept of a digital citizen.  -List good netiquette and online behaviours.  -Clarify the concept of digital footprints, privacy, and data security issues in online | 15 | Explanation Discussion, Drawing | References books pictures devices | Home works, Unit test, Viva and drawings. |  |
| 12 | **Advance programming (python)**  -Demonstrate the conditional statement in Python.  -Demonstrate iteration on Python  -Apply list and dictionary in programming.  -Demonstrate string, numeric and mathematical functions in python. | 25 | Explanation Discussion, Practical lab. | References books pictures devices | Home works, Unit test, Viva and  practical lab test. |  |
|  |
| 13 | **Project Work**  a) Students prepare a simple game or story-telling based project with the guidance of the teacher applies control, events, operator, variables, and sound components of scratch and publish the project on Scratch.  b) Develop your personal web page using suitable tools (e.g. Dreamweaver, Chrome Dev Tools or similar) , Top of Form  including <list>,<A>, <img>, <table>, <form>, <div>  html tags, and internal and  Inline CSS.  c) Develop a simple real life project using Python programming and libraries such as calculators, mathematical operations, etc. | 15 | Discussion practical lab | Computer  System Projects Reference | Practical  and VIVA |  |
|  | Revision | 8 | Discussion | Question Collection, Students Question | Viva |  |
|  |  | 63 |  |  |  |  |