**Content Weightages for PSHD - NHSP**

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| **Sr. No** | **Core Areas Division** | **% Weight** |
| 1- | Quantitative | 05% |
| 2- | General knowledge | 05% |
| 3- | Subject Trade Specific | 90% |
|  | **Total** | **100%** |

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| **Sr. No** | **Designation of the Post** | **Criteria and Subject Division** | **Subject**  **% Weight** |

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| **01** | **Team Lead Software Development** | **Overall Percentage** | **90%** |
| Software Development   * Software Development Life Cycle * Monolithic Architecture * Microservices Architecture * Differences Between Monolithic and Microservices Architecture * Scrum Master * Requirement Gathering and Tasking * Git For Source Control | 10% |
| Database Systems   * RDBMS * Basic Queries * Functions * Store procedures * Keys * Relation’s * Scaling of Database * Failover and Disaster Management * Temp Tables vs CTE * Normalization * Datatypes * Schema Management * Table Standards and Logging | 20% |
| Development Expertise C# , .Net Core , Angular   * Difference Between .Net Framework and .Net Core * Service Registration Life cycle in .Net Core * Classes and Interfaces * Couple and Decouple classes * Constructor and Constructor Overloading * Param, Ref, Out Modifiers * Access Modifiers * Primitive Types and Non-Primitive Types * Dependency Injection * Authentication and Authorization * Cache / Redistributable Cache * Entity Framework vs ADO.Net * Load Balancing * Middleware | 15% |
| Angular   * Angular Modules * Components * Decorators * Directives * Life Cycle Hooks * Communication between components * Routing * Data binding * Forms types * Lazy Loading / Pre-Loading * Reuseable components * Micro Frontend * Service Worker * Interceptor * Services | 15% |
| Programming Fundamentals   * Variables * Data Types * Basic Syntax * Structure (Stack, Queue, Array, List) * Iterations (Loops) * Conditions * Functions | 20% |
| Object Oriented Concepts   * Classes * Objects * Methods * Attributes * Encapsulation * Abstraction * Inheritance * Polymorphism * Composition * Coupling | 10% |
| **02** | **Senior Software Developer** | **Overall Percentage** | **90%** |
| Software Development   * Software Development Life Cycle * Monolithic Architecture * Microservices Architecture | 10% |
| Database Systems   * RDBMS * Basis Queries * Functions * Store procedures * Keys * Relation’s * Temp Tables vs CTE * Normalization | 20% |
| Development Expertise C# , .Net Core , Angular   * Difference Between .Net Framework and .Net Core * Service Registration Life cycle in .Net Core * Classes and Interfaces * Couple and Decouple classes * Constructor and Constructor Overloading * Param, Ref, Out Modifiers * Access Modifiers * Primitive Types and Non-Primitive Types * Dependency Injection * Authentication and Authorization * Cache / Redistributable Cache * Entity Framework vs ADO.Net * Load Balancing * Middleware | 15% |
| Angular   * Angular Modules * Components * Decorators * Directives * Life Cycle Hooks * Communication between components * Routing * Data binding * Forms types * Lazy Loading / Pre-Loading * Reuseable components * Micro Fronted * Service Worker * Interceptor * Services | 15% |
| Programming Fundamentals   * Variables * Data Types * Basic Syntax * Structure (Stack, Queue, Array, List) * Iterations (Loops) * Conditions * Functions | 20% |
| Object Oriented Concepts   * Classes * Objects * Methods * Attributes * Encapsulation * Abstraction * Inheritance * Polymorphism * Composition * Coupling | 10% |
| **03** | **Software Developer** | **Overall Percentage** | **90%** |
| Programming Fundamentals   * Variables * Data Types * Basic Syntax * Structure (Stack, Queue, Array, List) * Iterations (Loops) * Conditions * Functions | 30% |
| Database Systems   * RDBMS * Basic Queries * Functions * Store procedures * Keys * Relation’s * Scaling of Database * Failover and Disaster Management * Temp Tables vs CTE | 15% |
| Object Oriented Programming   * Classes * Objects * Methods * Attributes * Encapsulation * Abstraction * Inheritance * Polymorphism * Composition * Coupling | 15% |
| .NET C#   * Constructor and Constructor Overloading * Param, Ref, Out Modifiers * Access Modifiers * Controller * Model * View * Services * DTOs * DB Context * String Interpolation * Collections * Asynchronous Task Composition * Primitive Types and Non-Primitive Types * Upcasting and Down casting | 15% |
| Angular   * Role of NodeJS in Angular * Angular Modules * Components * Decorators * Directives * Life Cycle Hooks * Selector * Template * Child to Parent and Parent to Child Communication * Routing * Data binding * Forms * Lazy Loading * Pre-Loading | 15% |
| **04** | **Graphic Designer** | **Overall Percentage** | **90%** |
| Adobe Photoshop   * raster images Editor * Toolbar * Image mode (bitmape, greyscale etc.) * Transform image * Color * Layers * Type (texts, Paragraphs) * Select * Filter * View * Alignment | 25% |
| Illustrator   * Vector drawing Editor * Toolbar * Align * Path * Envelop * Type (texts, Paragraphs) * Select * Layers | 20% |
| Corel Draw   * Vector drawing Editor * Toolbar * Align * Path * Envelop * Type (texts, Paragraphs) * Select * Power Clip | 20% |
| Modeling   * 2D/3D Concept * 3D software (#DS Max, Cinema4D etc.) * Polygon * Subdivision Surface * Spline Shapes * Texture Mapping * Lights | 15.% |
| Rendering, and Animation   * Image Resolution * Frame Render * External Renderers * Keyframe Animation * Motion Capture * Rigging | 10% |
| **05** | **Senior Data Analyst** | **Overall Percentages** | **90%** |
| Database Management | 10% |
| SPSS | 30% |
| Statistical Analysis | 10% |
| Research Methods | 10% |
| Data Structures and Algorithms | 10% |
| System Programming | 10% |
| Numerical Computing | 10% |
| **06** | **Data Analyst** | **Overall Percentages** | **90%** |
| Database Management (SQL)  Basic commands such as Joins  Group by Order by Select | 10% |
| Statistical Analysis  Excel (vlookup) | 10% |
| Research Methods  Data sampling, population size, types of research methods | 10% |
| Report Writing Skills | 10% |
| MS-Office (Excel, PowerPoint, Word) | 30% |
| English | 20% |
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| **07** | **Team Lead Software Quality Assurance** | **Overall Percentages** | **90%** |
| Quality Assurance & Software Testing | 10% |
| Software Testing Life Cycle (STLC)   * Requirement Analysis * Test Planning * Test Case Development * Test Environment Setup * Test Execution * Test Cycle Closure | 20% |
| Defect/Bug tracking tool:   * Jira | 10% |
| Software Testing Types   * Manual Testing   Types of Manual Testing:   * White Box Testing * Black Box Testing * Gray Box Testing   Types of Black Box Testing   * Functional Testing * Non-Functional Testing   Types of Functional Testing   * Smoke Testing * Sanity Testing * Regression Testing * Adhoc Testing * Alpha Testing * Beta Testing | 30% |
| Different Levels of Software Testing:   * Unit Testing * Integration Testing * System Testing * Acceptance Testing | 20 % |
| Testing Throughout Software Life Cycle | 10% |
| **08** | **Software Quality Assurance Officer** | **Overall Percentages** | **90%** |
| Different Levels of Software Testing   * Unit Testing * Integration Testing * System Testing * Acceptance Testing | 20% |
| Software Testing Types:   * Manual Testing   Types of Manual Testing:   * White Box Testing * Black Box Testing * Gray Box Testing   Types of Black Box Testing   * Functional Testing * Non-Functional Testing   Types of Functional Testing   * Smoke Testing * Sanity Testing * Regression Testing * Adhoc Testing * Alpha Testing * Beta Testing | 30% |
| Software Testing Life Cycle (STLC)   * Requirement Analysis * Test Planning * Test Case Development * Test Environment Setup * Test Execution * Test Cycle Closure | 20% |
| Quality Assurance & Software Testing | 20% |
| **09** | **Senior Android Developer** | **Overall Percentages** | **90%** |
| Programming Fundamentals   * Variables * Functions * Data Types * Basic Syntax * Structure (Stack, Queue, Array, List) * Iterations (Loops) * Conditions | 15% |
| Object Oriented Programming   * Classes * Objects * Methods * Attributes * Encapsulation * Abstraction * Inheritance * Polymorphism * Composition | 15% |
| Android Core:   * Introduction to Android Development * Android Project Structure * Activity and Fragments * Intent * Broadcast Receiver * Content Providers * Intents and Intent Filters * User Interface (UI) * RecyclerView and Adapters * AsyncTask * Modern Android Development (MAD) Skills * Working with Data (SharedPreferences, SQLite, Room) * Networking (HTTP, REST APIs, Retrofit) * Background Tasks (Coroutines, Services, WorkManager) * Permissions and Security | 30% |
| Kotlin:   * Kotlin basics and syntax * Variables and Data Types * Operators and Expressions * Control Flow Statements (if, when, loops) * Arrays and Collections * Coroutines for asynchronous programming * Extension functions * Null safety * Data classes and Sealed classes * Dependency Injection | 15% |
| Java:   * Java program structure (classes, methods, main method) * Variable declaration and initialization * Type casting and type promotion * Control Flow Statements * Arrays and Strings * Exception Handling | 15% |
| **10** | **Android Developer** | **Overall Percentages** | **90%** |
| Programming Fundamentals   * Variables * Functions * Data Types * Basic Syntax * Structure (Stack, Queue, Array, List) * Iterations (Loops) * Conditions | 15% |
| Object Oriented Programming   * Classes * Objects * Methods * Attributes * Encapsulation * Abstraction * Inheritance * Polymorphism * Composition | 15% |
| Android Core:   * Introduction to Android Development * Android Project Structure * Activity and Fragments * Intent * Broadcast Receiver * Content Providers * Intents and Intent Filters * User Interface (UI) * RecyclerView and Adapters * AsyncTask * Modern Android Development (MAD) Skills * Working with Data (SharedPreferences, SQLite, Room) * Networking (HTTP, REST APIs, Retrofit) * Background Tasks (Coroutines, Services, WorkManager) * Permissions and Security | 30% |
| Kotlin:   * Kotlin basics and syntax * Variables and Data Types * Operators and Expressions * Control Flow Statements (if, when, loops) * Arrays and Collections * Coroutines for asynchronous programming * Extension functions * Null safety * Data classes and Sealed classes * Dependency Injection | 15% |
| Java:   * Java program structure (classes, methods, main method) * Variable declaration and initialization * Type casting and type promotion * Control Flow Statements * Arrays and Strings * Exception Handling | 15% |
| **11** | **Database Administrator** | **Overall Percentages** | **90%** |
| Data and Database Administration | 15% |
| Client-Server Database | 15% |
| Data Warehousing | 15% |
| Managing Multiuser Databases | 15% |
| Advanced SQL | 15% |
| Managing Databases with Oracle | 15% |
| **12** | **CCTV / Hardware Technician** | **Overall Percentages** | **90%** |
| ICT Knowledge | 30% |
| CCTV / Network Knowledge/System Hardware | 25% |
| Network Monitoring & Reporting | 25% |
| MS Windows & MS Office Knowledge | 10% |

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| **Sr. No** | **Designation of the Post** | **Criteria and Subject Division** | **Subject**  **% Weight** |

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| **13.** | **Data Centre Specialist** | **Overall Percentage** | **60%** |
| Machine Learning & Artificial Intelligence | 10% |
| Advance Network Architecture (STP, VPN, Tunnel, NGFW,OSPF, BGP, MPLS and SDWAN) | 10% |
| Cloud Infrastructure Architect (Azure, AWS and Hadoop) | 10% |
| Python & Dev Ops | 10% |
| Datacenter Planning, Designing, implementation and monitoring | 10% |
| Advance Linux and Microsoft server administration | 10% |