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## GLH Scheme: Unit 17 Program Design, Production and Testing

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Hour	Topic
1	Introduction to Unit 17: <i>Program Design, Production and Testing</i>
2 & 3	17.2.1 Program Specification: <ul style="list-style-type: none"><li>• Problem definition</li><li>• Defining inputs, outputs and processing requirements.</li></ul>
4 & 5	17.2.1 Program Specification: <ul style="list-style-type: none"><li>• Evaluating a specification against the original requirements.</li></ul>
6 & 7	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Designing input and output.</li></ul>
8 & 9	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Structured program design methods</li></ul>
10 & 11	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Designing input and output screens and input validation</li><li>• Using structured design methods.</li></ul>
12 to 20	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Designing processes using Structured English, flowcharts or program structure charts, event-action charts, event sequence diagrams and decision tables.</li></ul>
21 & 22	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Designing data structures.</li></ul>
23 to 25	17.2.2 Program Design: <ul style="list-style-type: none"><li>• Designing file structures and file organisation</li></ul>
26 to 30	17.2.3 Coding: <ul style="list-style-type: none"><li>• Revision of chosen programming language covering data types, variable and constant declarations, data structures, control structures, modularity, operators, input, output, file handling, string manipulation, annotating program listings.</li></ul>
31 to 36	17.2.3 Coding: <ul style="list-style-type: none"><li>• Implementation of designs into code.</li></ul>

37 & 38	17.2.4 Planning a Test Strategy: <ul style="list-style-type: none"> <li>Defining valid, invalid and boundary input data</li> <li>Finding all paths through a program</li> <li>Defining all user operations.</li> </ul>
39 & 40	17.2.4 Planning a Test Strategy: <ul style="list-style-type: none"> <li>Predicting expected results.</li> </ul>
41 & 42	17.2.5 Testing: <ul style="list-style-type: none"> <li>Recording the results of testing</li> <li>Test programs already designed and coded.</li> </ul>
43 & 44	17.2.6 Technical Documentation: <ul style="list-style-type: none"> <li>Contents and how to put them together</li> <li>Prepare technical documentation for programs already designed, coded and tested.</li> </ul>
45 & 46	17.2.7 Program Review and Evaluation: <ul style="list-style-type: none"> <li>Comparing final program against original requirements using pre-designed programs and those designed by candidates</li> <li>Evaluating methods used to design pre-written programs and those designed by candidates.</li> </ul>
47 & 48	17.2.7 Program Review and Evaluation: <ul style="list-style-type: none"> <li>Evaluating user interface for ease of use using pre-written programs and those designed by candidates</li> <li>Analysing the results of testing to establish quality of program.</li> </ul>
49 & 50	17.2.1 to 17.2.7 Program Design, Production and Testing: <ul style="list-style-type: none"> <li>Short case study.</li> </ul>