

BMIT2013 Exam Scope (202405)

Format : 4 Questions (each 25 marks, with sub-questions).

Duration: 2 hours

Chapter	Scope (Theory)	Scope (Coding)
1. Introduction	All	None
2. HTML	<ul style="list-style-type: none"> • Differences between: 2A <ul style="list-style-type: none"> ◦ Ordered list ◦ Unordered list ◦ Description list • Differences between: 2A <ul style="list-style-type: none"> ◦ Absolute path ◦ Relative path • Identify absolute and relative path to a page based on a given file and folder structure (diagram). • Suggest appropriate input controls for form fields based on a given scenario. 2C <ul style="list-style-type: none"> ◦ Textbox ◦ Textarea ◦ Checkbox ◦ Radio button list ◦ Single-selection list ◦ Checkbox list ◦ Multi-selection list ◦ Password field ◦ Slider ◦ Spinner ◦ Date picker ◦ Time picker ◦ Color picker ◦ File picker <p>** HTML codes <u>NOT</u> required.</p>	<ul style="list-style-type: none"> • Write HTML codes to construct: 2A <ul style="list-style-type: none"> ◦ Ordered list → ol and li elements. ◦ Unordered list → ul and li elements. ◦ Description list → dl, dt and dd elements. • Write HTML codes to construct table: 2B <ul style="list-style-type: none"> ◦ Elements → table, tr and td. ◦ Attributes → rowspan and colspan. <p>** Other table elements and attributes <u>NOT</u> cover.</p>
3. CSS	<ul style="list-style-type: none"> • Differences between: 3A <ul style="list-style-type: none"> ◦ Inline CSS ◦ Embedded CSS ◦ External CSS <p>** CSS codes <u>NOT</u> required.</p> <ul style="list-style-type: none"> • Differences between: 3A <ul style="list-style-type: none"> ◦ Color names ◦ RGB colour values ◦ HEX colour values • Their advantages and disadvantages. <p>** CSS Codes <u>NOT</u> required.</p>	None
4. JS	<ul style="list-style-type: none"> • Differences between: 4A <ul style="list-style-type: none"> ◦ Inline JS ◦ Embedded JS ◦ External JS <p>** JS codes <u>NOT</u> required.</p> <ul style="list-style-type: none"> • Examples of JS / jQuery events: 4B <ul style="list-style-type: none"> ◦ Moving the mouse over an element (e.g. image) ◦ Selecting a radio button or checkbox ◦ Clicking on an element (e.g. button) <p>** JS codes <u>NOT</u> required.</p>	None

5. PHP	<ul style="list-style-type: none"> • 3 general data types in PHP: 5A <ul style="list-style-type: none"> ◦ Scalar: Integer, Float, String and Boolean → Contains a single value ◦ Compound: Array and Object → Contains more than one value ◦ Special: Resource and Null → Neither scalar nor compound but they have special meaning • Loose Data Type: 5A <ul style="list-style-type: none"> ◦ Definition ◦ Example ◦ Advantages ◦ Disadvantages • Differences between: 5B <ul style="list-style-type: none"> ◦ Indexed array → numeric index ◦ Associative array → string key • Example • Differences between: 5C <ul style="list-style-type: none"> ◦ include ◦ require ◦ include_once ◦ require_once • Advantages of importing files using include or require • What is and why we need a sticky form? 5C 	<ul style="list-style-type: none"> • Write simple PHP codes to demonstrate loose data type. For example: 5A <pre>\$a = 123; // \$a is integer \$a = 'A'; // \$a is string now</pre> • Write simple PHP codes to demonstrate differences between indexed array and associative array. For example: 5B <pre>\$a = ['Apple', 'Banana', 'Coconut',]; // \$a is indexed array</pre> <pre>\$b = ['APP' => 'Apple', 'BNN' => 'Banana', 'CCN' => 'Coconut',]; // \$b is associative array</pre>
6. Database	<ul style="list-style-type: none"> • Advantages of PDO (PHP Data Object). • Advantages of prepared statement and parameterized query. • Differences between (in words): <ul style="list-style-type: none"> ◦ fetchAll() ◦ fetch() ◦ fetchColumn() • What is a database transaction? • Database security practices (remember at least 3 points). 	<ul style="list-style-type: none"> • Given \$db and a database table (ERD), write basic PDO and SQL codes to: <ul style="list-style-type: none"> ◦ SELECT all records ◦ SELECT one record ◦ SELECT one single value (e.g. COUNT) ◦ INSERT one record ◦ UPDATE one record ◦ DELETE one record • Involve only the following functions: <ul style="list-style-type: none"> ◦ query() ◦ prepare() ◦ execute() ◦ fetchAll() ◦ fetch() ◦ fetchColumn() • Refer to code examples given in Chapter 6 slide, Exam Scope section.
7. Security	<ul style="list-style-type: none"> • Input validation vs. input sanitization (differences + examples). • Suggest input validations for given data or input fields (refer to example given in Chapter 7 slide). • Output coding (definition). • Stateless protocol (definition). • Session vs. cookie (differences + usage examples). • Authentication vs. authorization (differences + examples). 	None

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| | <ul style="list-style-type: none">● Password hashing (definition).● Examples of password hashing algorithms:<ul style="list-style-type: none">○ Basic: MD5, SHA1○ Advanced: SHA256, BCRYPT, ARGON2● Key points of password hashing.● Enforce password strength or strong password.
● Validating uploaded files.● File upload security practices (remember at least 3 points). |
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