**Section C: Physical landscapes in the UK**

**River processes and landforms**

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| **1a. Landscape** – an extensive area of land regarded as being visually and physically distinct as a result of the action and interaction of natural and human factors.  **Relief** – | **1b.** The wide range of rock type in the UK explains the varied landscapes found in the country.  The **Tees-Exe line** is | | **2. Drainage basin –**  .  **S**  **T**  **C**  **W**  **M** | |
| **3.** The **long profile** of a river is the gradient of a river from source to mouth. A **concave shape** is the ideal **long profile**. The **long profile** of a river can typically be divided into three sections; the  U  M  L  A **cross profile** of a river is  Typical features  **U**  **M**  **L** | | **4a.** There are **3** **fluvial processes**:   * Erosion (x4) * Transportation (x4) * Deposition (x1)   **Erosion:**  **Transportation:**  **Deposition** takes place when the river no longer has the \_\_\_\_\_\_\_\_\_\_\_ to carry the sediment. | | **5. IS**  **W**  **G**  **M**  **Riffles** are shallow turbulent portions whereas **pools** are deep efficient portions of the river. These lead to the development of meanders.  **OBL**  A **floodplain** is  They are formed by migration of meanders (lateral erosion) which in turn erodes the valley side. The extent of the erosion is marked by a \_\_\_\_\_\_\_\_.line. The deposition of silt during times of flood builds up a layer of **fertile alluvium**.  **L**  **E** |

**River flooding and management**

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| **1a. Flooding** is | | **1b.** Both **physical** and **human** factors increase flood risk. Flood risk increases when stores of water (wetlands, forests) are removed meaning more water will end up in the river channel. In addition flood risk increases when surface runoff is increased. | | | |
| **1c.** A **river flood** occurs  . | | **2a. 3 Physical factors**: | | | **2b. 3 Human factors**: |
| **3a.** A **hydrograph** is  **Lag time** is | |
| **3b.** The shape of a hydrograph is affected by rainfall and drainage basin characteristics. | | | | | **4a.** When considering flood management options **costs** need to be weighed against the **benefits**:  **Costs** – financial cost & impact on the environment.  **Benefits** – financial savings made by preventing the flood & environmental improvements. |
| **Characteristic** | **Short lag time** | | **Long lag time** | |
| **Basin size** |  | |  | |
| **Rock type** |  | |  | |
| **Land use** |  | |  | |
| **Relief** |  | |  | |
| **Soil moisture** |  | |  | |
| **Rainfall intensity** |  | |  | |
| **4b. Hard engineering** involves using | | | | | |
| **4c Dams & reservoirs**:   * **Channel straightening** * **Embankments** * **Flood relief channels** | | | | | |
| **5a. Soft engineering** involves working with | | | | | |
| **5b. Afforestation**: | | | | **5c. Wetlands and flood storage areas**. | |
| **5d. Floodplain zoning**: | | | | **5e. River restoration**: | |
| **5f. Preparing for floods**: | | | | **6. Banbury**  **HE features**  **SE features** | |