Luboš Popelák, 394237

2. ročník, B-GK-GEOG (FG)

17. 11. 2012, Brno

Hydrologie

**Cvičení 8 – Vodní stavy toku…**

**Zadání:**

Zo zadaných údajov zostrojte chronologickú čiaru vodných stavov a čiaru prekročenia denných vodných stavov a zistite hodnoty M – denných vodných stavov pre M = 30, 90, 150, 210, 270, 330, 364 dní.

**Vypracování:**

Tab. 1 Vodní stavy toku na stanici v hydrologickém roku 1952/1953

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | XI | XII | I | II | III | IV | V | VI | VII | VIII | IX | X |
| 1 | 116 | 121 | 95 | 122 | 117 | 156 | 130 | 105 | 98 | 112 | 96 | 86 |
| 2 | 111 | 113 | 100 | 110 | 116 | 133 | 135 | 103 | 95 | 133 | 92 | 86 |
| 3 | 116 | 110 | 94 | 105 | 115 | 150 | 134 | 102 | 95 | 126 | 91 | 86 |
| 4 | 140 | 113 | 97 | 102 | 123 | 187 | 132 | 105 | 93 | 109 | 91 | 84 |
| 5 | 120 | 110 | 97 | 96 | 120 | 203 | 130 | 102 | 94 | 105 | 91 | 89 |
| 6 | 115 | 105 | 96 | 97 | 119 | 164 | 133 | 99 | 90 | 118 | 86 | 89 |
| 7 | 125 | 101 | 97 | 92 | 104 | 146 | 181 | 97 | 93 | 122 | 90 | 100 |
| 8 | 116 | 102 | 98 | 97 | 98 | 146 | 136 | 102 | 97 | 138 | 89 | 93 |
| 9 | 115 | 103 | 95 | 93 | 98 | 140 | 120 | 102 | 91 | 123 | 89 | 96 |
| 10 | 116 | 106 | 97 | 94 | 102 | 151 | 115 | 100 | 97 | 102 | 88 | 87 |
| 11 | 114 | 105 | 95 | 94 | 96 | 145 | 113 | 98 | 120 | 110 | 91 | 89 |
| 12 | 113 | 106 | 96 | 95 | 102 | 136 | 115 | 102 | 101 | 106 | 96 | 95 |
| 13 | 111 | 107 | 85 | 104 | 94 | 142 | 115 | 128 | 96 | 104 | 100 | 89 |
| 14 | 110 | 106 | 94 | 97 | 93 | 148 | 115 | 107 | 91 | 104 | 116 | 89 |
| 15 | 109 | 107 | 85 | 96 | 92 | 142 | 123 | 125 | 109 | 101 | 98 | 85 |
| 16 | 107 | 103 | 85 | 94 | 99 | 140 | 127 | 110 | 103 | 100 | 94 | 84 |
| 17 | 104 | 97 | 91 | 93 | 104 | 144 | 130 | 145 | 99 | 101 | 90 | 85 |
| 18 | 107 | 103 | 90 | 96 | 102 | 143 | 131 | 124 | 93 | 101 | 90 | 84 |
| 19 | 111 | 100 | 91 | 96 | 103 | 140 | 119 | 112 | 130 | 100 | 88 | 86 |
| 20 | 192 | 96 | 79 | 97 | 105 | 140 | 117 | 105 | 104 | 99 | 88 | 86 |
| 21 | 165 | 100 | 85 | 103 | 111 | 128 | 115 | 102 | 102 | 95 | 100 | 84 |
| 22 | 144 | 100 | 91 | 104 | 122 | 131 | 112 | 103 | 104 | 105 | 94 | 84 |
| 23 | 135 | 97 | 85 | 107 | 120 | 133 | 109 | 100 | 97 | 96 | 94 | 84 |
| 24 | 128 | 102 | 85 | 147 | 122 | 133 | 106 | 100 | 236 | 97 | 91 | 83 |
| 25 | 123 | 99 | 87 | 126 | 126 | 127 | 104 | 100 | 135 | 95 | 90 | 83 |
| 26 | 120 | 99 | 89 | 116 | 135 | 140 | 103 | 101 | 114 | 95 | 90 | 86 |
| 27 | 114 | 98 | 77 | 105 | 144 | 132 | 102 | 110 | 113 | 95 | 88 | 86 |
| 28 | 117 | 97 | 86 | 110 | 128 | 166 | 102 | 127 | 122 | 97 | 88 | 85 |
| 29 | 153 | 100 | 180 |  | 122 | 160 | 104 | 107 | 108 | 96 | 86 | 83 |
| 30 | 125 | 98 | 170 |  | 142 | 136 | 103 | 104 | 107 | 96 | 87 | 81 |
| 31 |  | 97 | 139 |  | 180 |  | 114 |  | 107 | 97 |  | 85 |

Graf č. 1 Chronologická čára denních vodních stavů řeky

Tab. 2 Četnost výskytu vodních stavů na řece

|  |  |  |  |
| --- | --- | --- | --- |
| Pořadí intervalu | Interval (od – do) |  Absolutní četnost | Kumulativní četnost |
| 1 | 240,0 - 231,8 | 1 | 1 |
| 2 | 231,8 - 223,4 | 0 | 1 |
| 3 | 223,4 - 215,1 | 0 | 1 |
| 4 | 215,1 - 206,7 | 0 | 1 |
| 5 | 206,7 - 198,3 | 1 | 2 |
| 6 | 198,3 - 190,0 | 1 | 3 |
| 7 | 190,0 - 181,6 | 1 | 4 |
| 8 | 181,6 - 173,2 | 3 | 7 |
| 9 | 173,2 - 164,9 | 3 | 10 |
| 10 | 164,9 - 156,5 | 2 | 12 |
| 11 | 156,5 - 148,1 | 4 | 16 |
| 12 | 148,1 - 139,8 | 19 | 35 |
| 13 | 139,8 - 131,4 | 17 | 52 |
| 14 | 131,4 - 123,0 | 20 | 72 |
| 15 | 123,0 - 114,7 | 38 | 110 |
| 16 | 114,7 - 106,3 | 38 | 148 |
| 17 | 106,3 - 97,9 | 87 | 235 |
| 18 | 97,9 - 89,6 | 82 | 317 |
| 19 | 89,6 - 81,2 | 45 | 362 |
| 20 | 81,2 - 73,0 | 3 | 365 |

Graf 2 Čára překročení denních vodních stavů toku

Tab. 3 Hodnoty M-denních vodních stavů řeky

|  |  |
| --- | --- |
| M | Vodní stav (cm) |
| 30 | 140 |
| 90 | 119 |
| 150 | 107 |
| 210 | 101 |
| 270 | 96 |
| 330 | 88 |
| 364 | 79 |