**Name: Muhammad Uzair**

**Roll No. L1F18BSCS0311**

**Section - F**

**Apply Prim’s algorithm on the following graph and show all the steps what are needed to be done, starting vertex is A {solution requird in table format]**



|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** |
|  | **0/nill** | **Inf/nill** | **Inf/nill** | **Inf/nill** | **Inf/nill** | **Inf/nill** | **Inf/nill** | **Inf/nill** |
| **A** | **X** | **Inf/nill** | **Inf/nill** | **4/A** | **4/A** | **Inf/nill** | **Inf/nill** | **Inf/nill** |
| **D** | **X** | **4/D** | **Inf/nill** | **X** | **2/D** | **2/D** | **Inf/nill** | **Inf/nill** |
| **E** | **X** | **4/D** | **2/E** | **X** | **X** | **1/E** | **4/E** | **Inf/nill** |
| **F** | **X** | **4/D** | **2/E** | **X** | **X** | **X** | **4/E** | **4/F** |
| **C** | **X** | **4/D** | **X** | **X** | **X** | **X** | **4/E** | **4/F** |
| **B** | **X** | **X** | **X** | **X** | **X** | **X** | **4/E** | **4/F** |
| **G** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **4/F** |
| **H** | **X** | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

**Total: 21**

**Apply Krushkal’s algorithm on the following graph and show all the steps what are needed to be done, first show your edge selction order then apply all that work on the graph. Write every edge in alphabetical order [A to B edge, undirected you can write it AB(3) or BA(3) write it AB(3)]**

A B C D E F G H I J

A B C D E F G HI J HI(1)

A BC D E F G HI J BC(2)

A BCD E F G HI J CD(2)

ABCD E F G HI J AB(3)

ABCD E F G HIJ IJ(3)

ABCD E F GHIJ GH(4)

ABCD E FGHIJ FG(7)

ABCD EFGHIJ EF(8)

ABCDEFGHIJ BE(9)

**Total: 39**