

|  |  |  |
| --- | --- | --- |
| Mathematics Department | |  |
| Course: ATMAA | |
| Topic Title: Skills Test 10 | |
| Student Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_ | | |
| Special Instructions: No Calculator | Time Allowed: 20 minutes | | |
|  | Marks: / 12 | | |
|  | | | |

1. Consider the following network where the numbers represent distances in km: **[2, 2, 4, 4 : 12 marks]**

A 26 B

28 14 10 5

E

C 34 D 16

19 26

F

a. What is the shortest distance from C to E?

b. Give the letters of the shortest path.

c. Fill in the table below where only direct links are shown (don’t fill in shaded cells)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| A |  |  |  |  |  |  |
| B |  |  |  |  |  |  |
| C |  |  |  |  |  |  |
| D |  |  |  |  |  |  |
| E |  |  |  |  |  |  |
| F |  |  |  |  |  |  |

d. Use Prim’s Algorithm on your table to determine the minimum spanning tree