**Bài tập lý thuyết chương 5**

**Bài 1: Thực hiện đếm bậc các đỉnh tại các ví dụ 5.1, 5.2, 5.3, 5.6**

* VD 5.1: - VD 5.2
  + d(A): 3 d(A): 5
  + d(B): 4 d(B): 4
  + d(C): 4 d(C): 4
  + d(D): 4 d(D): 5
  + d(E): 2 d(E): 2
  + d(F): 5 d(F): 6
  + d(G): 2
* VD 5.3: - VD 5.6
  + d(A): 5 d(A): 3
  + d(B): 6 d(B): 4
  + d(C): 4 d(C): 4
  + d(D): 4 d(D): 3
  + d(E): 4 d(E): 4
  + d(F): 3 d(F): 2

**Bài 2: Cho biết ma trận kề của đồ thị tại các ví dụ 5.1, 5.6, 5.7, 5.11**

* VD 5.1:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F | G |
| A | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| B | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| C | 1 | 1 | 0 | 1 | 0 | 1 | 0 |
| D | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| E | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| F | 0 | 1 | 1 | 1 | 1 | 0 | 1 |
| G | 0 | 0 | 0 | 1 | 0 | 1 | 0 |

* VD 5.6

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| A | 0 | 1 | 1 | 1 | 0 | 0 |
| B | 0 | 0 | 1 | 0 | 1 | 0 |
| C | 0 | 0 | 0 | 1 | 1 | 0 |
| D | 0 | 0 | 0 | 0 | 1 | 0 |
| E | 0 | 0 | 0 | 0 | 0 | 1 |
| F | 0 | 1 | 0 | 0 | 0 | 0 |

* VD 5.7:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | A | B | C | D | E | F |
| A | 0 | 110 | 90 | 100 | 0 | 0 |
| B | 110 | 0 | 50 | 0 | 55 | 80 |
| C | 90 | 50 | 0 | 40 | 80 | 0 |
| D | 100 | 0 | 40 | 0 | 60 | 0 |
| E | 0 | 55 | 80 | 60 | 0 | 70 |
| F | 0 | 80 | 0 | 0 | 70 | 0 |

* VD 5.11:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Bài 3: Cho biết danh sách kề của đồ thị tại ví dụ 5.1, 5.7, 5.8, 5.11**

* VD 5.1:
  + A → B → C → D → NULL
  + B → A → C → E → F → NULL
  + C → A → B → D → F → NULL
  + D → A → C → F → G → NULL
  + E → B → F → NULL
  + F → E → B → C → D → G → NULL
  + G → D →F → NULL
* VD 5.6:
  + A → B → C → D → NULL
  + B → C → E → NULL
  + C → D → E → NULL
  + D → E → NULL
  + E → F → NULL
  + F → B → NULL
* VD 5.7:
  + A → B(110) → C(90) → D(100) → NULL
  + B → A(110) → C(50) → E(55) → F(80) → NULL
  + C → A(90) → B(50) → E(80) → D(40) → NULL
  + D → A(100) → C(40) → E(60) → NULL
  + E → D(60) → C(80) → B(55) → F(70) → NULL
  + F → B(80) → E(70) → NULL
* VD 5.11:
  + 1 → 2 → 3 → 4 → NULL
  + 2 → 7 → NULL
  + 3 → 6 → NULL
  + 4 → 5 → NULL
  + 5 → 10 → 11 → NULL
  + 6 → NULL
  + 7 → 8 → 9 → NULL
  + 8 → 13 → 14 → NULL
  + 9 → NULL
  + 10 → 12 → NULL
  + 11 → NULL
  + 12 → NULL
  + 13 → NULL
  + 14 → NULL
* VD 5.8:
  + A → B → C → D → NULL
  + B → A → C → E → F → NULL
  + C → A → B → D → F → NULL
  + D → A → C → F → G → NULL
  + E → B → F → NULL
  + F → B → C → D → E → G → NULL
  + G → D → F → NULL