Your assignment must cover the following sections **Marks : 3**

1. A well defined Cover Page
2. Problem Definition and your approach to solve the problem.
3. Solution to each of the problems defined
4. Conclusion of what you learnt from the Assignment.
5. Given the death percentage during a Covid Pandemic where data has been taken for 8 days. **Marks : 9**

| Days | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Death % | 0.02 | 0.12 | 0.05 | 0.15 | 0.06 | 0.20 | 0.11 | 0.21 | 0.08 |

1. Construct Huffman Optimal Code.
2. Calculate the Regular Coding Price
3. Calculate the Huffman’s Optimal Coding Price.
4. Given the Total Patients attacked during Covid Pandemic where data has been taken for 9 days **Marks : 8**

| Days | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Attack in # | 515 | 421 | 560 | 263 | 285 | 320 | 360 | 620 |

1. Construct Fanoe's Nearly Optimal Code.
2. Calculate the Regular Coding Price
3. Fanoe’s nearly optimal Code Price.

3) You are trying to Design a system which can detect and correct two

errors. Answer the following if there are 64 code words **Marks : 20**

* 1. What is the hamming distance for code detection
  2. What is the hamming distance of Code correction
  3. Design the Code and show the number of parity bits.
  4. Select two words received and try to check the errors and correct them.