

Total No. of Questions : 4]

SEAT No. :

PD-391

[Total No. of Pages : 2

[6411]-184

B.E. (Artificial Intelligence & Data Science) (Insem.)

COMPUTATIONAL INTELLIGENCE

(2019 Course) (Semester - VIII) (417530)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates :

- 1) *Neat diagrams must be drawn wherever necessary.*
- 2) *Figures to the right side indicate full marks.*
- 3) *Use of Calculator is allowed.*
- 4) *Assume Suitable data if necessary.*

Q1) a) Explain how following approaches contribute to Computational Intelligence: [8]

- i) Fuzzy Logic
- ii) Neural Networks
- iii) Evolutionary Computing
- iv) Swarm Intelligence

b) Define Computational Intelligence. Differentiate between Artificial Intelligence and Computational Intelligence. [7]

OR

Q2) a) Provide examples of successful applications of Computational Intelligence in different fields. [8]

b) Explain how different methodologies synergistically combine in Computational Intelligence? [7]

Q3) a) Define a Fuzzy Set? Explain in detail about Fuzzy set operations. [7]

b) Write a short note on : [8]

- i) Linguistics Variables and Hedges
- ii) Fuzzy Rules

P.T.O.

OR

- Q4) a)** Define Fuzzy logic Controllers. Explain different Fuzzy logic Controller Types. [7]
- b) Write a short note on : [8]
- i) Membership Function
 - ii) Fuzzification
 - iii) Defuzzification
 - iv) Fuzziness and Probability

