Total No. of Questions : 8]

SEAT No. :

P228

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[5871]-755
B.E. (Honors)
ARTIFICIAL INTELLIGENCE FOR BIG DATA ANALYTICS
(2015 Pattern) (Semester - II) (410503)

Time : 2½ Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicate full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain scalable machine hearning using spark. **[6]**

b) Explain Hadoop Ecosystem in detail. **[6]**

c) List and explain the applications of computer vision. **[8]**

OR

Q2) a) What are the features likely to be detected by the initial layers of neural netwrok used for computer vision? How is this different from what is detected by the later layers of the neural network? **[6]**

b) Explain computer vision applications : object detection. **[6]**

c) Explain the process of tokenization during text processing. **[8]**

Q3) a) What are some of the machine learning algorithms that can be used for computer vision. **[4]**

b) Explain spark - basics and pyspark. **[6]**

c) List and explain the applications of NLP. **[8]**

OR

Q4) a) Which of the techniques that can be used to compute the distance between two word vectors in NLP? **[4]**

b) List some of the best NLP tools and explain one of then? **[6]**

c) List and explain the applications of computer vision. **[8]**

P.T.O.

Q5) a) Explain how programmability can be improved by using Pig and Hive in Hadoop. **[6]**

b) Explain NLP application : Sentiment Analysis. **[6]**

c) Demonstrate content based recommendation system. **[4]**

OR

Q6) a) Explain HDFS and Map Reduce. **[6]**

b) Explain Python and Hadoop Streaming. **[6]**

c) Explain Recurrent Neural Networks. **[4]**

Q7) a) Write note on Artificial Intelligence explaining its need and applications. **[6]**

b) Explain logic programming with an example. **[6]**

c) List down the names of some popular Activation functions used in Neural Networks. **[4]**

OR

Q8) a) Illustrate the constraint satisfication problem with suitable example. **[6]**

b) How does forward propagation and back propagation work in ANN? **[6]**

c) What is the role of the Activation functions in Neural Networks? **[4]**

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