



## **BRAINWARE UNIVERSITY**

**Term End Examination 2023-2024** Programme – MCA-2022 Course Name - Deep Learning **Course Code - MCA402B** (Semester IV)

Time: 2:30 Hours Full Marks: 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

## **Group-A**

(Multiple Choice Type Question)

1 x 15=15

- Choose the correct alternative from the following:
- (i) State the cause of the necesity of biological neural networks in artificial Intelligence.
  - a) to solve tasks like machine vision & natural language processing
  - c) to make smart human interactive & user friendly system
- b) to apply heuristic search methods to find solutions of problem
- d) all of the mentioned
- (ii) Define the unsupervised learning.
  - a) features of group explicitly stated
  - c) contains unlabelled data

- b) number of groups may be known d) none of the mentioned
- (iii) State the limitations of deep learning.
  - a) Data labeling

b) Obtain huge training datasets

c) Both A and B

- d) None of the mentioned
- (iv) Determine that in CNN, having max pooling always decrease the parameters.

- b) False
- c) Can be true and false
- d) Can not say
- (v) Select the option from the following that would have a constant input in each epoch of training a Deep Learning model.
  - a) Weight between input and hidden layer
- b) Weight between hidden and output layer
- c) Biases of all hidden layer neurons
- d) Activation function of output layer
- (vi) Identify the neural network has only one hidden layer between the input and output.
  - a) Shallow neural network

- b) Deep neural network
- c) Feed-forward neural networks
- d) Recurrent neural networks
- (vii) Identify the option of the following statements is true when you use 1×1 convolutions in a CNN.
  - a) It can help in dimensionality reduction
- b) It can be used for feature pooling
- c) It suffers less overfitting due to small kernel Size
- d) All of the mentioned

(viii) N	Name the neural net architecture where weight	sharing occur.		
	) Convolutional neural Network	b) Recurrent Neural Network		
_;	No. II. Composted Noural Notwork	d) Both1 and 2		
(ix) T	ell the conditions are must for competitive net	work to perform pattern clustering.		
a)	_	to the farther units inhibitory		
c)	on centre off surround connections	d) none of the mentioned fulfils the who	ole	
(x) Ir	n language understanding, name the levels of k	nowledge that does not include.		
	) Phonological	b) Syntactic		
-	) Empirical	d) Logical		
	Determine that Association analysis deals with	,		
• •	Finding group of objects	b) Feature Selection		
	) Common sequence of objects	d) none of the mentioned		
	Name the data that is used to build a data minir	•		
	) Validation data	b) Testing Data		
•	) Training data	d) none of the mentioned		
(xiii) Select the correct option for the statement-A measure of goodness of fit for the estimated regression equation is the				
	) Multiple coefficient for determination	b) Mean square due to error		
	) Mean square due to regression	d) none of the mentioned		
(xiv) State the best uses of nearest neighborhood approach.				
1300		b) When irrelevant attributes are remo	ved	
dist.	) With large size data set	from data		
c'	) When a generalized model of data is	d) When an explanation of what has be	een	
	desirable	found is of primary importance		
(xv) V	Write the purpose, hamming network is suitabl	e for.		
а	) classification	b) association		
	) pattern storage	d) none of the mentioned		
	Grou	ір-В		
	(Short Answer T	ype Questions)	3 x 5=15	
2. Describe the function of the Fourier Transform in Deep Learning? (3)				
3. Explain the disadvantages of deep learning.			(3)	
4. State the unsupervised learning algorithms in Deep learning?			(3)	
5. Justify the use of pooling in CNN.			(3)	
6. Explain data normalization, and Why Do We Need It?			(3)	
	0			
Diff	erentiate between a Feedforward Neural Netv	vork and Recurrent Neural Network.	(3)	
	to the second of the second of the second	A STATE OF THE STA		
		up-C	10.12	
	(Long Answer T	ype Questions)	5 x 6=30	
	efine Perceptron and also, explain its types.		(5)	
8. Explain the different layers of CNN.  9. Explain briefly the different layers of Autoencoders			(5) (5)	
<ul><li>9. Explain briefly the different layers of Autoencoders.</li><li>10. Describe Machine learning?</li></ul>				
11. Explain the common ways to handle missing data in a dataset?				
	rite in detail about Deep Autoencoders?	a iii a dataseti	(5) (5)	
	Principal and Artificial and the control of the con	IR	17-1-16	

Write about the three steps to develop the necessary assumption structure in Deep	(5)
learning?	(87
**************	