

Roll No.	
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**Tatyasaheb Kore Institute of Engineering and Technology, Warananagar**  
(An Autonomous Institute, Affiliated to Shivaji University, Kolhapur)  
**Department of Computer Science and Engineering**

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**B.Tech In-Semester Examination-I, September- 2023**

Course Name :	Deep Learning	Course Code: CSE705
Day & Date :	Friday 29/09/2023	Max Marks : 40Marks
Time :	9.15 to 10.45 AM	

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**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL) (**L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)
- iii. Use of non-programmable calculator is allowed. iv. Assume suitable data if required

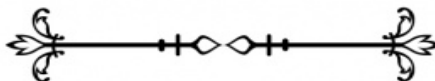
**Course Outcomes are:**

CO1: Identify the deep learning algorithms to solve various problems.

CO2: Analyses optimization and regularization techniques of deep learning for the given problem

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	Marks	B.L	CO
<b>Q.1 Attempt any two</b>			<b>CO1</b>
a) State Overfitting, Underfitting and Capacity in ML?	7	L1	
b) Define Point Estimator, Function Estimator, Bias and Variance in DL?	7	L1	
c) Explain Stochastic Gradient Decent?	7	L2	
<b>Q.2 Attempt any two</b>			<b>CO2</b>
a) Draw the Architecture of Feed forward Neural Network?	7	L2	
b) Tell the Necessity of Cost function ? Explain the different types of Cost functions?	7	L2	
c) Mention use of Activation function? Classify the Different types of Activation functions in Neural Networks?	7	L2	
<b>Q.3 Attempt any two</b>			<b>CO1</b>
a) State Challenges motivating deep learning?	6	L1	
b) Describe the Concept of Back propagation algorithm w.r.t to Neural Network?	6	L3	
c) Illustrate the Maximum like hood estimation along with conditional log like hood and mean square error?	6	L2	



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**Department of Computer Science and Engineering**

**B.Tech In-Semester Examination-II, October- 2023**

Course Name :	Deep Learning	Course Code: CSE705
Day & Date :	Monday 31/10/2023	Max Marks : 40Marks
Time :	9.15 to 10.45 AM	

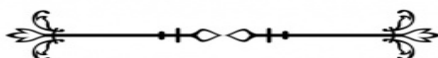
**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL) (L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
- iii. Use of non-programmable calculator is allowed
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**Course Outcomes**

CO2 :Analyses optimization and regularization techniques of deep learning for the given problem  
 CO3 : Develop different deep learning models for given tasks Apply  
 CO4 : To Demonstrate the mathematical, statistical and computational challenges of building neural networks

	Marks	B.L	CO
<b>Q.1 Attempt any two</b>			<b>CO2</b>
a) Why Regularization is needed? State L1 and L2 Regularization in detail?	7	L1	
b) Discuss Norm-Penalties as constraint optimization?	7	L2	
c) Describe Multicast learning w.r.t Regularization	7	L2	
<b>Q.2 Attempt any two</b>			<b>CO4</b>
a) Demonstrate the working of pooling operation in CNN	7	L3	
b) Enlist Different data types used in CNN?	7	L1	
c) Illustrate convolution operation in CNN?	7	L2	
<b>Q.3 Attempt All Questions</b>			<b>CO3</b>
a) Write briefly variants of CNN Model?	6	L2	
OR			
Classify different components of CNN Model	6	L2	
b) Why semi supervised learning needed in Regularization?	6	L2	<b>CO2</b>
OR			
Report Data augmentation w.r.t. to Regularization	6	L2	



**B.Tech Make-Up Examination, November- 2023**

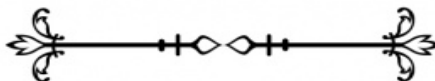
Course Name : Deep Learning  
Day & Date : Wensday 29/11/2023  
Time : 2.30 to 4.00 PM

Course Code: CSE705  
Max Marks : 40Marks

**Instructions:**

- All questions are compulsory
- Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL) (L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
- Use of non-programmable calculator is allowed
- Assume suitable data if required

		Marks	B.L	CO
<b>Q.1</b>	<b>Attempt any two</b>			<b>CO1</b>
a)	Explain the Architecture of Feed forward Neural Network?	7	L2	
b)	Why Cost function is used? Explain the different types of Cost functions?	7	L2	
c)	Mention use of Activation function? Classify the Different types of Activation functions in Neural Networks?	7	L2	
<b>Q.2</b>	<b>Attempt any two</b>			<b>CO2</b>
a)	Why Regularization is needed? State L1 and L2 Regularization in detail?	7	L1	
b)	Discuss Norm-Penalties as constraint optimization?	7	L2	
c)	Describe Multicast learning w.r.t Regularization	7	L2	
<b>Q.3</b>	<b>Attempt any two Questions</b>			<b>CO2</b>
a)	Why semi supervised learning needed in Regularization	6	L2	
b)	Report Data augmentation w.r.t. to Regularization	6	L2	
c)	Write Back propagation algorithm?	6	L2	



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**Department of Computer Science and Engineering**

**B. Tech. Makeup Test November- 2023**

Course Name : **Artificial Intelligence**  
 Day & Date : Tuesday , 28/11/2023  
 Time : 9.15 AM to 10.45AM

Course Code: **CSE701**  
 Max Marks : 40Marks

- Instructions:** i. All questions are compulsory.  
 ii. Figures to the right indicate full marks.  
 iii. Course Outcome (CO) & Bloom's Taxonomy Level (BL) (**L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)  
 iv. Use of non-programmable calculator is allowed. v. Assume suitable data if required

**Course Outcome's are:**

CO1- Implement knowledge of agent architecture, searching, and reasoning techniques for different applications.

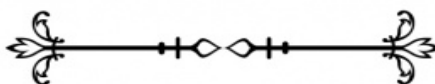
CO2- Investigate Searching and Inference Techniques.

CO3- Establish knowledge base sentences using propositional logic and first-order logic.

CO4 -Illustrate the application of probability in uncertain reasoning.

CO5-Assess the AI expert systems using engineering knowledge.

		Marks	B.L	CO
<b>Q.1</b>	<b>Attempt any two</b>			
a)	Illustrate the Breadth First Search Technique with the help of an example.	7	L2	CO3
b)	Define Propositional logic? Explain types of Sentences with Syntax and Semantics.	7	L2	
c)	Explain different Stages of Greedy Best First search with examples.	7	L3	
<b>Q.2</b>	<b>Attempt any two</b>			
a)	Demonstrate Wumpus World Problem and its solution?	7	L2	CO3
b)	Discuss Heuristic Search function? How this function helps during search procedure?	7	L3	
c)	Illustrate the Depth First Search Technique with the help of an example.	7	L4	
<b>Q.3</b>	<b>Attempt all</b>			
a)	How to measure the Problem Solving Performance? Explain in brief?	6	L2	CO2
b)	Explain A*search Algorithm	6	L4	
c)	Write note on Knowledge based Agent? Explain Backus Naur Form grammar?	6	L3	



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**Department of Computer Science and Engineering**

**B.Tech In-Semester Examination-I, September- 2023**

Course Name :	Advanced Database Systems	Course Code: CSE703
Day & Date :	Wednesday, 27/09/2023	Max Marks : 40Marks
Time :	9.15AM to 10.45AM	

**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL) (L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
- iii. Use of non-programmable calculator is allowed
- iv. Assume suitable data if required

Course Outcomes:		
COs	At the end of the successful completion of the course, the students will be able to	Bloom's Taxonomy
CO1	Apply the knowledge of PL/SQL in writing queries.	Apply
CO2	Construct appropriate databases for real-world problems.	Evaluate
CO3	Demonstrate the use of data mining & data warehousing techniques in business data analytics.	Apply
CO4	Illustrate design, architectures, data storage, distribution & query processing in Parallel & distributed databases.	Apply
CO5	Construct a database using the SQL security features.	Create

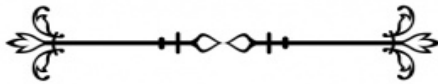
	Marks	B.L	CO
<b>Q.1 Attempt any two</b>			
a) Explain the features & advantages of PL/SQL.	7	L2	
b) Give the definition for PL/SQL Function? Explain the syntax of creating function at 1. Schema Level & 2. Inside PL/SQL Block.	7	L6	CO1
c) Write a PL/SQL Function inside PL/SQL block to find the total number of employees working for company 'TCS' and getting salary more than Rs.50,000. Call the same within the PL/SQL Block. Refer the following table, Employee(EID,ENAME,SALARY,COMPANY,LOCATION)	7	L6	

**Q.2 Attempt any two**

- |   |   |    |     |
|---|---|----|-----|
| a) Quote the definition for PL/SQL Procedure? Explain the syntax of creating procedure at 1. Schema Level & 2. Inside PL/SQL Bock | 7 | L6 |     |
| b) Write a PL/SQL procedure at schema level to find the factorial of a number and call the same in a PL/SQL Block.                | 7 | L6 | CO1 |
| c) Illustrate structured Data Types in Object Oriented Databases.   | 7 | L2 |     |

**Q.3 Attempt any two**

- |   |   |    |     |
|---|---|----|-----|
| a) Describe Embedded SQL? Illustrate the Structure of Embedded SQL.   | 6 | L3 |     |
| b) Define Oracle Sequence? Describe the syntax for creating Sequence. Create a sequence for generating Students Id's for a table Student(Student_ID,Name,Class,Branch). | 6 | L6 | CO2 |
| c) Describe Object Oriented Database? Illustrate with example.  | 6 | L3 |     |



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**Department of Computer Science and Engineering**

**B.Tech In-Semester Examination-II, October- 2023**

Course Name :	Advanced Database Systems	Course Code: CSE703
Day & Date :	Saturday, 28/10/2023	Max Marks : 40 Marks
Time :	9.15AM to 10.45AM	

**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks, Course Outcome (CO) & Bloom's Taxonomy Level (BL) (L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
- iii. Use of non-programmable calculator is allowed
- iv. Assume suitable data if required

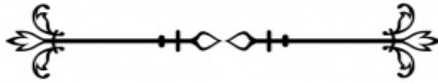
Course Outcomes:		
COs	At the end of the successful completion of the course, the students will be able to	Bloom's Taxonomy
CO1	Apply the knowledge of PL/SQL in writing queries.	Apply
CO2	Construct appropriate databases for real-world problems.	Evaluate
CO3	Demonstrate the use of data mining & data warehousing techniques in business data analytics.	Apply
CO4	Illustrate design, architectures, data storage, distribution & query processing in Parallel & distributed databases.	Apply
CO5	Construct a database using the SQL security features.	Create

	Marks	B.L	CO
<b>Q.1</b>			
<b>Attempt any two</b>			
a) Describe in detail the Data Warehouse with architecture	7	L2	
b) Elaborate OLAP Operations	7	L3	CO3
c) Outline the Key-Value Database	7	L2	
<b>Q.2</b>			
<b>Attempt any two</b>			
a) Explain Data Management with distributed databases	7	L5	
b) Illustrate Star schema with example	7	L6	CO4
c) Give a brief note on Tree-Structured Rules & Write Decision Tree Induction Schema	7	L6	

**Q.3****Attempt any two**

- |   |          |           |
|---|----------|-----------|
| a) What is view materialization? List Issues in view materialization.                       | <b>6</b> | <b>L5</b> |
| b) Write and elaborate the algorithm for finding frequent item sets.                        | <b>6</b> | <b>L5</b> |
| c) Quote the definition for Data Mining. State the use of association rules in data mining. | <b>6</b> | <b>L5</b> |

CO3





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**B. Tech In-Semester Examination-I, September- 2023**

Course Name :	<b>Artificial Intelligence</b>	Course Code: <b>CSE701</b>
Day & Date :	Tuesday , 30/09/2023	Max Marks : 40Marks
Time :	9.15 AM to 10.45AM	

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- Instructions:** i. All questions are compulsory.  
ii. Figures to the right indicate full marks.  
iii. Course Outcome (CO) & Bloom's Taxonomy Level (BL) (**L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)  
iv. Use of non-programmable calculator is allowed. v. Assume suitable data if required

**Course Outcome's are:**

**CO1-** Implement knowledge of agent architecture, searching, and reasoning techniques for different applications.

**CO2-** Investigate Searching and Inference Techniques.

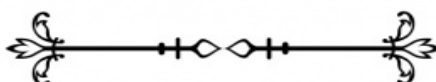
**CO3-** Establish knowledge base sentences using propositional logic and first-order logic.

**CO4 -**Illustrate the application of probability in uncertain reasoning.

**CO5-**Assess the AI expert systems using engineering knowledge.

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	Marks	B.L	CO
<b>Q.1 Attempt any two</b>			
a) What is AI? Describe the four categories under which AI definition is classified.	7	L2	
b) Define Intelligent Agent? Explain relationship between Agent and Environment.	7	L1	CO1
c) Discuss the PEAS description of the task environment for an automated taxi.	7	L3	
<b>Q.2 Attempt any two</b>			
a) Discuss the State Space for the Vacuum World with suitable diagram.	7	L2	
b) Write an algorithm for the general Tree Search with an example	7	L3	CO2
c) Illustrate the following search Technique with the help of an example. i. Breadth First Search. ii. Depth First Search.	7	L4	
<b>Q.3 Attempt any two</b>			
a) Define Structure of Agent? List the types of agents and explain any one in brief.	6	L2	CO1
b) How to measure the Problem Solving Performance? Explain in brief?	6	L2	
c) Describe the Concept of Rationality?	6	L3	



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**B. Tech In-Semester Examination-II, October- 2023**

Course Name : **Artificial Intelligence**  
 Day & Date : Monday , 26/10/2023  
 Time : 9.15 AM to 10.45AM

Course Code: **CSE701**  
 Max Marks : 40Marks

- Instructions:** i. All questions are compulsory.  
 ii. Figures to the right indicate full marks.  
 iii. Course Outcome (CO) & Bloom's Taxonomy Level (BL) (**L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating**)  
 iv. Use of non-programmable calculator is allowed. v. Assume suitable data if required

**Course Outcome's are:**

CO1- Implement knowledge of agent architecture, searching, and reasoning techniques for different applications.

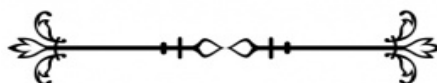
CO2- Investigate Searching and Inference Techniques.

CO3- Establish knowledge base sentences using propositional logic and first-order logic.

CO4 -Illustrate the application of probability in uncertain reasoning.

CO5-Assess the AI expert systems using engineering knowledge.

		Marks	B.L	CO
<b>Q.1</b>	<b>Attempt any two</b>			
a)	What is Greedy Best First search? Explain different Stages of Greedy Best First search with examples	7	L2	CO3
b)	Define Propositional logic? Explain types of Sentences with Syntax and Semantics.	7	L2	
c)	Explain following terms with FOL with Examples? i. Atomic Sentence ii. Complex Sentences iii. Quantifiers	7	L3	
<b>Q.2</b>	<b>Attempt any two</b>			
a)	Demonstrate Wumpus World Problem and its solution?	7	L2	CO4
b)	Discuss Heuristic Search function? How this function helps during search procedure?	7	L3	
c)	Explain in detail Inference in First Order Logic with examples?	7	L4	
<b>Q.3</b>	<b>Attempt all</b>			
a)	Distinguish between propositional Logic and First Order logic?	6	L2	CO3
b)	Explain A*search Algorithm	6	L4	
c)	Write note on Knowledge based Agent? Explain Backus Naur Form grammar?	6	L3	



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**Department of Computer Science and Engineering**

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**B. Tech In-Semester Examination-I, September- 2023**

Course Name :	Cloud Computing	Course Code: CSE702
Day & Date :	Tuesday , 26/09/2023	Max Marks : 40Marks
Time :	9.15 AM to 10.45AM	

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**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks,
- iii. Course Outcome (CO) & Bloom's Taxonomy Level (BL) (L1- Remembering, L2- Understanding, L3 – Applying, L4 – Analyzing, L5 – Evaluating, L6 - Creating)
- iv. Use of non-programmable calculator is allowed v. Assume suitable data if required

**Course Outcome's are:** CO1- Describe the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing.

CO2-Demonstrate the architecture and infrastructure of cloud computing

CO3-Identify problems, and explain, analyze, and evaluate various cloud computing solutions.

CO4-Use AWS cloud for designing solutions to various computational problems.

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	Marks	B.L	CO
<b>Q.1 Attempt any two</b>			
a) Define the cloud computing and what the silent feature of the cloud is computing?	7	L1,L2	CO1
b) What are cloud and other similar cloud configurations?	7	L3	
c) List the advantages and disadvantage of the cloud computing?	7	L1	
<b>Q.2 Attempt any two</b>			
a) Describe typical virtualization structure with suitable diagram And list its types and benefits.	7	L1,L2	CO2
b) Explain the Full virtualization and Paravirtualization.	7	L2	
c) Explain Hosted Virtualization structure with necessary diagram and list its benefits and drawbacks.	7	L1	
<b>Q.3 Attempt All</b>			
a) Write short note components of cloud computing.	6	L1	CO1
<b>OR</b>	6		
a) What are the impacts of cloud computing on businesses?		L2	
b) Describe virtualization mechanism.	6	L2	
<b>OR</b>			
b) Explain Bare Metal Virtualization structure with necessary diagram and list its benefits and drawbacks.	6	L2	CO2



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**B.Tech Makeup Test, November- 2023**

Course Name :	Cloud Computing	Course Code:	CSE702
Day & Date :	Tuesday and 28/11/2023	Max Marks :	40Marks
Time :	2.30 pm to 4.00 pm		

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**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks,
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- iv. Use of non-programmable calculator is allowed v. Assume suitable data if required

**Course Outcome's are:**

- CO1-** Describe the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing.
- CO2-** Demonstrate the architecture and infrastructure of cloud computing.
- CO3-** Identify problems, and explain, analyze, and evaluate various cloud computing solutions.
- CO4-** Use AWS cloud for designing solutions to various computational problems
- 

		Marks	B.L.	CO
<b>Q.1</b>	<b>Attempt any Two</b>			
a)	Describe implementation Levels of virtualization.	7	L2	
b)	Explain virtualization of CPU, Memory and I/O devices.	7	L1	CO1
c)	Draw and explain Hosted Virtualization structure with its benefits and drawbacks.	7	L3	
<b>Q.2</b>	<b>Attempt any Two</b>			
a)	Explain leveraging pass for productivity.	7	L1	
b)	Enlist the guidelines for selecting a PaaS provider.	7	L2	CO3
c)	Explain types of orientation and support for various software languages.	7	L1	
<b>Q.3</b>	<b>Attempt All</b>			
a)	What is virtualization and explain its benefits.	6	L2	
	<b>OR</b>			CO1
a)	Explain Open Source Virtualization.	6	L1	
b)	Describe SaaS with example (case study)	6	L3	
	<b>OR</b>			CO3
b)	List and explain specialized cloud services.	6	L2	

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**B. Tech In-Semester Examination-II, October- 2023**

Course Name :	<b>Cloud Computing</b>	Course Code: <b>CSE702</b>
Day & Date :	<b>Friday and 27/10/2023</b>	Max Marks : <b>40Marks</b>
Time :	<b>9.15 am to 10.45 am</b>	

**Instructions:**

- i. All questions are compulsory
- ii. Figures to the right indicates full marks,
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- iv. Use of non-programmable calculator is allowed v. Assume suitable data if required

**Course Outcome's are:**

- CO1-** Describe the main concepts, key technologies, strengths, and limitations of cloud computing and the possible applications for state-of-the-art cloud computing.
- CO2-** Demonstrate the architecture and infrastructure of cloud computing.
- CO3-** Identify problems, and explain, analyze, and evaluate various cloud computing solutions.
- CO4-** Use AWS cloud for designing solutions to various computational problems.

		Marks	B.L.	CO
<b>Q.1</b>	<b>Attempt any Two</b>			
a)	Describe Infrastructure as a Service.	7	L1	
b)	Enlist the guidelines for selecting a PaaS provider.	7	L1	CO2
c)	Explain Database as a Service and list the few factors to consider before selecting one for your database.	7	L3	
<b>Q.2</b>	<b>Attempt any Two</b>			
a)	What are the challenges with the cloud data?	7	L1	
b)	Define data confidentiality and encryption.	7	L2	CO3
c)	Draw and explain AAA model.	7	L2	
<b>Q.3</b>	<b>Attempt All</b>			
a)	Describe SaaS with ASP.	6	L2	CO2
	<b>OR</b>			
a)	Explain storage as a service.	6	L1	
b)	Illustrate host security for, 1.SaaS 2.PaaS 3. IaaS	6	L3	
	<b>OR</b>			CO3
b)	Write a note on I) Data Availability II) Data Integrity.	6	L4	

