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23CAU635N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCA DEGREE EXAMINATION MAY 2026
(Sixth Semester)

Branch – **COMPUTER APPLICATIONS**

SOFT COMPUTING

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Intelligent systems are primarily designed to _____ a) Replace humans completely b) Simulate human intelligence c) Perform only calculations d) Store large data	K1	CO1
	2	Knowledge representation includes _____ a) Rules and facts b) Only numbers c) Only images d) Hardware	K2	CO1
2	3	Basic unit of Artificial Neural Network is _____ a) Node b) Neuron c) Edge d) Data	K1	CO2
	4	Perceptron can solve _____ a) Linear problems b) Non-linear problems c) Sorting d) Searching	K2	CO2
3	5	A Feed Forward Neural Network is characterized by _____ a) Cyclic connections between neurons b) Data flowing in one direction only c) Random connections d) Feedback loops	K1	CO3
	6	Back Propagation algorithm is mainly used for _____ a) Clustering b) Supervised learning c) Unsupervised learning d) Reinforcement learning	K2	CO3
4	7	Associative memory is also called _____ a) Content addressable memory b) RAM c) ROM d) Cache	K1	CO4
	8	Optimization in neural networks refers to _____ a) Increasing network size b) Removing neurons c) Reducing input data d) Minimizing or maximizing an objective function	K2	CO4
5	9	In Genetic Algorithms, a chromosome represents _____ a) A variable b) A possible solution c) A constraint d) A constant	K1	CO5
	10	Binary coded Genetic Algorithm represents solutions using _____ a) Decimal numbers b) Binary strings c) Characters d) Graphs	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL Marks** (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Identify the characteristics of intelligent systems.	K4	CO1
		(OR)		
	11.b.	Determine the knowledge representation and processing.		
2	12.a.	Explain the process of mathematical model of neuron.	K3	CO2
		(OR)		
	12.b.	Illustrate the applications of neural network.		
3	13.a.	Summarize the parameter selection in BPN.	K4	CO3
		(OR)		
	13.b.	Evaluate the variants of Backpropagation with example.		
4	14.a.	Discuss the auto-associative memory with diagram.	K5	CO4
		(OR)		
	14.b.	Assume the optimization and some traditional methods.		
5	15.a.	Conclude the advantages and disadvantages of genetic algorithm.	K6	CO5
		(OR)		
	15.b.	Estimate the constraints handling in genetic algorithm.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Analyze the generalized fuzzy operations with example.	K4	CO1
2	17	Enumerate the general architecture of perceptron network with diagram.	K5	CO2
3	18	Compare and construct the local minima and global minima.	K5	CO3
4	19	Evaluate the functions of Bidirectional Associative Network with diagram.	K4	CO4
5	20	Elaborate the working cycle of a genetic algorithm.	K6	CO5

Z-Z-Z END