



PJ – 583

V Semester M.C.A. Examination, January 2019
(CBCS)
COMPUTER SCIENCE
MCA 501 : Advanced Web Programming

Time : 3 Hours

Max. Marks : 70

- Instructions :** 1) Part – A : Answer any five questions from Part – A, each question carries 6 marks.
2) Part – B : Answer any four questions from Part – B, each question carries 10 marks.

PART – A

Answer any five questions from Part – A, each question carries 6 marks. (5×6=30)

1. What is cookie ? Explain cookie handling in PHP.
2. Explain basic pattern matching in Perl.
3. Write a program in Perl. Demonstrate usage of function, parameter passing and scope of a variable.
4. Explain CGI, CGI linkage and CGI query string format in Perl.
5. What are servlets ? Explain the life cycle of servlet and its methods.
6. What is AJAX ? Explain its working in detail.
7. Define MySQL database. Explain database access with PHP and MySQL.
8. Explain file processing using Perl (Give example).

PART – B

Answer any four questions, from Part – B each question carries 10 marks. (4×10=40)

9. Write a program in Perl to insert name and age information entered by the user into a table created using MySQL and to display the current contents of the table.
 10. a) Explain CODE blocks and iterators in Ruby.
b) Explain OOPs concept in Ruby. (5+5)
 11. Explain MVC architecture of Rails in detail.
 12. Explain form handling in PHP ? Write a program to demonstrate the same.
 13. Write notes on :
a) JDBC
b) Arrays and hashes in Ruby.
 14. Explain the various elements of JSP document. Write an example in JSP to display "HelloWorld".
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V Semester M.C.A. Examination, January 2018

(CBCS)

COMPUTER SCIENCE

MCA503 : Artificial Intelligence

Time : 3 Hours

Max. Marks : 70

Instruction : Answer **any five** questions from Part – A and **four** questions from Part – B.

PART – A

Answer **any five** questions. **Each** question carries **6** marks. (5×6=30)

1. Define Artificial Intelligence in terms of human performance also list various applications of AI.
2. Explain the following uninformed search strategies with example.
 - a) Breadth First Search
 - b) Depth First Search.
3. Discuss the syntax and semantics of a first order logic in detail with an example.
4. Explain planning with state space search with an example, and its components.
5. Explain various forms of learning. How are explanation based learning done ?
6. Develop a parse tree structure for the sentence "Jeevitha slept on the bench" by constructing your own grammar rules.
7. Define natural language and NLP and advantages of NLP.
8. Explain the expert system architecture.

PART – B

Answer **any four** questions. **Each** question carries **10** marks. (4×10=40)

9. What is Heuristic Search ? And discuss the Heuristic Search technique of "Means Ends Analysis".

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10. Explain various types of AI problems and its characteristics with an example.
11. Differentiate between deductive, inductive and abductive learning giving at least one example for each.
12. Differentiate between propositional logic and predicate logic. Represent the following statements in logic. "If milk is black, then every cow is white. If every cow is white then, it has four legs, then every buffalo is white and brisk. The milk is black, therefore the buffalo is white".
13. Write a short notes on :
 - a) Waltz algorithm 5
 - b) Resolution. 5
14. Identify and describe two good application areas for expert systems considering a university environment.



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V Semester M.C.A. Examination, December 2016
(CBCS)
COMPUTER SCIENCE
MCA 503 : Artificial Intelligence

Time : 3 Hours

Max. Marks : 70

SECTION – A

Answer **any five** questions. **Each** carries **6** marks.

(5×6=30)

1. What are the different characteristics of the problem which need to be analysed to select an appropriate method for solving the problem ? Explain.
2. Explain TMS with a neat diagram.
3. Discuss planning v/s state space search. Explain the components of planning.
4. What are the steps in natural language processing ? List and explain them briefly.
5. What is Game playing ? Discuss its application in artificial intelligence.
6. Express the following concepts as an Semantic Net structure with interconnected nodes and labelled arcs :

Company ABC is a software development company. Three departments within the company are sales, administration and programming. Joe is the manager of programming. Sue and Bill are programmers. Sue is married to Sam. Sam is an editor for Prentice Hall. They have three children and they live on Elm street. Sue wears glasses and is five feet four inches tall.

7. Write A* algorithm. Discuss its performance.
8. Explain the expert system architecture.

P.T.O.



SECTION – B

Answer **any four** questions. **Each** carries **10** marks. **(4×10=40)**

9. Explain minmax algorithm for game playing. Discuss any two requirements for the algorithm to improve its performance.
10. Explain STRIPS algorithm with a suitable block world problem. Discuss its disadvantages.
11. a) Explain rule-based architecture with a neat diagram. **6**
b) Explain different types of learning. **4**
12. Given are the following English sentences :
- E1 : All employees earning \$ 1400 or more per year pay taxes.
E2 : Some employees are sick today.
E3 : No employee earn more than the President.
E4 : John earns \$ 1600 pre year.
- Translate the above sentences into predicate logic. Prove that John pays tax using appropriate logic.
13. What is Parse Tree ? Explain its advantages. Derive Parse Tree using the following rules :
- $S \rightarrow NP \ vP$
 $NP \rightarrow N$
 $NP \rightarrow DET \ ADJ \ N \ PP$
 $VP \rightarrow V \ PP$
 $PP \rightarrow PREP \ NP$
- Determine whether the following sentence is accepted by the above grammar –
“ Jack slept on the brown table”.
14. Write short notes on :
- a) Waltz algorithm. **5**
b) Means end analysis. **5**
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