NOT MODERATED

Roll No. | | | | | | | |

18-CS-43

M.Sc. IV SEMESTER [MAIN/A.T.K.T.] EXAMINATION APRIL - MAY, 2018

COMPUTER SCIENCE

Paper - III

[Internets and Web Technology]

[Max. Marks : 75] *[Time : 3:00 Hrs.]* *[Min. Marks : 27]*

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks.**

Q. 1 a) Differentiate between web server and application server. Also write some steps to install application server. (8 marks)

b) Explain in detail about generic servlet. (7 marks)

OR

a) What is Dynamic Web programming ? Discuss the basic HTML form control in detail. (8 marks)

b) What is the use of scripting languages ? Write major advantages of scripting language. (7 marks)

Q. 2 a) How to handle HTML form data with java servlet ? Write a suitable example of servlet class to process the login form. (8 marks)

b) Write in brief about various types of JDBC drivers. (7 marks)

OR

a) Discuss Java Database Connectivity. Also explain various steps in process of connection to the database. (8 marks)

b) Write various methods of session handling. (7 marks)

Q. 3 a) What are the types of JDBC statements available with interfaces ? (8 marks)

b) Discuss the term connection pooling. What is the need of connection pooling ? (7 marks)

OR

a) How to extract meta data from the database via JDBC driver. (8 marks)

b) Write a servlet example in java with database connection. (7 marks)

P.T.O.

Find an optimal solution to the following knapsack problem (15 marks)

$n = 3$, $(w_1, w_2, w_3) = = (2, 3, 4)$ and $P_1 = 1$, $P_2 = 2$, $P_3 = 5$, $m = 5$

Q. 4 Write the Kruskal's algorithm for obtaining minimum spanning tree ? Also explain complexity of this algorithm. (15 marks)

OR

Write algorithm for computing the shortest path (Dijkstra) (15 marks)

Q. 5 Explain P, NP-complete and NP - hard problem with suitable example. (15 marks)

OR

Explain approximation algorithm with eq. (15 marks)