

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST 1 (September 2015)

COURSE CODE: 13M11BT112

MAX. MARKS: 15

COURSE NAME: Advanced Bioinformatics

SEMESTER: I<sup>st</sup> (M.Tech) or X<sup>th</sup> (BTDD)

COURSE CREDITS: 04

MAX. TIME: 1 hour

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*Note: All questions are compulsory.*

1. PAM and VTML matrices are quite similar to each other, but very different from BLOSUM matrices. Do you agree? Substantiate your answer with arguments. (3)
  2. How is semi-global alignment different from global alignment? Discuss the applications of both. (4)
  3. Find the best local alignment of sequences "ACCTAAGG" and "GGCTCAATCA", using +2 for a match, -1 for a mismatch, and -2 for a gap. (5)
  4. How are Gonnet matrices derived? Discuss its applications in sequence alignment. (3)
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