

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST-1 EXAMINATION-AUGUST-SEPTEMBER 2025

B.Tech-V Semester (CSE/IT)

COURSE CODE (CREDITS): 18B1WCI532 (2)

MAX. MARKS: 15

COURSE NAME: DATA COMPRESSION

COURSE INSTRUCTORS: **Dr. Praveen Modi**

MAX. TIME: 1 Hr

**Note:** (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	CO	Marks
Q1	What is the worst case performance if run length encoding, and Huffman encoding?	1	2
Q2	Find the arithmetic code for message "bab" if $P(a) = \frac{1}{3}$ , $P(b) = \frac{2}{3}$ ?	2	3
Q3	What will be run length code for the given message below using $k = 4$ bits? "00000000000110000001000000000100000000001100000011000000"	1	3
Q4	Sender transmit a binary message to receiver which contain number of zeros are $N = 57, 103, 17, 31$ . Sender encode them using golomb method using $M = 6$ ? Find the golomb codes?	2	2
Q5	Bob sends a message "meet me in the toga party" to alice using Huffman encoding technique. Calculate the randomization of bit distribution in the encoded message?	2	(4+1)