

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII EXAMINATION – SUMMER 2016****Subject Code: 183201****Date: 05/05/2016****Subject Name: Multimedia Computing****Time: 10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain elements of multimedia communication system. **07**
(b) Describe lossy and lossless image compression. **07**
- Q.2** (a) What are the measurements qualities of reconstructed image? **07**
(b) Briefly explain JPEG image compression (Encoder and Decoder). Explain each stage of JPEG compression. **07**
- OR**
- (b) Explain Huffman coding with example. **07**
- Q.3** (a) Write a short note on static and dynamic Huffman coding. **07**
(b) Explain Arithmetic coding with example. **07**
- OR**
- Q.3** (a) Explain following terms: **07**
(a) Adaptive Predictive Coding (b) Linear Predictive Coding
(c) Code-Excited Coding
(b) Briefly explain redundancies found in data compression. **07**
- Q.4** (a) With diagram explain MPEG audio coder. **07**
(b) With the aid of diagram, Explain frequency masking and temporal masking. **07**
- OR**
- Q.4** (a) Explain the following types of compressed frame: **07**
(a) I-frame (b) P-frame (c) B-frame
(b) Write a short note on video compression standards. **07**
- Q.5** (a) Use LZW to encode the string “alf eats alfalfa”. Show the encoder output and the new entries added by it to the dictionary. **07**
(b) Write a short note on linear predictive coding. **07**
- OR**
- Q.5** (a) Explain different applications of multimedia networks. **07**
(b) Explain motion estimation and compensation for video compression. **07**
