Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/M.Tech(IT)/SEM-2/PGEIT-202C/2013

2013

MULTIMEDIA TECHNOLOGY

Time Allotted : 3 Hours *Full Marks :* 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any *seven* questions. 7 × 10 = 70

1. What is multimedia ? What are the elements of a multimedia system ? What are the developments to a PC architecture to improve support for multimedia ? What are the multimedia application types and application areas ? List three basic multimedia services. Give four examples of multimedia applications. 1 + 2 + 2 + 2 + 1 + 2

2. What do you understand by temporal and non-temporal media ? What are the two structures of text ? Explain. What are type faces and fonts ? With examples describe the two types of fonts. With the help of examples explain what an ascender and a descender is in the Times New Roman font.

   2 + 2 + 2 + 2 + 2

3. Explain the terms audio amplitude, audio frequency and audio envelope. What is the difference between speech and music ? What are sampling size and sampling rate ?

   2 + 2 + 3 + 2 + 1

4. What is a digital image ? What is a pixel ? Describe three image colour models. 1 + 9

5. Describe two popular video colour models. What are the different types of video signals ? What are the three different types of analog video standards ? 4 + 3 + 3

6. a) Describe the basic concepts of animation.

   b) What do you understand by multimedia authoring ? Describe with an example one type of authoring metaphor. 5 + 5

7. a) Distinguish between data and information.

   b) What are the three different types of redundancies ? Explain with examples. 1 + 9

8. a) Explain what you understand by the following :

      (i) Interactive television

      (ii) Video-on-demand.

   b) Compare the usefulness of magnetic media and optical media for storage. 5 + 5

9. Write short notes on any *two* of the following : 2 × 5

   a) Run-length coding

   b) Coding redundancy

   c) Spatial and Temporal redundancy in video compression.