Question Paper Code : 42418

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018
Seventh Semester
Electronics and Communication Engineering
EC 2037 – MULTIMEDIA COMPRESSION AND COMMUNICATION
(Regulations 2008)

Time : Three Hours   Maximum : 100 Marks

Answer ALL questions

PART – A   **(10×2=20 Marks)**

1. What are the functions performed by a multimedia programmer ?

2. Define the term hypermedia.

3. How is reversible variable length code words created ?

4. Define signal to mask ratio.

5. What do you mean by entropy encoding ?

6. What do you understand from image compression ?

7. What is meant by IP telephony ?

8. What are the different factors that determine the QoS of VoIP systems ?

9. What are the policing mechanisms adopted in multimedia networks ?

10. What is meant by best-effort service ?

PART – B   **(5×16=80 Marks)**

11. a) Explain the concept behind the three types of text produced for multimedia. **(16)**

(OR)

b) Describe how digital videos are generated for multimedia communication. **(16)**

12. a) i) Draw and explain the DPCM encoder and decoder and explain the basics of predictive DPCM. **(10)**

   ii) Give a detailed note on linear predictive coding. **(6)**

(OR)

   b) i) Describe the H.261 video encoder principle and its implementation. **(8)**

   ii) Discuss the MPEG-4 encoder and decoder with necessary diagrams. **(8)**

13. a) i) Explain in detail about lossless and lossy compression schemes. **(10)**

   ii) Give a brief note on GIF and TIFF formats. **(6)**

(OR)

   b) i) A series of message is to be transferred between two computers. The message comprises of the characters A, B, C, D and E. The probabilities of occurrence of the above characters are 0.4, 0.19, 0.16, 0.15 and 0.1 respectively. Use Huffman coding to obtain a codeword for the above characters. Determine the average number of bits per codeword. **(10)**

   ii) Discuss the principle of Arithmetic coding. **(6)**

14. a) Discuss in detail about H.323 and SIP network architectures. **(16)**

(OR)

   b) Explain SS7 protocol suite and also discuss ISUP call establishment and release in detail. **(16)**

15. a) Bring out the significance of multimedia networking and comment on the various classes of service offered by these networks. **(16)**

(OR)

   b) In detail, explain the role played by RSVP in multimedia networks with illustrations. **(16)**