PURBANCHAL UNIVERSITY
2018/ २०७५

4 Years Bachelor of Computer Application (BCA/Eighth Semester/Final)

Time: 3.00 hrs.   Full Marks: 60 / Pass Marks: 24

BCA452CO, Multimedia Application

Candidates are required to give their own answers in their own words as far as practicable.
Figure in the margin indicate full marks.

Group A

Answer TWO questions.   **2 × 12 = 24**

1. How image and graphics is represented in PC? Describe image synthesis and image analysis. Explain image recognition steps with the help of block diagram.

2. (a) Explain importance of data compression with its issues. Compare source coding, entropy coding, and hybrid coding.

   (b) Describe video compression techniques used in MPEG system.

3. What is data conversion? Explain with example. Briefly discuss the concept of interface.

Group B

Answer SIX questions.   **6 × 6 = 36**

4. Explain multimedia and multimedia system. Explain data stream characteristics with an appropriate figure.

5. Compare audio, music and sound. Explain the components of speech recognition and understanding.

6. Explain how text is used in multimedia application. What is bit map image?

7. Define resource management architecture. Discuss the relation between QoS and resource management.

8. Why is the reference model for synchronization required and how is it defined? Explain.

9. Define basic technology of optical storage media. Explain CD- ROM extended architecture.

10. Write short notes on any TWO:

    (a) Nyquist's sampling theorem

    (b) Libraries and Toolkit

    (c) Lossy compression algorithm

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Group A

Answer TWO questions. $2 \times 12 = 24$

1. (a) How multimedia is necessary in real world? Explain multimedia with its classification.

   (b) What is data stream characteristics? Explain traditional data stream characteristic in multimedia.

2. Explain the types of image format in brief. Explain Image recognition steps with the help of block diagram.

3. Why synchronization is required in multimedia? Explain with the help of example. How four layer referenced model explains the concept of synchronization?

Group B

Answer SIX questions. $6 \times 6 = 36$

4. Define MIDI. Explain MIDI channel message and MIDI system message.

5. Explain basic concepts of animation. Explain how animation can be controlled?

6. Why do we need compression? Explain JPEG Audio Encoding in brief.

7. What is multimedia operating system? Explain resource management techniques in multimedia operating system.

8. Explain Abstraction level of programming with the help of the block diagram.

9. Explain Group Communication Architecture used in multimedia communication system.

10. Write short notes on any TWO:

(a) Video on demand

(b) Entropy Encoding

(c) Document Architecture