

**Course Code:**  
**Class: B.Tech (CSE/IT)-7<sup>th</sup> Sem. (4<sup>th</sup> year)**  
**Title: Software Project Management (SPM)**  
**Assignment Number: 2**  
**Last Dates for Submission: 10<sup>th</sup> Nov, 2016**

**Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HOD within the due date.
3. Write your Name, Programme, and Enrolment No. clearly at the top of the page.

**Question 1:**

a) Explain Software Project Estimation. Also, Discuss Empirical & Heuristic estimation techniques in detail.

b) What is maintenance? Explain Corrective, Adaptive & perfective maintenance.

**Question 2:**

a) Write a note on COCOMO Model. Also explain Organic, Semi-detached & Embedded systems.

b) Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code .Assume that the average salary of software engineers be Rs. 15,000/- per month. Determine the effort required to develop the software product and the nominal development time.

**MONAD UNIVERSITY**  
Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101  
Tehsil Hapur (U.P), India

**Course:** Digital Image Processing  
**Assignment No:** 2  
**Due date of submission:** 10.11.2016

**Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

Q.1

a)

1. What do you mean by Color model? Explain Hardware Oriented and Manipulation Oriented Model in detail. Also list the applications of color models.
2. Write steps involved in converting colors from RGB to HIS and vice-versa.

b) Write short note on:

- i) Hue & Saturation
- ii) Dilation
- iii) Erosion
- iv) Thinning
- v) Thickening
- vi) Thresholding

Q.2

a)

1. How many different shades of grey are there in a color RGB system in which each RGB image is a 15 bit image?
2. Suppose RGB color triplet for a particular color is given by (.3, .5, .2). Compute corresponding YIQ and HIS triplets.
3. Write short note on:
  - i) Clustering
  - ii) Topological Attributes

b)

1. Write algorithm for Boundary Extraction & Region Filling.
2. Discuss Edge Linking and Edge Following in detail.

**MONAD UNIVERSITY**  
Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101  
Tehsil Hapur (U.P), India

**Course: Distributed System**

Assignment No: 2

Due date of submission: 10.11.2016

**Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

**Q.1**

- a) What are Agreement Protocols? Differentiate between Byzantine Agreement Protocol, Consensus Problem, and Interactive Consistency Problem.
- b) What is deadlock? What are the necessary conditions for the occurrence of deadlock in distributed system? Describe the deadlock handling strategies in distributed system.

**Q.2**

- a) Discuss the major issue in designing a distributed system.
- b) Write short notes on:
  - 1) Flat and nested transaction
  - 2) Orphan Messages and Domino Effects
  - 3) Lost Messages
  - 4) Problems of Livelocks

**MONAD UNIVERSITY**  
Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101  
Tehsil Hapur (U.P), India

**Course: Mobile Computing**

Assignment No: 2

Due date of submission: 10.11.2016

**Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

**Question 1**

- a) What are the advantages & disadvantages of using a wireless transmission as compared to a fibre or wire transmission?
- b) How does data stored in a file differ from a database? Explain the function of the database connectivity protocol

**Question 2**

- a) Explain the situations in which a database can crash. How does a database recover using a recover manager? What is the role of logged entries in updating transactions?
- b) Describe MANET. How does a MANET differ from a fixed infrastructure network?

**MONAD UNIVERSITY**  
Village & Post Kastla, Kasmabad, P.O Pilkhuwa - 245101  
Tehsil Hapur (U.P), India

**Course: Data Compression**

Assignment No: 2

Due date of submission: 10.11.2016

**Instructions**

1. Write the responses to the assignment in your own handwriting.
2. Submit the responses to your HoD within the due date.
3. Write your Name, Programme and Enrollment No. clearly at the top of page.

**Question 1**

- a) What do you mean by data compression? Write some of the application where it is used?
- b) Explain Markov Model and composite source Models?

**Question 2**

- a) What is quantization? Describe the quantization problem with the help of example in detail.
- b) What do you mean by binary code? Compare binary code with Huffman coding?