



COMSATS University Islamabad
Department of Computer Science
Mid Term Examination Fall 2022

Course:	Introduction to ICT	Instructor:	Dr. Majid Iqbal Khan, Dr. Hufsa Mohsin, Dr. Saif ur Rehman Malik, Mr. Khurram Iqbal, Mr. Saleem Raza
Class:	BS (CS, SE, DS, CT, AI)	Date:	15-11-2022
Marks:	25	Duration:	90 minutes
Name:		Registration #	

Instructions:

- Attempt all questions. Draw diagrams, wherever necessary, to illustrate your answer
- Return the question paper with answer sheet

Question# 01. (CLO-1)

[8 Marks]

- 1-A) How many machine cycles are required to execute the addition instruction of 2+5. Write steps of each cycle. (2)
- 1-B) Describe the purpose of pits and lands. In which type of storage device this mechanism is used? (2)
- 1-C) Given a hard disk with (platters = 4, tracks per platterside = 8, sector per track = 18). Calculate the following: (2)
- Total tracks in hard disk
 - Total sectors in hard disk
- 1-D) What are the components that affects the speed of a computer? Name any two of them and state how it affects the speed? (2)

Question# 02. (CLO-2)

[7 Marks]

Suppose two hexadecimal numbers (AC9F2B)₁₆ and (7D9B3)₁₆ are given to the computer to be added.

- Perform the conversions that how computer will convert the numbers into binary,
- Add the converted binary numbers together and
- Produce the result in a human understandable decimal format. (3+2+2)

Question# 03. (CLO-3)

[10 Marks]

- 3-A) Compare and contrast the Bus, Star and Mesh topologies with the help of examples. (3)
- 3-B) OLX falls under which category of Ecommerce Business Model and why? (1)
- 3-C) Clarify the purpose of knowledge base in Expert Systems. Why it is important? (1)
- 3-D) For a scenario where customers can place order for a product. Associate the entities in the form of relational database showing attributes, primary and foreign keys. (3)
- 3-E) Ali wants to back up his data. (2)
- Give two reasons why making backups is necessary.
 - Ali thinks that making backups will prevent his data from getting viruses. Describe what a virus is and explain why Ali is wrong.