

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)****ORGANISATION OF ISLAMIC COOPERATION (OIC)****Department of Computer Science and Engineering (CSE)****SEMESTER FINAL EXAMINATION****WINTER SEMESTER, 2015-2016****DURATION: 3 Hours****FULL MARKS: 150****CSE4105 Computing for Engineers****Programmable calculators are not allowed. Do not write anything on the question paper.**There are **8 (Eight)** questions. Answer **6 (Six)** of them.

Figures in the right margin indicate marks.

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1. a) Briefly describe the side effects of output ergonomics. State how the side effects of using output devices can be reduced. 13
  - b) Describe laser jet printer. 12
  2. a) Describe various units of CPU and state how you can compare various microprocessors. 8+5
  - b) Explain text coding in computer. 8+4
  - c) Mention the names of various ports of a computer and discuss serial port. 8+4
  - d) Describe parallel processing.
  3. a) Explain how magnetic hard disk is organized and data are stored and retrieved. 13
  - b) State the concept of average access time and data transfer rate. Explain how you can optimize the performance of hard disk drive. 4+8
  4. a) State the functions of an operating system and the concept of multitasking OS. How can you enhance the power of an operating system? 8+5
  - b) Compare WINDOWS and LINUX. Describe embedded operating system. 8+4
  5. a) Describe various ways of acquiring software. Mention names of various types of software. 11+2
  - b) Compare bit mapped graphics and vector graphics. Discuss photo editing software. 8+4
  6. a) What are the uses of computer networking? State the concept of network topology and describe the topology that is being used in IUT. 5+8
  - b) State the names of various types of hardware and media for computer networking. Briefly describe router. Write short notes on TCP/IP. 4+4+4
  7. a) What do you understand by database and DBMS, and Data warehouse and data mining? Discuss query languages. 8+5
  - b) Describe enterprise software along with its properties. Mention names of few available corporate DBMS and discuss the features of Oracle database. 8+4
  8. a) Software is stored in many different types of files, briefly discuss those. What do you understand by hardware / software interaction? 11+2
  - b) What do you understand by planning of a program? Discuss planning tools, pseudo code and IPO. 4+8