

Unique Paper Code	:	62345501-OC
Name of the Course	:	B.A. (Prog.) / B.Com. (Prog.) GE (CBCS)
Name of the Paper	:	IT Fundamentals
Semester	:	V
Year of Admission	:	2015, 2016, 2017, 2018

Duration: 3 Hours

Maximum Marks: 75

All questions carry equal marks.

Attempt any four questions out of six questions.

1. Explain the role of primary memory in the computer system. Give the two major types of primary memory.
 Arrange the memories in increasing order of speed - Register, RAM, Hard Disk Drive, Magnetic Tape, Cache Memory. Justify your answer.
 Compute the number of bits and bytes in the following memory sizes:

 - a. 4GB
 - b. 1TB
 - c. 200MB
 - d. 7KB
2. "Operating system is a resource allocator." Justify your statement.
 Briefly explain any four types of operating systems with a suitable example.
 Identify the type of operating system (time-sharing, real-time, batch processing) which is more suitable for the following applications.

 - a. Manufacturing unit
 - b. Monthly payroll system
 - c. Online gaming portal
3. Discuss the advantages of the database approach over the file-oriented approach in any real-life scenario.
 Explain the terms entity and attribute with respect to the entity-relationship database model. How are these two terms related?
 Consider the scenario of automating the cab booking service.

 - A cab service provider has several cars and drivers.
 - A cab may be booked by multiple passengers.

Identify the entities and their attributes in this scenario. State assumptions, if any.
4. Under which situation the coaxial cable will be preferred over twisted-pair cable?
 Consider a scenario where there is a requirement of connecting multiple computers within an institution spanned across 500 meters. Suggest the type of network to be used in this scenario. Give reasons.
 What are the advantages of the Internet as far as the business application is concerned?

5. How is uploading different from downloading? Which downloading speed is better for real-time video streaming - 1Mbps or 24Mbps? Why?
What purpose do we require more uploading speed than downloading speed?
Consider the URL - <http://www.niit.com/mainpage>. Describe the components of this URL.
Explain the steps involved in sending an e-mail.
6. Give the purpose of any four types of registers of the Central Processing Unit (CPU).
Briefly explain any three applications of computers in real-life scenarios.
Differentiate between the following:
- Impact and Non-impact printers
 - Optical Character Recognition and Optical Mark Recognition

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