

**B.SC. FOURTH SEMESTER (HONOURS) EXAMINATIONS, 2021**

**Subject: Mathematics**

**Course ID: 42115**

**Course Code: SH/MTH /405/SEC-2**

**Course Title: Operating System: Linux**

**Full Marks: 40**

**Time: 2 Hours**

**The figures in the margin indicate full marks**

**Notations and symbols have their usual meaning**

1. Answer *any five* of the following questions: **5 × 2 = 10**
  - a) Name different Linux Shell.
  - b) What is the use of fork () function?
  - c) Why Linux considered as more secured than other OS.
  - d) What is the purpose of ls command in Shell?
  - e) Write full form of GUI and CLI?
  - f) What is Linux Kernel?
  - g) What is the maximum length for any file name under Linux?
  - h) What is Unix pwd command?
  
2. Answer *any four* of the following questions: **5 × 4 = 20**
  - a) Differentiate between shell variables, environment variables and user defined variables.
  - b) In Linux what are the utilities of a root account?
  - c) What is meant by I/O redirection and piping? What is grep command?
  - d) Explain the following commands with syntax, options and examples: i) head ii) tail.
  - e) Why Linux considered as more secured than other OS?
  - f) Explain basic components of Linux.
  
3. Answer *any one* of the following questions: **10 × 1 = 10**
  - a) Explain briefly different Linux File systems.
  - b) Explain Linux architecture with suitable diagram.

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