

This question paper contains 2 printed pages]

AI—416—2017

FACULTY OF SCIENCE

M.Sc. (Third Semester) EXAMINATION

MARCH/APRIL, 2017

(CBCS Pattern)

COMPUTER SCIENCE

Paper No. 305

(Elective III)(1)

(Advanced Operating System)

(Saturday, 29-4-2017)

Time : 2.00 p.m. to 5.00 p.m.

Time—Three Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

1. Attempt any *three* of the following : 15
 - (a) Explain Architecture of unix operating system.
 - (b) What is inter process communication ? Explain.
 - (c) Explain how to read and write blocks.
 - (d) What is process scheduling ? Explain.
 - (e) Explain layout of system memory.
2. Attempt any *three* of the following : 15
 - (a) Explain how manage users and groups.
 - (b) Explain mkdir and rmdir functions with example.
 - (c) Explain symlink and readlink functions.
 - (d) Explain advanced memory allocation.
3. Attempt any *three* of the following : 15
 - (a) Which are the file times ? Explain utime function.
 - (b) Explain opportunistic allocation.
 - (c) What is meant by file access permission ? Explain different file access permissions.
 - (d) Which are the priority levels ? Explain.

P.T.O.

4. Attempt any *three* of the following : 15
- (a) What is anonymous memory mapping ? Explain.
 - (b) Explain access and unmask functions.
 - (c) Draw process states transition diagram and explain.
 - (d) Which are the limitations on protected process threads.
5. Write short notes on (any *three*) : 15
- (a) Shell
 - (b) Kernel variables
 - (c) SIGCLD semantics
 - (d) DUP
 - (e) Performance counter.