STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 600 086
(For Candidates admitted during the academic year 2011-12 & thereafter)
SUBJECT CODE: 11CS/MC/OS54

B.C.A. DEGREE EXAMINATION – NOVEMBER 2015
FIFTH SEMESTER

REG. NO. _____

COURSE : MAJOR CORE
PAPER : OPERATING SYSTEMS
TIME : 30 MINUTES **MAX. MARKS: 20**

SECTION – A
ANSWER ON THE QUESTION PAPER ITSELF
Answer all the questions **(20 x 1 = 20 marks)**

Choose the correct answer

1. Blade servers comprise of _____.
   a) Multi-processor boards b) I/O boards
   c) N/W boards d) all of the above.

2. An application program refers to
   a) Program b) code
   c) instruction d) word processor

3. _____ is identified by IP address and port number.
   a) Socket b) Memory
   c) I/O d) all of the above

4. Many user level threads can be mapped to single level threads using solaris _____.
   a) Multi-thread b) blue chip
   c) green thread d) none of the above

5. 'Spinlock' – term is associated with _____.
   a) Monitor b) fork
   c) system call d) semaphore

6. Serializability can be ensured through _____.
   a) Internet Protocol b) Two-way locking protocol
   c) One-way locking protocol d) all of the above

7. Fast look-up hardware cache called _____.
   a) TAB b) SNB
   c) TLB d) TMB

8. One or more physically contiguous pages is known as_____.
   a) Stub b) hub
   c) slab d) ring

9. _____ defines path from the current directory.
   a) Logical path name b) relative path name
   c) physical path name d) all of the above

10. _____ is the latest n/w attached protocol.
    a) TCP b) IP
    c) ISCSI d) UDP

Fill in the blanks:

11. _____ is a software generated interrupt.

12. _____ provide an interface to the services made available by an Operating System.

13. Number of processes that are completed per time unit is called _____.

14. The problem of In-definite blockage of low-priority process can be solved by

    _____.

15. Segment code of each process is known as _____.

16. PCB stands for _____.

17. _____ holds the smallest physical memory address.

18. Variant of swapping can be termed as _____.

19. _____ provides host-name to network address translations for the entire internet.

20. _____ is a memory area that stores data while they transferred between two devices.

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COURSE : MAJOR CORE
PAPER : OPERATING SYSTEMS
TIME : 2 HOURS & 30 MINUTES **MAX. MARKS: 80**

Section – B

Answer ALL questions: **(5 x 2 = 10 marks)**

1. Define distributed system.
2. List all the process states.
3. Define Monitor.
4. Define segmentation.
5. Write about NFS.

Section – C

Answer any EIGHT of the following questions: **(8 x 5 = 40 marks)**

6. Compare Clustered and Desktop systems.
7. Write note on System Programs.
8. What is RMI? Explain with example.
9. List the benefits of Multi-threaded programming.
10. Discuss about Peterson solution to critical section problem.
11. How to recover from deadlock? Discuss.
12. Explain about Paging in detail.
13. What is the cause of Thrashing? Explain.
14. List down the file operations. Explain.
15. Write the significance of Indexed Allocation in detail.

Section – D

Answer any THREE of the following: **(3 x 10 = 30 marks)**

16. Elaborate the services offered by an Operating system.
17. Explain the steps involved in Shortest Job First scheduling with an Illustration.
18. Briefly discuss about Deadlock prevention.
19. Illustrate the FIFO page replacement algorithm.
20. Write short notes on a) Kernel I/O
    b) Transforming I/O requests to Hardware operations.

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