

Part I: Operating Systems Fundamentals

Q1. True or False (put T for true and F for false)

1. The Main Memory consists of RAM (Random Access Memory) and ROM (Read Only Memory).
(1 Point)

- ☒ True
☐ False

2. All of the secondary storages used as Output devices only for permeant storage.(1 Point)

- ☐ True
☒ False

3. Bootstrap is a framework stored in ROM contains some instructions called basic input output instructions (BIOS).(1 Point)

- ☒ True
☐ False

4. Windows server 2008 and Novell Netware are batching operating systems.(1 Point)

- ☐ True
☒ False

5. The purpose of the operating system is to ensure that it abstracts the HW and facilitates the seamless execution of users' applications using the system.(1 Point)

- ☒ True
☐ False

6. The application itself is the responsible for accessing the memory variable storage and perform the calculations based on values in memory.(1 Point)

- ☒ True
☐ False

7. Threads help in performing parallelism within the same process.(1 Point)

- ☒ True
☐ False

8. Interrupt vector contains the addresses for all Interrupt Service Routines (ISR) for all I/O devices that connected to the computer system.(1 Point)

- ☒ True
☐ False

9. The process which running in user-mode services would be able to access the hardware directly. (1 Point)

- ☐ True
- ☒ False

10. A Virtual Machine has its own guest OS, which may be the same as or different from the underlying host OS.(1 Point)

- ☒ True
- ☐ False

Q2. Select the correct answer(s):

11. 1. Which of the following are Output Devices? (Select all the correct answers)(1 Point)

- ☒ a. Data Projectors
- ☐ b. Microphone
- ☒ c. Speaker and Headphones
- ☐ d. Scanner (2D and 3D)
- ☒ e. Printer (2D and 3D) – inkjet or laser

12. The is a program that controls the execution of other programs running on the system. It acts as a facilitator and intermediate layer between the different software components and the computer hardware.(1 Point)

- ☐ a. Bootstrap
- ☒ b. Operating System
- ☐ c. Database Management System
- ☐ d. Embedded System

13. The main objectives of any operating systems are: (Select all the correct answers)(1 Point)

- ☒ a. Efficiency of the OS in terms of responsiveness, fluidity, and so on.
- ☒ b. Ability to abstract and extend to new devices and software
- ☒ c. Ease of usability to the user in terms of making it convenient
- ☐ d. Control the flow of data through local networks.

14. The Usage type categorization of operating systems are: (Select all the correct answers)(1 Point)

- ☒ a. Batch Operating Systems
- ☒ b. Time Sharing Operating Systems
- ☒ c. Parallel – Distributed Operating Systems
- ☒ d. Network Operating Systems
- ☒ e. Real Time Operating Systems

15. Select the Advantages of virtualization from the following: (Select all the correct answers)(1 Point)

- ☐ a. Emulate more machines than are physically available.
- ☐ b. Run operating systems where the physical hardware is unavailable.
- ☐ c. Run legacy systems.
- ☐ d. Debug problems (suspend and resume the problem machine).
- ☒ e. All of the above

16. Which of the following are the responsibilities of an operating systems? (Select all the correct answers)(1 Point)

- ☒ a. Access and protection
- ☒ b. File systems
- ☒ c. Scheduling
- ☒ d. Memory management
- ☒ e. I/O and resource management

17. The types of addressing of memory in the operating systems are: (Select all the correct answers) (1 Point)

- ☐ a. Logical Address
- ☒ b. Physical Address
- ☐ c. Controlling
- ☐ d. None of the above.

18. The way of management when the two processes need to save in the shared memory at the same time, it is called (1 Point)

- ☒ a. Compilation. ✗
- ☐ b. Execution.
- ☒ c. Synchronization.
- ☐ d. Termination.

19. When a set of processes become blocked because each process is holding a resource and waiting for another resource acquired by some other process. This is called(1 Point)

- ☐ a. Synchronization.
- ☒ b. Deadlock.
- ☐ c. Acceleration.
- ☐ d. Process Status.

20. The OS needs to be able to periodically clear temporarily created files that may no longer be required for the functioning of the system. This is typically done using a on the system.(1 Point)

- ☒ a. Garbage Collector.
- ☐ b. Anti-Virus.
- ☐ c. Data Collector.
- ☐ d. None of the above.

Part II: Computer Networks Fundamentals and Security

Q3. Select the correct answer: (only one correct answer)

21. We can find our IP address on a MS Windows based computer, by using:(1 Point)

- ☐ a. Control Panel\Network and Internet\Network and Sharing Center
- ☐ b. Ipconfig Command
- ☐ c. Ipconfig /all Command
- ☒ d. All the above

22. We are using protocol to read our mails when internet connection is NOT available all the time.(1 Point)

- ☒ a. POP3
- ☐ b. IMAP4
- ☐ c. UDP
- ☐ d. FTP

23. What is the name of the attack method that can be used to crack passwords?(1 Point)

- ☐ a. DOS attack
- ☐ b. Brute force attack
- ☒ c. Smurf attack
- ☐ d. Spam

24. To communicate with hosts on the same LAN, we must use a (1 Point)

- ☐ a. DNS
- ☒ b. Router
- ☐ c. Switch
- ☐ d. DHCP

25. You must have an IP address to connect to the internet, you can get your IP address (if your configuration was "obtain automatically ") from:(1 Point)

- ☐ a. Router
- ☒ b. DHCP
- ☐ c. DNS
- ☐ d. Switch

26. What is the benefit of the Networking?(1 Point)

- ☐ a. File Sharing
- ☐ b. Easier access to Resources
- ☐ c. Easier Backups
- ☒ d. All of the Above

27. Which of the following is not the Networking Devices?(1 Point)

- ☐ a. Switch
- ☒ b. Linux
- ☐ c. Routers
- ☐ d. Firewalls

28. A collection of computers and devices connected together via communication devices and transmission media is called a:(1 Point)

- ☐ a. Workgroup
- ☐ b. Server
- ☐ c. Mainframe
- ☒ d. Network

29. Which of the following devices is dedicated to connect several computers wirelessly?(1 Point)

- ☐ a. Hub
- ☐ b. Switch
- ☒ c. Access Point
- ☐ d. Router

30. An intrusion detection system (IDS) is primarily designed to perform what function?(1 Point)

- ☐ a. prevents system failures
- ☐ b. Rate system performance
- ☐ c. Test a system for vulnerabilities
- ☐ d. Detect abnormal activity

31. is ensuring that information is not revealed to unauthorized persons.(1 Point)

- ☐ a. Confidentiality
- ☐ b. Integrity
- ☐ c. Security
- ☒ d. Authorization

32. Which of The Following Malicious Program is Replicate Automatically?(1 Point)

- ☐ a. Antivirus
- ☐ b. backdoor
- ☒ c. Worm
- ☐ d. Zombie

33. The modern TCP/IP Protocol Suite model consists of Layers?(1 Point)

- ☐ a. 4 layers
- ☒ b. 5 layers
- ☐ c. 6 layers
- ☐ d. 7 layers

34. In which class the IP address 70.70.70.70 exists?(1 Point)

- ☒ a. Class A
- ☐ b. Class B
- ☐ c. Class C
- ☐ d. Class D

35. If one site fails in distributed system then _____(1 Point)

- ☒ a. the remaining sites can continue operating
- ☐ b. all the sites will stop working
- ☐ c. directly connected sites will stop working
- ☐ d. none of the mentioned

Part III: SW Testing Fundamentals

Q4. Select the correct answer: (only one correct answer)

36. Which testing phase tests individual software modules combined together as a group?(1 Point)

- ☐ a. Module testing
- ☒ b. Integration testing
- ☐ c. White Box testing
- ☐ d. Software testing

37. The main focus of acceptance testing is:(1 Point)

- ☐ a. Finding faults in the system
- ☒ b. Ensuring that the system is acceptable to all users
- ☐ c. Testing the system with other systems
- ☐ d. Testing for a business perspective
- ☐ e. Testing by an independent test team

38. Which is NOT true - The black box tester:(1 Point)

- ☐ a. Should be able to understand a functional specification or requirements document
- ☒ b. Should be able to understand the source code
- ☐ c. Is highly motivated to find faults
- ☐ d. is creative to find the system's weaknesses

39. Beta testing is:(1 Point)

- ☒ a. Performed by customers at their own site
- ☐ b. Performed by customers at their software developer's site
- ☐ c. Performed by an independent test team
- ☐ d. Useful to test bespoke software
- ☐ e. Performed as early as possible in the lifecycle

40. Verification is:(1 Point)

- ☐ a. Checking that we are building the right system
- ☒ b. Checking that we are building the system right
- ☐ c. Performed by an independent test team
- ☐ d. Making sure that it is what the user really wants

41. The difference between re-testing and regression testing is:(1 Point)

- ☒ a. Re-testing is running a test again; regression testing looks for unexpected side effects
- ☐ b. Re-testing looks for unexpected side effects; regression testing is repeating those tests
- ☐ c. Re-testing is done after faults are fixed; regression testing is done earlier
- ☐ d. Re-testing uses different environments, regression testing uses the same environment

42. Before launching a software which testing is to be done in-house?(1 Point)

- ☐ a. Beta
- ☐ b. Gamma
- ☒ c. Alpha
- ☐ d. None of the above

43. Software testing activities should start(1 Point)

- ☐ a. As soon as the code is written
- ☐ b. During the design stage
- ☐ c. When the requirements have been formally documented
- ☒ d. As soon as possible in the development life cycle

44. Faults found by users are due to:(1 Point)

- ☐ a. Poor quality software
- ☒ b. Poor software and poor testing
- ☐ c. Bad luck
- ☐ d. Insufficient time for testing

45. In which order should tests be run?(1 Point)

- ☒ a. The most important tests first
- ☐ b. The most difficult tests first (to allow maximum time for fixing)
- ☐ c. The easiest tests first (to give initial confidence)
- ☐ d. The order they are thought of