

[Time: Three Hours]

[ Marks:80]

Please check whether you have got the right question paper.

- N.B:
1. Question.No.1 is compulsory.
  2. Attempt any three questions out of remaining.
  3. Figure to the right indicate marks.

- Q1 a Explain Information Lifecycle Management. 05  
 b Define and describe Recovery Time Objective 05  
 c An application specifies a requirement of 200GB to host a database and other files. It also specifies that the storage environment should support 5,000 IOPs during its peak processing cycle. The disks available for configuration provide 66GB of usable capacity, and the manufacturer specifies that they can support a maximum of 140 IOPs. The application is response time sensitive and disk utilization beyond 60 percent will not meet the response time requirements of the application. Compute and explain the theoretical basis for the minimum number of disks that should be configured to meet the requirements of the application. 05  
 d What are the different techniques of indexing a document? 05
- Q2 a An application has 1,000 heavy users at a peak of 2 IOPs each and 2,000 typical users at a peak of 1000 IOPs each, with a read/write ratio of 2:1. Calculate IOPs requirement for RAID3, RAID5 and RAID6. 10  
 b Explain FC-AL and FC-SW connectivity. 10
- Q3 a Discuss NAS along with its components. 10  
 b Explain storage data traffic over TCP/IP. 10
- Q4 a Explain Copy-on-Write Frozen Image technology. 10  
 b Explain document surrogates and their usefulness in detail. 10
- Q5 a Explain in detail about Object Storage and Retrieval in CAS with example. 10  
 b Discuss the problems with Boolean retrieval system. 05  
 c What do you mean by stemming? Explain. 05
- Q6 Write short note on (any two) 10  
 a Boolean Based Matching. 10  
 b Read and write operations with cache. 10  
 c Soft and Hard zoning. 10



comp [choice]  
EHDF

Q.P. Code:16634

(3 hours)

[80 Marks]

N.B.:

1. Question No.1 is **compulsory**.
2. Attempt any **Three** questions out of remaining **Five** questions.
3. Figures to the right indicate full marks.
4. Assume any suitable data wherever required but justify the same.

- |     |    |   |    |
|-----|----|---|----|
| Q.1 | a) | Write a short note on Reconnaissance.                             | 5  |
|     | b) | What is a Computer Security Incident?                             | 5  |
|     | c) | List and explain in short the steps of writing a Forensic Report. | 5  |
|     | d) | What is Ethical Hacking?  | 5  |
| Q.2 | a) | Write a detail note on Crimes using mobile phones.                | 10 |
|     | b) | Write a detail note on creating a Response Toolkit.               | 10 |
| Q.3 | a) | What are the challenges in evidence handling?                     | 10 |
|     | b) | What are the goals of network monitoring?                         | 10 |
| Q.4 | a) | Explain Evidence Handling Procedures.                             | 10 |
|     | b) | Write a note on Recovering deleted files on UNIX system.          | 10 |
| Q.5 | a) | Write a detail note on Tools for Forensics Duplication.           | 10 |
|     | b) | Explain steps of Live Data Collection from Windows system.        | 10 |
| Q.6 |    | Write a detail note on (any two)                                  | 20 |
|     | a) | Data analysis tool NMAP.  |    |
|     | b) | Guidelines for writing a Forensic Report.                         |    |
|     | c) | Incident Response Methodology.                                    |    |



**Q.P.Code: 013969**

**(3 Hours)**

**[Total Marks: 80]**

**N.B. :** 1) Q.1 is Compulsory  
2) Solve any 3 out of remaining 5

- Q.1.a Explain the various criteria for classification of parallel computer. Explain Flynn's classification in detail. 10 M
- b What is the significance of 5 M
1. Bisection bandwidth 2. Network Diameter
- c Explain granularity of a parallel system. 5M
- Q.2.a Write a MPI program that prints out a "Hello World "Message from each processor 10 M
- b. What are principles of Message Passing Programming? 10 M
- Q.3.a Explain about process synchronization mechanism with Semaphore. 10 M
- b. Short note on 'SIMD matrix multiplication'. 10 M
- Q.4.a State Amdahl's law ? 10 M
- Suppose we are trying to determine whether it is worthwhile to develop a parallel version of a program solving a particular problem. Benchmarking reveals that 90 percent of the execution time is spent inside functions that we believe we can execute in parallel. The remaining 10 percent of the execution time is spent in functions that must be executed on a single processor. What is the maximum speedup that we could expect from a parallel version of the program executing on eight processors.
- b. Explain the various levels of parallel processing. 10 M
- Q.5.a Explain in brief Nanotechnology and its impact on high performance computing. 10 M
- b Explain Speedup, efficiency and scalability with suitable Example. 10 M
- Q.6. a Write a note on NVIDIA Tesla GPU . 5M
- b Differentiate a dataflow computer from a control flow computer. 5M
- c What is data Race ? 5M
- d What is meant by grain packing and scheduling in parallel Processing. 5M

