



Maratha Vidya Prasarak Samaj's

Rajarshi Shahu Maharaj Polytechnic, Nashik

Udoji Maratha Boarding Campus, Near Pumping Station, Gangapur Road, Nashik-13.

Affiliated to MSBTE Mumbai, Approved by AICTE New Delhi, DTE Mumbai & Govt. of Maharashtra, Mumbai.

***Subject: Emerging trends in Computer
and Information Technology [22618]***



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SYLLABUS

| Chapter No. | Name of chapter | Total Marks |
|-----------------------|----------------------------|--------------------|
| 1 | Artificial intelligence | 06 |
| 2 | Internet Of Things | 18 |
| 3 | Basics Of Digital Forensic | 08 |
| 4 | Digital Evidences | 10 |
| 5 | Basics Of hacking | 12 |
| 6 | Types Of Hacking | 16 |
| Total Marks :- | | 70 |



COURSE OUTCOME (CO)

COURSE:- ETI (22618)

PROGRAMME: - CM

| CO.NO | Course Outcome |
|--------------|---|
| CO-618.1 | Describe Artificial Intelligence, Machine Learning and Deep Learning. |
| CO-618.2 | Interpret IoT concepts. |
| CO-618.3 | Compare Models of Digital Forensic Investigation. |
| CO-618.4 | Describe Evidence Handling procedures. |
| CO-618.5 | Describe Ethical Hacking process. |
| CO-618.6 | Detect Network, Operating System and Applications vulnerabilities. |



1. ARTIFICIAL INTELLIGENCE

Total Marks-06

MCQ Question

(Total number of Question=Marks*4=06*04=24)

- 1 Which of these schools was not among the early leaders in AI research?
 - A. Dartmouth University
 - B. **Harvard University**
 - C. Massachusetts Institute of Technology
 - D. Stanford University
 - E. None of the above
- 2 DARPA, the agency that has funded a great deal of American AI research, is part of the Department of:
 - A. **Defense**
 - B. Energy
 - C. Education
 - D. Justice
 - E. None of the above
- 3 The conference that launched the AI revolution in 1956 was held at:
 - A. **Dartmouth**
 - B. Harvard
 - C. New York
 - D. Stanford
 - E. None of the above
- 4 What is the term used for describing the judgmental or commonsense part of problem solving?
 - A. **Heuristic**
 - B. Critical
 - C. Value based
 - D. Analytical
 - E. None of the above
- 5 What of the following is considered to be a pivotal event in the history of AI.
 - A. 1949, Donald O, The organization of Behavior.
 - B. 1950, Computing Machinery and Intelligence.
 - C. **1956, Dartmouth University Conference Organized by John McCarthy.**
 - D. 1961, Computer and Computer Sense.
 - E. None of the above
- 6 A certain Professor at the Stanford University coined the word 'artificial intelligence' in 1956 at a conference held at Dartmouth College. Can you name the Professor?
 - A. David Levy
 - B. **John McCarthy**
 - C. Joseph Weizenbaum
 - D. Hans Berliner
 - E. None of the above
- 7 The field that investigates the mechanics of human intelligence is:
 - A. History
 - B. **cognitive science**
 - C. psychology
 - D. sociology
 - E. None of the above
- 8 A.M. turing developed a technique for determining whether a computer could or could not demonstrate the artificial Intelligence,, Presently, this technique is called
 - A. **Turing Test**
 - B. Algorithm
 - C. Boolean Algebra
 - D. Logarithm
 - E. None of the above



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- 9 The first AI programming language was called:
A. BASIC
B. FORTRAN
C. **IPL**
D. LISP
E. None of the above
- 10 What is Artificial intelligence?
A. Putting your intelligence into Computer
B. Programming with your own intelligence
C. **Making a Machine intelligent**
D. Putting more memory into Computer
- 11 Who is a father of AI?
A. Alain Colmerauer
B. **John McCarthy**
C. Nicklaus Wirth
D. Seymour Papert
- 12 Artificial Intelligence has its expansion in the following application.
A. Planning and Scheduling
B. Game Playing
C. Robotics
D. **All of the above**
- 13 The characteristics of the computer system capable of thinking, reasoning and learning is known is
A. machine intelligence
B. human intelligence
C. **artificial intelligence**
D. virtual intelligence
- 14 The first AI programming language was called:
A. BASIC
B. FORTRAN
C. **IPL**
D. LISP
- 15 The first widely used commercial form of Artificial Intelligence (AI) is being used in many popular products like microwave ovens, automobiles and plug in circuit boards for desktop PCs.
What is name of AI?
A. Boolean logic
B. Human logic
C. **Fuzzy logic**
D. Functional logic
- 16 What is the term used for describing the judgmental or commonsense part of problem solving?
A. **Heuristic**
B. Critical
C. Value based
D. Analytical
- 17 ___ is a branch of computer science which deals with helping machines finds solutions to complex problems in a more human like fashions
A. **Artificial Intelligence**
B. Internet of Things
C. Embedded System
D. Cyber Security
- 18 In ___ the goal is for the software to use what it has learned in one area to solve problems in other areas.
A. Machine Learning
B. **Deep Learning**
C. Neural Networks
D. None of these
- 19 Computer programs that mimic the way the human brain processes information is called as
A. Machine Learning
B. Deep Learning
C. **Neural Networks**
D. None of these
- 20 A ___ is a rule of thumb, strategy, trick, simplification, or any other kind of device which drastically limits search for solutions in large problem spaces.
A. **Heuristic**
B. Critical
C. Value based
D. Analytical
- 21 ___ do not guarantee optimal/any solutions
A. **Heuristic**
B. Critical
C. Value based
D. Analytical



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- 22 Cognitive science related with
- A. Act like human
 - B. ELIZA
 - C. **Think like human**
 - D. None of above
- 23 ___ Model should reflect how results were obtained.
- A. Design model
 - B. Logic model
 - C. **Computational model**
 - D. None of above
- 24 Communication between man and machine is related with
- A. LISP
 - B. **ELIZA**
 - C. All of above
 - D. None of above
- 25 ELIZA created by
- A. John McCarthy
 - B. Steve Russell
 - C. Alain Colmerauer
 - D. **Joseph Weizenbaum**



2. INTERNET OF THINGS

Total Marks-18

MCQ Question

(Total number of Question=Marks*3=18*03=54)

- 1 Embedded system is
 - A. An electronic system
 - B. A pure mechanical system
 - C. An electro-mechanical system
 - D. (A) or (C)
- 2 Which of the following is not true about embedded systems?
 - A. Built around specialized hardware
 - B. Always contain an operating system
 - C. Execution behavior may be deterministic
 - D. All of these
 - E. None of these
- 3 Which of the following is not an example of a “small-scale embedded system”?
 - A. Electronic Barbie doll
 - B. Simple calculator
 - C. Cell phone
 - D. Electronic toy car
- 4 The first recognized modern embedded system is
 - A. Apple computer
 - B. Apollo Guidance Computer (AGC)
 - C. Calculator
 - D. Radio navigation system
- 5 The first mass produced embedded system is
 - A. Minuteman-I
 - B. Minuteman-II
 - C. Autonetics D-17
 - D. Apollo Guidance Computer (AGC)
- 6 Which of the following is an (are) an intended purpose(s) of embedded systems?
 - A. Data collection
 - B. Data processing
 - C. Data communication
 - D. All of these
 - E. None of these
- 7 Which of the following is (are) example(s) of embedded system for data communication? USB Mass Storage device
 - A. Network router
 - B. Digital camera
 - C. Music player
 - D. All of these
 - E. None of these
- 8 What are the essential tight constraint/s related to the design metrics of an embedded system?
 - A. Ability to fit on a single chip
 - B. Low power consumption
 - C. Fast data processing for real-time op.
 - D. All of the above
- 9 A digital multi meter is an example of an embedded system for
 - A. Data communication
 - B. Monitoring
 - C. Control
 - D. All of these
 - E. None of these
- 10 Which of the following is an (are) example(s) of an embedded system for signal processing?
 - A. Apple iPod (media player device)
 - B. SanDisk USB mass storage device
 - C. Both (A) and (B)
 - D. None of these
- 11 The instruction set of RISC processor is



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- A. **Simple and lesser in number** C. Simple and larger in number
B. Complex and lesser in number D. Complex and larger in number
- 12 Which of the following is true about CISC processors?
A. The instruction set is non-orthogonal D. Variable length instructions
B. Number of general purpose registers is limited E. **All of these**
C. Instructions are like macros in c language F. None of these
- 13 Main processor chip in computers is
A. ASIC C. **CPU**
B. ASSP D. CPLD
- 14 Processors used in many microcontroller products need to be
A. high power C. low interrupt response
B. **low power** D. low code density
- 15 In microcontrollers, UART is acronym of
A. Universal Applied Receiver/Transmitter C. **Universal Asynch. Receiver/Trans.**
B. Universal Asynchronous Rectified Transmitter D. United Asynch.Receiver/Transmitter
- 16 Which architecture is followed by general purpose microprocessors?
A. Harvard architecture C. None of the mentioned
B. **Von Neumann architecture** D. All of the mentioned
- 17 Which architecture involves both the volatile and the non-volatile memory?
A. **Harvard architecture** C. None of the mentioned
B. Von Neumann architecture D. All of the mentioned
- 18 Which architecture provides separate buses for program and data memory?
A. **Harvard architecture** C. None of the mentioned
B. Von Neumann architecture D. All of the mentioned
- 19 Harvard architecture allows:
A. Separate program and data memory C. Complex architecture
B. Pipe-ling D. **All of the mentioned**
- 20 Which of the following processor architecture supports easier instruction pipelining?
A. **Harvard** C. Both of them
B. Von Neumann D. None of these
- 21 Which of the following is an example for wireless communication interface?
A. RS-232C D. IEEE1394
B. Wi-Fi E. **Both (B) and (C)**
C. Bluetooth
- 22 ARM stands for
A. **Advanced RISC Machine** C. Advanced Reduced Machine
B. Advanced RISC Methodology D. Advanced Reduced Methodology
- 23 What is the processor used by ARM7?
A. 8-bit CISC C. 32-bit CISC
B. 8-bit RISC D. **32-bit RISC**
- 24 The main importance of ARM micro-processors is providing operation with
A. **Low cost and low power consumption** C. Lower error or glitches
B. Higher degree of multi-tasking D. Efficient memory management
- 25 ARM processors were basically designed for



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- A. Main frame systems
B. Distributed systems
- 26 ASIC chip is
A. Simple in design.
B. Manufacturing time is less.
- 27 ASIC stands for
A. Application-System Integrated Circuits
B. Application-Specific Integrated Circuits
- 28 In microcontrollers, I2C stands for
A. Inter-Integrated Clock
B. Initial-Integrated Clock
C. Intel-Integrated Circuit
D. Inter-Integrated Circuit
- 29 ___ is the smallest microcontrollers which can be programmed to perform a large range of tasks.
A. **PIC microcontrollers**
B. ARM microcontrollers
C. AVR microcontrollers
D. ASIC microcontrollers
- 30 ___ was developed in the year 1996 by ATMEL Corporation
A. PIC
B. AVR
C. ARM
D. ASIC
- 31 AVR stands for
A. Advanced Virtual RISC.
B. Alf-Egil Bogen and Vegard Wollan RISC
C. **Both A & B**
D. None of the above
- 32 AVR microcontroller executes most of the instruction in_.
A. **Single execution cycle.**
B. Double execution cycle.
C. Both A& B
D. None of the above.
- 33 Term "the Internet of things" was coined by
A. Edward L. Schneider
B. Kevin Ashton
C. John H.
D. Charles Anthony
- 34 The huge numbers of devices connected to the Internet of Things have to communicate automatically, not via humans, what is this called?
A. Bot to Bot(B2B)
B. Machine to Machine(M2M)
C. InterCloud
D. Skynet
- 35 What does "Things" in IoT refers to?
A. General device
B. Information
C. IoT devices
D. Object
- 36 Interconnection of Internet and computing devices embedded in everyday objects, enabling them to send and receive data is called
A. **Internet of Things**
B. Network Interconnection
C. Object Determination
D. None of these
- 37 ___ is a computing concept that describes the idea of everyday physical objects being connected to the internet.
A. **IOT (Internet of Things)**
B. MQTT
C. COAP
D. SPI
- 38 Devices may support a number of interoperable communication protocols and communicate with other device and also with infrastructure.
A. Artificial Intelligence
B. Machine Learning
C. Internet of Things
D. None of above



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- 39 Which one is not element of IOT?
A. Process
B. People
C. Security
D. Things
- 40 IIOT stands for
A. Information Internet of Things
B. **Industrial Internet of Things**
C. Innovative Internet of Things
D. None of above
- 41 Name of the IOT device which is first recognized?
A. Smart Watch
B. **ATM**
C. Radio
D. Video Game
- 42 ____ is used by IOT
A. **Radio information technology**
B. Satellite
C. Cable
D. Broadband
- 43 ____ consists of communication protocols for electronic devices, typically a mobile device and a standard device.
A. RFID
B. MQTT
C. **NFC**
D. None of above
- 44 ____ refers to establish a proper connection between all the things of IOT.
A. **Connectivity**
B. Analyzing
C. Sensing
D. Active Engagement
- 45 IOT devices which have unique identities and can perform.
A. Remote sensing
B. Actuating
C. Monitoring capabilities
D. **All of the above**
- 46 The sensed data communicated ____.
A. **Cloud-based servers/storage.**
B. I/O interfaces.
C. Internet connectivity.
D. None of the above
- 47 IOT devices are various types, for instance
A. Wearable sensors.
B. Smart watches.
C. LED lights.
D. **All of the above**
- 48 ____ is a collection of wired Ethernet standard for the link layer.
A. **IEEE 802.3**
B. IEEE 802.11
C. IEEE 802.16
D. IEEE 802.15.4
- 49 ____ is a collection of WLAN communication standards.
A. IEEE 802.3
B. **IEEE 802.11**
C. IEEE 802.16
D. IEEE 802.15.4
- 50 ____ is a collection of wireless broadband standards (WiMax).
A. IEEE 802.3
B. IEEE 802.11
C. **IEEE 802.16**
D. IEEE 802.15.4
- 51 ____ is a collection of standards for LR-WPANs.
A. IEEE 802.3
B. IEEE 802.11
C. IEEE 802.16
D. **IEEE 802.15.4**
- 52 LR-WPANs standards from basis of specifications for high level communication protocol such as ____.
A. **Zigbee**
B. Allsean
C. Tyrell
D. Microsoft's Azure



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- 53 _____ includes GSM and CDMA.
- A. 2G
B. 3G
C. 4G
D. None of above
- 54 _____ include UMTS and CDMA2000.
- A. 2G
B. 3G
C. 4G
D. None of above
- 55 _____ include LTE.
- A. 2G
B. 3G
C. 4G
D. None of above
- 56 _____ layer is responsible for sending of IP datagrams from the source network to the destination network.
- A. Application layer
B. Transport layer
C. Network layer
D. Link layer
- 57 _____ layer perform the host addressing and packet routing.
- A. Application layer
B. Transport layer
C. Network layer
D. Link layer
- 58 _____ Protocols provide end to end message transfer capability independent of the underlying network.
- A. Network layer
B. Transport layer
C. Application layer
D. Link layer
- 59 The _____ protocols define how the applications interface with the lower layer protocol to send the data over the network.
- A. Application layer
B. Transport layer
C. Network layer
D. Link layer
- 60 6LOWPAN stands for
- A. 6 LOW Personal Area Network
B. IPv6 LOW Personal Area Network
C. IPv6 over Low power wireless personal area network
D. None of above



3. BASICS OF DIGITAL FORENSIC

Total Marks-08

MCQ Question

(Total number of Question=Marks*3=08*03=24)

- 1 Digital forensics is all of them except:
 - A. Extraction of computer data.
 - B. Preservation of computer data.
 - C. Interpretation of computer data.
 - D. Manipulation of computer data.**
- 2 IDIP stands for
 - A. Integrated Digital Investigation Process.**
 - B. Integrated Data Investigator Process.
 - C. Integrated Digital Investigator Process.
 - D. Independent Digital Investigator Process.
- 3 Who proposed Road Map for Digital Forensic Research (RMDFR)
 - A. G. Gunsh.
 - B. S. Ciardhuain
 - C. J. Korn.
 - D. G. Palmar**
- 4 Investigator should satisfy following points:
 - A. Contribute to society and human being.
 - B. Avoid harm to others.
 - C. Honest and trustworthy.
 - D. All of the above**
- 5 In the past, the method for expressing an opinion has been to frame a ___question based on available factual evidence.
 - A. Hypothetical**
 - B. Nested
 - C. Challenging
 - D. Contradictory
- 6 More subtle because you are not aware that you are running these macros (the document opens and the application automatically runs); spread via email
 - A. The purpose of copyright
 - B. Danger of macro viruses**
 - C. Derivative works
 - D. computer-specific crime
- 7 There are three c's in computer forensics. Which is one of the three?
 - A. Control**
 - B. Chance
 - C. Chains
 - D. Core
- 8 When Federal Bureau Investigation program was created?
 - A. 1979
 - B. 1984**
 - C. 1995
 - D. 1989
- 9 When the field of PC forensics began?
 - A. 1960's
 - B. 1970's
 - C. 1980's**
 - D. 1990's
- 10 Digital Forensics entails .
 - A. Accessing the system's directories and navigating through the various systems files and folders
 - B. Undeleting and recovering lost files
 - C. Identifying and solving computer crimes
 - D. The identification, preservation, recovery, restoration and presentation of digital evidence from systems and devices**
- 11 Which of the following is FALSE?



- A. The digital forensic investigator must maintain absolute objectivity
B. It is the investigator's job to determine someone's guilt or innocence.
C. It is the investigator's responsibility to accurately report the relevant facts of a case.
D. The investigator must maintain strict confidentiality, discussing the results of an investigation on only a "need to know"
- 12 What is the most significant legal issue in computer forensics?
A. Preserving Evidence
B. Seizing Evidence
C. Admissibility of Evidence
D. Discovery of Evidence
- 13 ___phase includes putting the pieces of a digital puzzle together and developing investigative hypotheses
A. Preservation phase
B. Survey phase
C. Documentation phase
D. Reconstruction phase
E. Presentation phase
- 14 In ___phase investigator transfers the relevant data from a venue out of physical or administrative control of the investigator to a controlled location
A. Preservation phase
B. Survey phase
C. Documentation phase
D. Reconstruction phase
E. Presentation phase
- 15 Computer forensics do not involve___activity.
A. Preservation of computer data.
B. Extraction of computer data.
C. Manipulation of computer data.
D. Interpretation of computer data.
- 16 A set of instruction compiled into a program that perform a particular task is known as:
A. Hardware.
B. CPU
C. Motherboard
D. Software
- 17 Which of following is not a rule of digital forensics?
A. An examination should be performed on the original data
B. A copy is made onto forensically sterile media. New media should always be used if available.
C. The copy of the evidence must be an exact, bit-by-bit copy
D. The examination must be conducted in such a way to prevent any modification of the evidence.
- 18 To collect and analyze the digital evidence that was obtained from the physical investigation phase, is the goal of which phase?
A. Physical crime investigation
B. Digital crime investigation.
C. Review phase.
D. Deployment phase.
- 19 To provide mechanism to an incident to be detected and confirmed is purpose of which phase?
A. Physical crime investigation
B. Digital crime investigation.
C. Review phase.
D. Deployment phase.
- 20 Which phase entails a review of the whole investigation and identifies area of improvement?
A. Physical crime investigation
B. Digital crime investigation.
C. Review phase.
D. Deployment phase
- 21 ___ is known as father of computer forensic.
A. G. Palmar
B. J. Korn
C. **Michael Anderson**
D. S. Ciardhuain.
- 22 ___ is well established science where various contribution have been made
A. Forensic
B. Crime
C. Cyber Crime
D. Evidence



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- 23 Who proposed End to End Digital Investigation Process (EEDIP)?
- A. G. Palmar
B. **Stephenson**
C. Michael Anderson
D. S.Ciardhuain
- 24 Which model of Investigation proposed by Carrier and Safford?
- A. Extended Model of Cybercrime Investigation (EMCI)
B. **Integrated Digital Investigation Process(IDIP)**
C. Road Map for Digital Forensic Research (RMDFR)
D. Abstract Digital Forensic Model (ADFM)
- 25 Which of the following is not a property of computer evidence?
- A. Authentic and Accurate.
B. Complete and Convincing.
C. Duplicated and Preserved.
D. **Conform and Human Readable.**



4. DIGITAL EVIDENCES

Total Marks-10

MCQ Question

(Total number of Question=Marks*3=10*03=30)

- 1 A valid definition of digital evidence is:
 - A. Data stored or transmitted using a computer
 - B. Information of probative value
 - C. Digital data of probative value
 - D. **Any digital evidence on a computer**
- 2 What are the three general categories of computer systems that can contain digital evidence?
 - A. **Desktop, laptop, server**
 - B. Personal computer, Internet, mobile telephone
 - C. Hardware, software, networks
 - D. Open computer systems, communication systems, and embedded systems
- 3 In terms of digital evidence, a hard drive is an example of:
 - A. **Open computer systems**
 - B. Communication systems
 - C. Embedded computer systems
 - D. None of the above
- 4 In terms of digital evidence, a mobile telephone is an example of:
 - A. Open computer systems
 - B. Communication systems
 - C. **Embedded computer systems**
 - D. None of the above
- 5 In terms of digital evidence, a Smart Card is an example of:
 - A. Open computer systems
 - B. Communication systems
 - C. **Embedded computer systems**
 - D. None of the above
- 6 In terms of digital evidence, the Internet is an example of:
 - A. Open computer systems
 - B. **Communication systems**
 - C. Embedded computer systems
 - D. None of the above
- 7 Computers can be involved in which of the following types of crime?
 - A. Homicide and sexual assault
 - B. Computer intrusions & intellectual property
 - C. **Civil disputes**
 - D. All the above
- 8 A logon record tells us that, at a specific time:
 - A. An unknown person logged into the system using the account
 - B. **The owner of a specific account logged into the system**
 - C. The account was used to log into the system
 - D. None of the above
- 9 Cyber trails are advantageous because:
 - A. They are not connected to the physical world.
 - B. **Nobody can be harmed by crime on the Internet.**
 - C. They are easy to follow.
 - D. Offenders who are unaware of them leave behind more clues than they otherwise would have.
- 10 Private networks can be a richer source of evidence than the Internet because:
 - A. They retain data for longer periods of time.



- B. Owners of private networks are more cooperative with law enforcement.
C. **Private networks contain a higher concentration of digital evidence.**
D. All the above.
- 11 The criminological principle which states that, when anyone, or anything, enters a crime scene he/she takes something of the scene with him/her, and leaves something of himself/herself behind, is:
A. **Locard's Exchange Principle** C. Beccaria's Social Contract
B. Differential Association Theory D. None of the above
- 12 The author of a series of threatening e-mails consistently uses "im" instead of "I'm." This is an example of:
A. An individual characteristic C. A class characteristic
B. **An incidental characteristic** D. An indeterminate characteristic
- 13 An argument for including computer forensic training computer security specialists is:
A. It provides an additional credential.
B. It provides them with the tools to conduct their own investigations.
C. **It teaches them when it is time to call in law enforcement.**
D. None of the above.
- 14 The digital evidence are used to establish a credible link between
A. Attacker and victim and the crime scene C. **Victim and the crime scene**
B. Attacker and the crime scene D. Attacker and Information
- 15 Digital evidences must follow the requirements of the
A. Ideal Evidence rule C. Exchange rule
B. Best Evidence rule D. **All the mentioned**
- 16 From the two given statements 1 and 2, select the correct option from a-d.
a. Original media can be used to carry out digital investigation process.
b. By default, every part of the victim's computer is considered as unreliable.
A. a and b both are true C. a and b both are false
B. a is true and b is false D. **a is false and b is true**
- 17 The evidences or proof can be obtained from the electronic source is called the
A. digital evidence C. Explainable evidence
B. demonstrative evidence D. **substantial evidence**
- 18 Which of the following is not a type of volatile evidence?
A. Routing tables C. **Log files**
B. Main memory D. Cached data
- 19 The evidence must be usable in the court which is called as
A. Admissible C. Complete
B. **Authentic** D. Reliable
- 20 Photographs, videos, sound recordings, X-rays, maps drawing, graphs, charts is a type of __.
A. **Illustrative evidence** C. Documented evidence
B. Electronic evidence D. Explainable evidence
- 21 Email, hard drives are examples of
A. Illustrative evidence C. Documented evidence
B. **Electronic evidence** D. Explainable evidence
- 22 Blood, fingerprints, DNA these are examples of
A. Illustrative evidence C. Documented evidence



- B. Electronic evidence
D. Substantial evidence
- 23 When an incident takes place, a criminal will leave a hint evidence at the scene and remove a hint from the scene which is called as
A. Locard's Exchange principle
C. Charles's Anthony principle
B. Anderson's Exchange principle
D. Kevin Ashton principle
- 24 Which is not procedure to establish a chain of custody?
A. Save the original materials.
B. Take photos of physical evidence.
C. Don't take screenshots of digital evidence content.
D. Document date, time, and any other information of receipt.
- 25 Which is not related with digital evidence?
A. Work with the original evidence to develop procedures.
B. Use clean collecting media.
C. Document any extra scope.
D. Consider safety of personnel at the scene.
- 26 Which is example of non-volatile memory?
A. Flash memory
C. Process table
B. Registers and Cache
D. Arp cache
- 27 _____ is known as testimonial.
A. Oath affidavit
C. Fingerprint
B. DNA samples
D. Dried blood
- 28 The process of ensuring that providing or obtaining the data that you have collected is similar to the data provided or presented in a court is known as
A. Evidence validation
C. Best evidence
B. Relative evidence
D. Illustrative evidence
- 29 When cases got to trial your forensics examiner play one of _____ role.
A. 2
C. 3
B. 4
D. 5
- 30 Types of digital evidence
A. Eye witness
C. Paper work
B. Picture and video
D. None of the above
- 31 Rule of evidence is also known as
A. Law of witness
C. Law of evidence
B. Law of litigation
D. All of the above



5. BASICS OF HACKING

Total Marks-12

MCQ Question

(Total number of Question=Marks*3=12*03=36)

- 1 Ethical Hacking is also known as
 - A. Black Hat Hacking.
 - B. **White Hat Hacking.**
 - C. Encryption.
 - D. None of these.
- 2 Tool(s) used by ethical hacker
 - A. Scanner
 - B. Decoder
 - C. Proxy
 - D. **All of these.**
- 3 Vulnerability scanning in Ethical hacking finds _____.
 - A. Strengths.
 - B. **Weakness.**
 - C. A & B
 - D. None of these.
- 4 Ethical hacking will allow to ____ all the massive security breaches.
 - A. Remove.
 - B. **Measure.**
 - C. Reject.
 - D. None of these.
- 5 _____ is the art of exploiting the human elements to gain access to the authorized user.
 - A. **Social Engineering.**
 - B. IT Engineering.
 - C. Ethical Hacking.
 - D. None of the above.
- 6 Which hacker refers to ethical hacker?
 - A. Black hat hacker.
 - B. **White hat hacker.**
 - C. Grey hat hacker.
 - D. None of the above.
- 7 The term cracker refers to
 - A. **Black hat hacker.**
 - B. White hat hacker.
 - C. Grey hat hacker.
 - D. None of the above.
- 8 Who described a dissertation on fundamentals of hacker's attitude?
 - A. G. Palma.
 - B. **Raymond.**
 - C. Either.
 - D. Jhon Browman.
- 9 Computer Hackers have been in existence for more than a _____.
 - A. Decade.
 - B. Year.
 - C. **Century**
 - D. Era.
- 10 Hackers do hack for?
 - A. Fame.
 - B. Profit.
 - C. Revenge.
 - D. **All the above**
- 11 The intent of ethical hacker is to discover vulnerabilities from a point of view to better secure system.
 - A. Victims.
 - B. **Attackers.**
 - C. Both A & B
 - D. None of these. Ans. B
- 12 Security audits are usually based on
 - A. Entries.
 - C. Both A & B



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- B. Checklists.**
- 13 Ethical hacking consist of
- A. Penetration testing.
 - B. Intrusion testing.
 - C. Red teaming.
 - D. **All of the above.**
- 14 _____ is a person who find and exploits the weakness in computer system.
- A. Victim
 - B. **Hacker**
 - C. Developer
 - D. None of the above.
- 15 A white hat hacker is the one who
- A. **Fix identifies weakness**
 - B. Steal the data
 - C. Identifies the weakness and leave message to owner
 - D. None of the above
- 16 A black hat hacker is the one who
- A. Fix identifies weakness
 - B. **Steal the data**
 - C. Identifies the weakness and leave message
 - D. None of the above.
- 17 A grey hat hacker is the one who
- A. Fix identifies weakness
 - B. Steal the data
 - C. **Identifies the weakness and leave message to owner**
 - D. None of the above
- 18 To catch a thief, think like
- A. Police
 - B. Forensics
 - C. **Thief**
 - D. Hacker
- 19 _____ can create false feeling of safety
- A. Firewall
 - B. Encryption
 - C. VNPs
 - D. **All the above**
- 20 _____ exploits that involves manipulating people and user even your self are the greatest vulnerability within any computer
- A. **Nontechnical attacks**
 - B. Network infrastructure attack
 - C. Operating system attack
 - D. Application and other specialized attack
- 21 Connecting into network through a rogue modem attached to computer behind a firewall is an example of _____.
- A. Nontechnical attacks
 - B. **Network infrastructure attack**
 - C. Operating system attack
 - D. Application and other specialized attack
- 22 _____ comprise of large portion of hacker attacks simply because every computer has one and so well know exploits can be used against them.
- A. Nontechnical attacks
 - B. Network infrastructure attack
 - C. **Operating system attack**
 - D. Application and other specialized attack
- 23 _____ should be done before ethical hacking process.
- A. Data gathering.
 - B. Attacking
 - C. **Planning**
 - D. Research
- 24 Which permission is necessary before ethical hacking?
- A. **Written permission.**
 - B. Decision maker permission
 - C. Privacy permission
 - D. Risk permission.



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- 25 Which tool is used to crack the password?
A. Nmap
B. LC4
C. ToneLOC
D. Nessus
- 26 Which tool is used for depth analysis of a web application?
A. Whisker
B. Super scan
C. Nikto
D. Kismet
- 27 Which tool is used to encrypt Email?
A. WebInspect
B. QualyGuard
C. PGP (pretty good privacy)
D. None of the above.
- 28 Malicious attacker often think like?
A. Thieves
B. Kidnapper
C. Both A & B
D. None of the above
- 29 Which hacker try to distribute political or social message through their work?
A. Black hat hacker
B. Hactivist
C. Script kiddes
D. White hat hacker
- 30 _____ are part of organized crime on internet.
A. Criminal
B. Antinationalist
C. Hacker for hire
D. None of the above
- 31 Which magazines releases the latest hacking methods?
A. 2600
B. Hackin9
C. PHRACK
D. All the above
- 32 Performing a shoulder surfing in order to check other's password is _____ ethical practice.
A. a good
B. not so good
C. very good social engineering practice
D. a bad
- 33 _____ has now evolved to be one of the most popular automated tools for unethical hacking.
A. Automated apps
B. Database software
C. Malware
D. Worms
- 34 A penetration tester must identify and keep in mind the _____ & requirements of a firm while evaluating the security postures.
A. privacy and security
B. rules and regulations
C. hacking techniques
D. ethics to talk to seniors
- 35 The legal risks of ethical hacking include lawsuits due to _____ of personal data.
A. stealing
B. disclosure
C. deleting
D. hacking
- 36 Before performing any penetration test, through legal procedure, which key points listed below is not mandatory?
A. Know the nature of the organization
B. Characteristics of work done in the firm
C. System and network
D. Type of broadband company used by the firm



6. TYPES OF HACKING

Total Marks: 16

MCQ Question

(Total number of Question=Marks*3=16*03=48)

- 1 SNMP stands for ____.
A. Simple Network Messaging Protocol
B. Simple Network Mailing Protocol
C. **Simple Network Management Protocol**
D. Simple Network Master Protocol
- 2 Which of the following tool is used for Network Testing and port Scanning
A. NetCat
B. SuperScan
C. NetScan
D. **All of above**
- 3 Banner grabbing is used for
A. **White Hat Hacking**
B. Black Hat Hacking
C. Grey Hat Hacking
D. Script Kiddies
- 4 An attacker can create an ____ attack by sending hundreds or thousands of e-mails a with very large attachments.
A. Connection Attack
B. **Auto responder Attack**
C. Attachment Overloading Attack
D. All the above
- 5 Which of the following tool is used for Windows for network queries from DNS lookups to trace routes?
A. **Sam Spade**
B. SuperScan
C. NetScan
D. Netcat
- 6 Which tool is used for ping sweeps and port scanning?
A. Netcat
B. SamSpade
C. **Super Scan**
D. All the above
- 7 Which of the following tool is used for security checks as port scanning and firewall testing?
A. **Netcat**
B. Nmap
C. Data communication
D. Netscan
- 8 What is the most important activity in system cracking?
A. Information gathering
B. **Cracking password**
C. Escalating privileges
D. Covering tracks
- 9 Which Nmap scan is does not completely open a TCP connection?
A. **SYN stealth scan**
B. TCP scan
C. XMAS tree scan
D. ACK scan
- 10 Key loggers are form of
A. **Spyware**
B. Shoulder surfing
C. Trojan
D. Social engineering
- 11 ____ is a popular tool used for discovering network as well as security auditing.
A. Ettercap
B. Metasploit
C. **Nmap**
D. Burp Suit
- 12 Which of this Nmap do not check?



- A. Services different hosts are offering
B. On what OS they are running.
- 13 What is purpose of Denial of Service attacks?
A. Exploit weakness in TCP/IP attack.
B. To execute a trojan horse on a system.
C. To overload a system so it is no longer operational.
D. To shutdown services by turning them off.
- 14 What are the some of the most common vulnerabilities that exist in a network system?
A. Changing manufacturer, or recommended settings of newly installed application.
B. Additional unused feature on commercial software package.
C. Utilizing open source application code.
D. Balancing security and ease of use of system.
- 15 Which of the following is not a characteristic of ethical hacker?
A. Excellent knowledge of Windows.
B. Understands the process of exploiting network vulnerabilities.
C. Patience, persistence and perseverance.
D. Has the highest level of security for the organization.
- 16 Attempting to gain access to a network using an employee's credentials is called the ____ mode of ethical hacking.
A. **Local networking**
B. Social engineering
C. Physical entry
D. Remote networking
- 17 The first phase of hacking an IT system is compromise of which foundation of security?
A. Availability
B. Confidentiality
C. Integrity
D. Authentication
- 18 Why would a ping sweep be used?
A. To identify live systems
B. To locate live systems
C. To identify open ports
D. To locate firewalls
- 19 What are the port states determined by Nmap?
A. Active, inactive, standby
B. Open, half-open, closed
C. Open, filtered, unfiltered
D. Active, closed, unused
- 20 What port does Telnet use?
A. 22
B. 80
C. 20
D. 23
- 21 Which of the following will allow foot printing to be conducted without detection?
A. PingSweep
B. Traceroute
C. War Dialers
D. ARIN
- 22 Performing hacking activities with the intent on gaining visibility for an unfair situation is called
A. Cracking
B. Analysis
C. **Hacktivism**
D. Exploitation
- 23 Why would a hacker use a proxy server?
A. To create a stronger connection with the target.
B. To create a ghost server on the network.
C. To obtain a remote access connection



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- D. To hide malicious activity on the network
- 24 Which phase of hacking performs actual attack on a network or system?
A. Reconnaissance C. Scanning
B. Maintaining Access D. **Gaining Access**
- 25 Sniffing is used to perform _____ fingerprinting.
A. **Passive stack** C. Passive banner grabbing
B. Active stack D. Scanned
- 26 Services running on a system are determined by _____.
A. The system's IP address C. The system's network name
B. The Active Directory D. **The port assigned**
- 27 What are the types of scanning?
A. Port, network, and services C. Passive, active, and interactive
B. **Network, vulnerability, and port** D. Server, client, and network
- 28 Enumeration is part of what phase of ethical hacking?
A. Reconnaissance C. **Gaining Access**
B. Maintaining Access D. Scanning
- 29 _____ framework made cracking of vulnerabilities easy like point and click.
A. Net C. Zeus
B. **Metasploit** D. Ettercap
- 30 _____ is a popular IP address and port scanner.
A. Cain and Abel C. **Angry IP Scanner**
B. Snort D. Ettercap
- 31 _____ is a popular tool used for network analysis in multiprotocol diverse network
A. Snort C. Burp Suit
B. SuperScan D. **EtterPeak**
- 32 _____ scans TCP ports and resolves different hostnames.
A. **Super Scan** C. Ettercap
B. Snort D. QualysGuard .
- 33 What tool can be used to perform SNMP enumeration?
A. DNSlookup C. Nslookup
B. Whois D. **IP Network Browser**
- 34 Wireshark is a _____ tool.
A. **network protocol analysis** C. connection analysis
B. network connection security D. defending malicious packet-filtering
- 35 Air cracking is used for
A. Firewall bypassing C. Packet filtering
B. **Wi-Fi attacks** D. System password cracking
- 36 Phishing is a form of
A. Spamming C. **Impersonation**
B. Identify Theft D. Scanning
- 37 What are the types of scanning?
A. Port, network, and services C. Passive, active, and interactive
B. **Network, vulnerability, and port** D. Server, client, and network
- 38 _____ is used for searching of multiple hosts in order to target just one specific open port.



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- A. **Ping Sweep**
B. Port scan
- 39 ARP spoofing is often referred to as
A. **Man-in-the-Middle attack**
B. Denial-of-Service attack
- 40 _____ is a tool that allows you to look into network and analyze data going across the wire for network optimization, security and troubleshooting purposes.
A. **Network analyzer**
B. Crypt tool
- 41 _____ is not a function of network analyzer tool.
A. Captures all network traffic
B. Interprets or decodes what is found into a human-readable format.
C. Displays it all in chronological order.
D. **Banner grabbing**
- 42 _____ protocol is used for network monitoring.
A. **FTP**
B. SNMP
- 43 What is the attack called “evil twin”?
A. **rouge access point**
B. ARP poisoning
- 44 What is the primary goal of an ethical hacker?
A. avoiding detection
B. testing security controls
C. **resolving security vulnerabilities**
D. determining return on investment for security measures
- 45 What are the forms of password cracking technique?
A. Attack syllable
B. Attack brute forcing
C. Attacks hybrid
D. **All the above**
- 46 Which type of hacker represents the highest risk to your network?
A. black-hat hackers
B. grey-hat hackers
C. script kiddies
D. **disgruntled employees**
- 47 Hacking for a cause is called
A. **hacktivism**
B. black-hat hacking
C. active hacking
D. activism
- 48 When a hacker attempts to attack a host via the internet it is known as what type of attack?
A. local access
B. **remote attack**
C. internal attack
D. physical access
- 49 A type of attack that overloads the resources of a single system to cause it to crash or hang.
A. Resource Starvation
B. Active Sniffing
C. **Passive Sniffing**
D. Session Hijacking
- 50 In computer networking, _____ is any technical effort to manipulate the normal behavior of network connections and connected systems.
A. Hacking
B. Evidence
C. **Tracing**
D. None of above