Dear Students!!

In this e-book of 11th class, study material of computer science is being sent to you as per new syllabus (2021-22). You can easily prepare your test / papers by reading the contents in this file. Following are the links of the video lectures (for HTML and C Language) for various practical topics of your syllabus for better understanding of various concepts.

11th Class - Monthly distribution of Computer Science Syllabus & Video Lecture Links (Pbi)

How to do HTML Practical on Mobile?	https://youtu.be/PYFuKCwdlOY
HTML Part-1	https://youtu.be/DcYz0QX9CVs
HTML Part-2	https://youtu.be/qLlzLKrbhIA
Programs, Programming & Programming Languages	https://youtu.be/CKwC8oeOw_o
Introduction to C Language: Part-1	https://youtu.be/G9ZaHvTd5sU
Introduction to C Language: Part-2	https://youtu.be/8NXsnDCr1ho
Introduction to C Language: Part-3	https://youtu.be/aU06gTkp82k
Operators and Expressions in C	https://youtu.be/PGv1_8Q5fh8
Control Statements in C - Branching	https://youtu.be/xi-38dRt3mY
Control Statements in C – Looping & Jumping	https://youtu.be/NIkDGAr-AjE

C Language – Practical Video Lectures

C Language Practical -1	https://youtu.be/8hg3BJAyBqE
C Language Practical -2	https://youtu.be/v_lw8wmfIP4
C Language Practical -3	https://youtu.be/RBq--darc0I

Following is the Link of Playlist for detailed Lectures on C Programming

https://youtube.com/playlist?list=PLja3EaJFAjmYjeAcDs0ZQdVmx7liCtg5P

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▶ YouTube   http://youtube.com/c/computersciencepunjab

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Please use the following link to download the study material/e-books/e-contents for 6th to 12th classes:

http://cspunjab.nirmancampus.co.in/study.php

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Chapter – 3ʳᵈ
Cyber Threats and Security

Que1: Multiple Choice Questions:

1. Cyber word is taken among which of these?
a. Cybercrime   b. Cybernetic   c. Cyber-attack   d. Cyber security

2. Copying and selling of software or any computer-based material is known as:
a. Phishing   b. Stalking   c. Piracy   d. Hacking

3. A malware which acts like a spy in computer system:
a. Spyware   b. Computer virus   c. Adware   d. Ransom ware

4. Which type of security technique which converts password to special signs?
a. Strong password   b. Firewall   c. Digital signature   d. Encryption

5. IT Act 2000 is known by which another name?
a. IT Act 2008   b. ITA 2000   c. Information Act   d. Income Tax Act

6. An electronic environment in which internet users communicate with each other:
a. World Wide Web   b. Internet   c. Cyber space   d. Cyber café

Que:2 Fill in the Blanks:

1. _____ corrupt the computer system.
2. _____ is a digital code which is used to Transmit or verify documents online.
3. Antivirus software keeps our computer safe from _____
4. _____ acts as secure wall in the computer system.
5. Any unauthorized person alters the website with the use of _____
6. URL's of servers connected with internet are stored at _____

Ans: 1. **Malware**   2. **Digital Signature**   3. **Virus**   4. **Firewall**   5. **Web Jacking**   6. **WWW**

Que:3 Write the Full Forms:

1. IT   :   Information Technology
2. WWW   :   World Wide Web
3. CERT-IN :   Indian Computer Emergency Response Team
4. ITA 2000   :   Information Technology Act 2000
5. URL   :   Uniform Resource Locator

Que:4 Short Answer Type Questions.

1. What is Piracy? Define it?
Ans: Piracy is a cyber-crime in the series of cyber threats. When a software or other content is copied and sold in the market by a person without the consent of its original owner, such crime is called Piracy. Piracy causes financial loss to the original owner of the software or content. Nowadays, piracy of various software, audio and video contents becomes common.

2. What do you know about Web Jacking?
Ans: Web Jacking is also a cyber-crime. This is an unauthorized action like hijacking. It involves hacking into a web site by a hacker for personal gain and altering the information on that web site. The website of the Ministry of Information Technology and the Bombay Crime Branch was recently hacked by web hackers which was an unauthorized online activity. Such activity by hackers is called Web-Jacking.

3. What are Salami Attacks?
Ans: Salami attack is also a cyber-crime. Such online attacks are more common in the banking sector. In these online attacks, a small amount of money is transferred to Attacker's account from the accounts of a person after regular short time-intervals. The customer is not even aware of this because such online attacks target only those accounts where the amount is often more and the transactions are frequent.

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4. Give a brief description about antivirus software?

Ans: Antivirus is software that protects our computer from any kind of virus. It is also called anti-malware because any virus is a malware against which it works. This software prevents viruses from entering into our computer and even if virus enters into the system, it removes viruses by scanning the computer system. Many types of antivirus software are available such as AVG, Avira, McAfee, Avast, Kaspersky, Ad-Aware, Norton etc.

5. Differentiate between Cyber-Space and WWW (World Wide Web)?

Ans: Cyberspace is an electronic environment in the world of the Internet that cannot be seen or captured, but can only be felt emotionally. Internet users communicate with each other in this environment. This is different from the World Wide Web. WWW is an information system that stores the URLs of all web servers connected to the Internet and links to various web pages. It is WWW that creates the electronic environment called cyberspace.

6. Tell four objectives of IT Act 2000?

Ans: The main objectives of the IT Act 2000 are as follows:
  1. Legalize electronic notification and data communication
  2. Facilitate online storage of data or information
  3. Establish a legal framework for the prevention of cyber crimes
  4. Recognition of Electronic Funds Transfer Policy in Banks
  5. Implementing e-commerce across India
  6. Promoting e-commerce

Que:5 Long Answer Type Questions

1. What are Cyber Attacks? Describe five types of Cyber Attacks?

Ans: In the world of the Internet, all those activities or attempts that harm online computer networks or computer-based systems with the help of Internet are classified as cyber-attacks. Here are some of the major cyber-attacks:
* **Piracy**: It this type of cyber-attack, a person sells copied/downloaded software or other content in the market without the approval and consent of their original owner.
* **Web-Jacking**: It this type of cyber-attack, hacker hacks websites for personal gain and alter the information on websites.
* **Salami-Attack**: In this type of cyber-attack, a small amount of money is transferred to Attacker's account from the account of a person after regular short time-intervals.
* **Stalking**: In this type of cyber-attack, a person sends messages or inappropriate content to another person against their will using internet applications or social media.
* **Hacking**: In this type of cyber-attack, hackers tamper someone's computer or social media account or a website in one way or another way.

2. Describe the Causes of Cyber Attacks in Detail?

Ans: Following are some common causes of cyber-attacks:
* **Easy Access to the Internet**: Nowadays, the Internet has become very easy to use. People are unknowingly sharing their personal information on the Internet in a variety of ways. Doing so empowers cybercriminals to carry out cyber-attacks.
* **Lack of Technical Knowledge**: Though people are using the internet easily, but most of them do not have any technical knowledge about it. Such people get caught up in cyber attacker's behaviour by providing their confidential information on unknown links or sites.
* **Non-Use of Security and Privacy**: Most people do not use any kind of security or privacy when using the Internet, which makes cyber criminals easy to harm their online accounts.
* **Criminal Wisdom or Feeling of Revenge**: Cyber-attacks are also on the rise due to the criminal intelligence and revenge of many people nowadays.
* **Ignorance of IT Crime and Laws**: The number of cyber-attacks is also increasing because most of the people do not have knowledge of IT crimes and related laws.

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3. What is Malware? Describe five types of Malwares?

Ans: The word Malware is made up of a combination of two English words Mal and Ware. The word Mal is derived from the word Malicious and the word Ware is derived from Software. Thus, we can say that a group of software is called Malware which is created to infect or damage a computer-based system in one form or another. Computer viruses are a common example of malware. Here are some common types of malware:

- **Computer viruses**: These malware softwares come into a computer and infect our data and computer systems.
- **Adware**: These malware softwares enters in the computer system without permission and silently sends users confidential information to cyber criminals through the Internet. This is how these softwares act like a spy.
- **Ransomware**: These malware softwares lock the entire computer system or any important document. The cyber-criminals then demand a ransom for unlocking the computer/document.
- **Trojan Horse**: These malware softwares initially behaves in a user-friendly way with the computer user and later take control of the computer from the real user and hand it over to the cyber-criminal.
- **Browser hacking**: These malware softwares hacks the user's web browser, change the browser settings without any consent and automatically opens some web sites on that browser.

4. What is Cyber Security? Describe five types of Cyber Security Techniques?

Ans: A variety of techniques are used to prevent cyber-attacks. These different techniques are collectively called Cyber Security. Here are some key cyber security techniques:

- **Authentication**: This cyber security technique allows a computer user to determine who can use his computer system and who cannot.
- **Strong Password**: This cyber security technique uses a username and password to access a system. Passwords must be complex and strong so that hackers cannot break or steal them.
- **Encryption**: This cybersecurity technique converts the data that user sends over the network into unrecognizable special symbols so that nobody can interpret data during transmission.
- **Antivirus**: It is a software that protects our computer from any kind of virus. It is also called anti-malware. This software prevents viruses from entering into our computer and even if virus enters into the system, it removes viruses by scanning the computer system. AVG, Avira, Norton etc. are some of the popular antivirus softwares.
- **Firewall**: This cyber security protects computers and computer networks from viruses or any other type of cyber-attacks. It is a strong wall that protects our computer from all kinds of malware and does not allow any unauthorized person to access our computer.

5. What is IT Act 2000? Describe its Features?

Ans: Keeping in view about cyber threats, Government of India had passed an Act on 17-October-2000 to legalize the use of Information Technology, which was named as IT Act 2000. This act is also known as ITA 2000. Some of the salient features of this Act are:

Features of IT Act 2000:

1. Digital signature is legally recognized in this Act.
2. This Act gives full recognition to financial transactions made through electronic means.
3. This Act deals exclusively with Cyber Crime and Electronic Commerce.
4. This Act gives legal recognition to online submission of forms by Government Offices and Agencies.
5. The Act establishes a <u>Cyber Appeal Regulation Tribunal</u> which deals with cyber appeals.
6. According to this Act, a hearing against the order of the Cyber Appeal Regulation Tribunal can be held only in the Supreme Court.

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