

# NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

<b>Course/Branch</b> : B.E/ CSE	<b>Year / Semester</b> :IV/VII	Format No.	NAC/TLP-07a.13
<b>Subject Code</b> :CS8792	<b>Subject Name</b> :Cryptography & Network Security	Rev. No.	02
<b>Unit No</b> :5	<b>Unit Name</b> :Security Practice & System Security	Date	30.09.2020

## OBJECTIVE TYPE QUESTION BANK

S.No	Objective Questions (MCQ /True or False / Fill up with Choices )	BTL
1.	1. Number of Blocks in class C are – a) 27 b) 28 c) 214 d) 29 View Answer Answer: a Explanation: Number of Blocks in class A are 27.	LT2
2.	How many layers are present in the TCP/IP Reference model? a) 6 b) 7 c) 5 d) 4  Answer: d Explanation: There are 4 layers in the TCP/IP reference model : Link, Internet, Transport and Application.	LT1
3.	A device that helps prevent congestion and data collisions – a) Switch b) Hub c) Gateway d) Proxy Server  Answer: a Explanation: A switch is a device that splits large networks into smaller segments, decreasing the number of users sharing the same network resources and bandwidth.	LT1
4.	A slotted ALOHA network transmits 200-bit frames using a shared channel with a 200-kbps bandwidth. Find the throughput if the system (all stations together) produces 1000 frames per second. a) 92 frames b) 368 frames c) 276 frames d) 151 frames  Answer: b Explanation: $G = 1$ $S = G \times e^{-G} = 0.368$ (36.8%) $\text{Throughput} = 1000 \times 0.368 = 368$ frames.	LT2
5.	Which one of these does not lie in the Link Layer of the TCP/IP Model? a) DSL b) IP c) SONET d) 802.11	LT2

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	<p>Answer: b Explanation: IP (Internet Protocol) is a member of the Internet layer.</p>	
6.	<p>Generate the CRC codeword for the data word 1101011011 using generator 10011. Also write both in the polynomial form.</p> <p>a) 11010110110011 b) 11010110110110 c) 11010110111100 d) 11010110111110</p> <p>Answer: d Explanation: Solve using polynomial division and then appending the remainder to the divisor.</p>	LT2
7.	<p>Assume we need to download text documents at the rate of 100 pages per second. What is the required bit rate of the channel?</p> <p>a) 1.846 Mbps b) 1.536 Mbps c) 2.4 Mbps d) None of the Mentioned</p> <p>Answer: b Explanation: Average No, of lines u=in each page = 24 Each line has 80 char.Each char required 8 bits.<math>100 \times 24 \times 80 \times 8 = 1,536,000=1536</math> Mbps.</p>	LT2
8.	<p>A packet has arrived in which the offset value is 100, the value of HLEN is 5 and the value of the total length field is 100. What is the number of the last byte</p> <p>a) 880 b) 879 c) 881 d) 801</p> <p>Answer: b Explanation: Total data bytes = total length – header length = 80 bytes in this datagram.Last byte is therefore 879.</p>	LT1
9.	<p>In an IP packet, the value of HLEN is 516 and the value of the total length field is 002816.What is the efficiency of this datagram?</p> <p>a) 80% b) 50% c) 66% d) 75%</p> <p>Answer: b Explanation: Total number of bytes in the header = <math>5 \times 4 = 20</math> bytes. Total length = 0028_16 = 40 bytes. Data carried by the packet = <math>(40 - 20) = 20</math> bytes. Efficiency = <math>\text{payload length} / \text{total length} = 20/40= 50\%</math>.</p>	LT1

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10.	<p>Nsub = <math>n + \log_2(N/N_{sub})</math> is used to find the suffix length.</p> <p>a) True b) False</p> <p>Answer: b Explanation: Nsub = <math>n + \log_2(N/N_{sub})</math> is used to find the prefix length.</p>	LT2
11.	<p>Convert the following binary notation to hexadecimal notation – 10000000 00001011 00000011 00011111</p> <p>a) 0x 80 0B 03 1E b) 0x 81 0B 04 1E c) 0x 80 0C 03 1F d) 0x 80 0B 03 1F</p> <p>Answer: d Explanation: Converting the binary value to their respective hex values yields 0x 80 0B 03 1F.</p>	LT2
12.	<p>If the first address is First address = 18.14.12.0/22. What is the last address?</p> <p>a) 18.14.15.128/22 b) 18.14.15.64/22 c) 18.14.15.32/22 d) 18.14.15.255/22</p> <p>Answer: d Explanation: Last address = (any address) OR [NOT (network mask)]. The Last Address = 18.14.15.255/22.</p>	LT2
13.	<p>A router receives a packet with the destination address 132.7.21.84. Find the network address of the packet.</p> <p>a) 1.32.7 b) 132.7 c) 13.27 d) 21.84</p> <p>Answer: b Explanation: 132 is between 128 and 191, so it is Class B address i.e. n=16-bit. Therefore, Network address 132.7,Host address 21.84</p>	LT2
14.	<p>After performing bit stuffing on the following stream : 0110111111111111110010, the output is-</p> <p>a) 011011111011111011111100010 b) 01101111111111111110010111 c) 1001000000000000000001101 d) 01101111111111111111110010</p> <p>Answer: a Explanation: Bit stuffing involves adding a 0 after every five 1s during transmission.</p>	LT1
15.	<p>The first address in a range of addresses is 14.11.45.96. If the number of addresses in the range is 32, what is the last address?</p> <p>a) 14.11.44.64</p>	LT1

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	<p>b) 14.11.44.128 c) 14.12.44.128 d) 14.11.45.127</p> <p>Answer: d Explanation: Last Address = (14.11.45.96 + 0.0.0.31)_256 = 14.11.45.127.</p>	
16.	<p>In which year Apple II virus came into existence?</p> <p>a) 1979 b) 1980 c) 1981 d) 1982</p> <p>Answer: c Explanation: In mid-1981, the 1st virus for Apple computers with the name Apple II came into existence. It was also called Elk Cloner, which resided in the boot sectors of a 3.3 floppy disk.</p>	LT2
17.	<p>_____ infects the master boot record and it is challenging and a complex task to remove this virus.</p> <p>a) Boot Sector Virus b) Polymorphic c) Multipartite d) Trojans</p> <p>Answer: a Explanation: Boot Sector Virus infects the master boot record &amp; it is a challenging &amp; a complex task to remove such virus. Mostly such virus spreads through removable devices.</p>	LT2
18.	<p>The virus hides itself from getting detected by _____ different ways.</p> <p>a) 2 b) 3 c) 4 d) 5</p> <p>Answer: b Explanation: The virus hides itself from getting detected in three different ways. These are by encrypting itself, by altering the disk directory with additional virus bytes or it uses stealth algorithm to redirect disk data.</p>	LT2
19.	<p>In mid-1981, the 1st virus for Apple computers with the name _____ came into existence.</p> <p>a) Apple I b) Apple II c) Apple III d) Apple Virus</p> <p>Answer: b Explanation: In mid-1981, the 1st virus for Apple computers with the name Apple II came into existence. It was also called Elk Cloner, which resided in the boot sectors of a 3.3 floppy disk.</p>	LT2

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20.	<p>Which of them is not an ideal way of spreading the virus?</p> <p>a) Infected website b) Emails c) Official Antivirus CDs d) USBs</p> <p>Answer: c Explanation: The ideal means of spreading computer virus are through emails, USB drives that are used portable and injected and ejected in different systems as well as from infected websites. Antivirus selling vendors do not place a virus in their CDs and DVDs.</p>	LT1
21.	<p>Direct Action Virus is also known as _____</p> <p>a) Non-resident virus b) Boot Sector Virus c) Polymorphic Virus d) Multipartite Virus</p> <p>Answer: a Explanation: Direct Action Virus is also known as a non-resident virus which gets installed &amp; stays hidden in your computer's memory. Such type of virus stays involved to the specific type of files which it infects.</p>	LT1
22.	<p>_____ infects the executables as well as the boot sectors.</p> <p>a) Non-resident virus b) Boot Sector Virus c) Polymorphic Virus d) Multipartite Virus</p> <p>Answer: d Explanation: Multipartite Virus infects the executables as well as the boot sectors. It infects the computer or get into any system through multiple mediums and are hard to remove.</p>	LT2
23.	<p>_____ are difficult to identify as they keep on changing their type and signature.</p> <p>a) Non-resident virus b) Boot Sector Virus c) Polymorphic Virus d) Multipartite Virus</p> <p>Answer: c Explanation: Polymorphic Virus is difficult to identify as they keep on changing their type and signature. They're not easily detectable by traditional antivirus. It usually changes the signature pattern whenever it replicates itself.</p>	LT2
24.	<p>_____ deletes all the files that it infects.</p> <p>a) Non-resident virus b) Overwrite Virus c) Polymorphic Virus d) Multipartite Virus</p>	LT2

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	<p>Answer: b Explanation: Overwrite virus deletes all files that it infects. It can be removed by only deleting those infected files. Mostly, it gets spread via emails.</p>	
25.	<p>Which of the below-mentioned reasons do not satisfy the reason why people create a computer virus?</p> <p>a) Research purpose b) Pranks c) Identity theft d) Protection</p> <p>Answer: d Explanation: Computer virus is not created for protection. Virus writers may have other reasons like for research purpose, pranks, vandalism, financial gain, identity theft, and some other malicious purposes.</p>	LT2
26.	<p>_____ is also known as cavity virus.</p> <p>a) Non-resident virus b) Overwrite Virus c) Polymorphic Virus d) Space-filler Virus</p> <p>Answer: d Explanation: Space-fillers are a special type of virus which usually does not cause any serious harm to the system except it fills up the empty space in memory and codes leading to wastage of memory.</p>	LT1
27.	<p>A computer _____ is a malicious code which self-replicates by copying itself to other programs.</p> <p>a) program b) virus c) application d) worm</p> <p>Answer: b Explanation: A computer virus is a malicious code which self-replicates by copying itself to other programs. The computer virus gets spread by itself into other executable code or documents. The intention of creating a virus is to infect vulnerable systems.</p>	LT1
28.	<p>Which of the following is not a type of virus?</p> <p>a) Boot sector b) Polymorphic c) Multipartite d) Trojans</p> <p>Answer: d Explanation: Types of viruses are System or Boot Sector Virus, Direct Action Virus, Resident Virus, Multipartite Virus, Polymorphic Virus, Overwrite Virus, Space-filler Virus, File infectors, Macro Virus, Rootkit virus. Trojan does not come under types of virus.</p>	LT2

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29.	There are _____ types of computer virus. a) 5 b) 7 c) 10 d) 12  Answer: c Explanation: There are a total of 10 types of virus. These are categorized based on their working and characteristics. These are System or Boot Sector Virus, Direct Action Virus, Resident Virus, Multipartite Virus, Polymorphic Virus, Overwrite Virus, Space-filler Virus, File infectors, Macro Virus, Rootkit virus.	LT2
30.	_____ gets installed & stays hidden in your computer's memory. It stays involved to the specific type of files which it infects. a) Boot Sector Virus b) Direct Action Virus c) Polymorphic Virus d) Multipartite Virus  Answer: b Explanation: Direct Action Virus gets installed & stays hidden in your computer's memory. Such type of virus stays involved to the specific type of files which it infects.	LT2

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