## University of Mumbai <br> Online Examination 2020

Program: BE Computer Engineering
Curriculum Scheme: Revised 2012
Examination: Final Year Semester VII
Course Code:CPC702 and Course Name:Cryptography and System Security
Time: 1hour
Max. Marks: 50
Note to the students:- All the Questions are compulsory and carry equal marks .

| Q1. | In cryptography, the order of the letters in a message is rearranged by |
| :--- | :---: |
| Option $\mathrm{A}:$ | transpositional ciphers |
| Option $\mathrm{B}:$ | substitution ciphers |
| Option $\mathrm{C}:$ | quadratic ciphers |
| Option $\mathrm{D}:$ | Binary ciphers |


| Q2. | When a hash function is used to provide message authentication, the hash function value is referred to as |
| :--- | :---: |
| Option A: | Message Field |
| Option B: | Message Digest |
| Option C: | Message Score |
| Option D: | Message Leap |


| Q3. | In |
| :--- | :---: |
| Option A: | attacks, the attacker manages to get an application to execute an SQL query created by the attacker. |
| Option B: | SQL injection |
| Option C: | SQL |
| Option D: | Direct |


| Q4. | In RSA, $\Phi(n)=$in terms of $p$ and $q$. <br> Option A:$\quad(\mathrm{p})$ |
| :--- | :---: |
| Option B: | $(\mathrm{p})$ |
| Option C: | $(\mathrm{p}-1)(\mathrm{q}-1)$ |


| Q5. | What are the characteristics of anomaly based IDS? |
| :--- | :---: |
| Option A: | It models the normal usage of network as a noise characterization |
| Option B: | It doesn't detect novel attacks |
| Option C: | Anything distinct from the noise is not assumed to be intrusion activity |
| Option D: | It detects based on signature |


| Q6. | If a single symbol in plaintext is changed, then several or all symbols in ciphertext will also be changed, this property of cipher |
| :--- | :--- |
| Option A: | Diffusion |
| Option B: | Confusion |
| Option C: | Fusion |
| Option D: | Conversion |


| Q7. | Blowfish encrypts blocks of plaintext which have size |
| :--- | :---: |
| Option A: | 256 bits |
| Option B: | 64 bits |
| Option C: | 72 bits |
| Option D: | 128 bits |


| Q8. | PGP encrypts data by using a block cipher called |
| :--- | :---: |
| Option A: | International data encryption algorithm |
| Option B: | Private data encryption algorithm |
| Option C: | Internet data encryption algorithm |
| Option D: | Local data encryption algorithm |


| Q9. | Snooping threatens which of the goal ? |
| :--- | :---: |
| Option A: | Integrity |
| Option B: | Confidentiality |
| Option C: | Availability |
| Option D: | Consistency |


| Q10. | $\quad$ Which of the following is not a characteristic of a virus? |
| :--- | :--- |


|  | Option A: |
| :--- | :---: |
| Option B: | Virus destroy and modify user data |
| Option C: | Virus is a standalone program |
| Option D: | Virus is a code embedded in a legitimate program |


| Q11. | IPSec is designed to provide security at the |
| :--- | :---: |
| Option A: | Transport layer |
| Option B: | Network layer |
| Option C: | Application layer |
| Option D: | Session layer |


| Q12. | For $p=11$ and $q=19$ and choose $e=17$. Apply RSA algorithm where message=5 and find the cipher text. |
| :--- | :--- |
| Option $\mathrm{A}:$ | $\mathrm{C}=80$ |
| Option $\mathrm{B}:$ | $\mathrm{C}=92$ |
| Option $\mathrm{C}:$ | $\mathrm{C}=56$ |
| Option $\mathrm{D}:$ | $\mathrm{C}=23$ |


| Q13. | Confusion hides relationship between___ and _ Ciphertext, plaintxt |
| :--- | :---: |
| Option A: | Ciphertext, key |
| Option B: | Plaintext, key |
| Option C: | plaintext, text, |
| Option D: |  |


| Q14. | What is trap door? |
| :--- | :---: |
| Option A: | It is trap door in WarGames |
| Option B: | It is a hole in software left by designer |
| Option C: | It is a Trojan horse |
| Option D: | It is a virus which traps and locks user terminal |


| Q15. | The DES Algorithm Cipher System consists of | 12 |
| :--- | :---: | :---: |
| Option A: |  | rounds (iterations) each with a round key |
| Option B: | 10 |  |
| Option C: | 16 |  |

loption D: $\quad 8$

| Q16. | What is the advantage of the multiplication method? |
| :--- | :---: |
| Option A: | only 2 steps are involved |
| Option B: | using constant |
| Option C: | value of $m$ not critical |
| Option D: | simple multiplication |


| Q17. | WPA2 is used for security in |
| :--- | :---: |
| Option A: | Ethernet |
| Option B: | Bluetooth |
| Option C: | Wi-Fi |
| Option D: | Email |


| Q18. | In which of the below attack, attacker impersonates somebody else? |
| :--- | :---: |
| Option A: | Masquerading |
| Option B: | Replaying |
| Option C: | Repudiation |
| Option D: | Masking |


| Q19. | What is the PGP stand for? |
| :--- | :---: |
| Option A: | Permuted Gap Permission |
| Option B: | Permuted Great Privacy |
| Option C: | Pretty Good Permission |
| Option D: | Pretty Good Privacy. |


| Q20. |  |
| :--- | :--- |
| Option A: | What is not an encryption standard? |
| Option B: | AES |
| Option C: | TES |
| Option D: | DES |


| Q21. | Access matrix model for user authentication contains |
| :---: | :---: |


|  | Option A: |  | a list of classes |
| :--- | :---: | :---: | :---: |
| Option B: | a list of sectors |  |  |
| Option C: | a function which returns an object's type |  |  |
| Option D: | a list of cylinders |  |  |


| Q22. | In playfair cipher,Number of characters in plaintext are____ to number of characters in ciphertext. |
| :--- | :---: |
| Option A: | greater than |
| Option B: | always equal |
| Option C: | less than |
| Option D: | less than or equal |


| Q23. | What is the average retrieval time when n keys hash to the same slot? |
| :--- | :---: |
| Option A: | Theta(n) |
| Option B: | Theta(n2) |
| Option C: | Theta(nlog n$)$ |
| Option D: | Big-Oh(n2) |


| Q24. | For a client-server authentication, the client requests from the KDC a $\quad$ ticket |
| :--- | :---: |
| Option A: | local |
| Option B: | token |
| Option C: | user |
| Option D: |  |


| Q25. | When an attempt is to make a machine or network resource unavailable to its intended users, the attack is called |
| :--- | :---: |
| Option A: | denial-of-service attack |
| Option B: | slow read attack |
| Option C: | spoofed attack |
| Option D: | starvation attack |

