**Computer Science Autumn Break Homework (CLASS XII)**

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| 1. | Define the following: a) Module b) Docstring c) Namespace d) Recursion |
| 2. | P-100, Q-23, 29 (Exercises based on Python modules) |
| 3. | Write a program that copies a text file first.txt to second.text excluding the lines starting with # or $ symbol. |
| 4. | Differentiate between i) text mode and binary mode ii) a mode and w mode |
| 5. | Define efficiency of a program and explain the guidelines of computational complexity. |
| 6. | Best, average and worst case complexity. Explain. (Example- 7.1) |
| 7 | Q12, 13 (Data visualisation), P-295, Q-2 |
| 8 | Explain briefly with the help of example. i) legend ii) autopct iii) x ticks iv) y ticks v) average |
| 9 | Stack and queues. Menu driven programs for Insertion (Push), Deletion (Pop), Peep. |
| 10 | Binary search using recursion. |
| 11 | What do you mean by list comprehension? Briefly explain with the help of one example. |
| 12 | Write the equivalent the following postfix expression 30,5,2,\*\*,12,6,\,+,- |
| 13 | False, True, NOT, OR, True, False, AND, OR |
| 14 | Define the following  i) Switch ii) Router iii) Repeater iv) Modem v) Protocol vi) IoT vii) IP Address |
| 15 | Write the usage of following tools:  i) PING ii) Traceart iii) Traceit iv) NSLOOKUP v) IP config |
| 16 | Explain the use of following protocols  i) HTTP ii) FTP iii) POP iv) IMAP v) VoIP vi) NFC vii) HTTPS vi) SSL g) SMTP |
| 17 | What is modulation? |
| 18 | Explain collision in Network. |
| 19 | Joining queries (MySQL) – 02 examples. |
| 20 | Connectivity programs between Mysql and Python  (Menu driven – INSERT, UPDATE , DELETE, SELECT operation. |
| 21 | Get and Post difference in Django Web Frame work |
| 22 | Solve Model Test paper (CBSE). |
| 23 | Written notes on Python- File handling, Data Structure, Modules. |
| 24 | Revision of SQL, Network, IT , OSS and IPR . |