**Assignment Question 1.**

CARGO EXPRESS is a full-time courier and cargo dispatch agency for corporate companies around the world. It mainly deals with delivering and tracking the packages delivered. TRON EXPRESS has its annual budget session during the end of year. The company has more than 30,000 full-time employees, 5,00,000 customers per month, and an average of 3 million packages a day. The manner in which the company structures pay scales is different for permanent and temporary staff. Some of the criteria which the company uses to decide the pay are as follows:

1. Number of packages being delivered: Permanent employees get $50 for every package they deliver, whereas temporary employees get $30 for every delivered package.

2. The distance they travel: Permanent employees get a daily allowance of $75 for their travel. Similarly, temporary employees get a daily allowance of $65 for their travel.

3. Shifts: People who work for the night shift get an additional pay of 10% over and above their regular pay.

Depending on all these factors, the basic pay structure is decided.

Now, the company wants to reward the employees with bonuses based on their grade as follows: (Assume that grade is provided as input.)

Grade A1: 5% of basic pay

Grade A2: 10% of basic pay

Grade A3: 15% of basic pay

With all the information provided, use all possible type of statements and expressions and design a Python program to help the management to calculate the net pay (basic added to bonus) for employees.

Hint: Make use of if-else, switch case, and arithmetic operators. Test the output by compiling the program and executing the same through Python IDLE/Jupyter.

Permanent= Basicsalary-5000

Temp = Basic\_Sal - 3000

**Assignment Question 2.**

Howell University is an accredited European university, which offers a range of courses to its students. It strives to provide students the very best in terms of education and course content.

Now, the university management is introducing a new IQ testing system for its MBA students, which is an add-on to the traditional Examination System. The IQ test will test the students on four different subjects like Aptitude, English, Mathematics, and General Knowledge.

Consider yourself to be a part of the software development team that is supposed to design the application in Python. First, the application asks the student the number of attempt. If student responds with a value higher than 1, then the application terminates and displays a message.

However, if the student is attempting the test for the first time, it displays the following menu:

1.Aptitude

2.English

3.Math

4.GK

5.Exit

On entering a value between 1 and 4, the application displays a corresponding question. Note that the student can attempt only once for every subject listed. For every correct answer the student gets a score of 10 points. Once the student appears the test for all the subjects, he/she can choose to exit the application. After selecting the Exit option, the student can obtain the total marks printed on the screen. The total scores should be calculated by adding up all the individual scores in each subject. Next, the application displays the following based on the score:

Bonus points earned

Total score out of 50

Message on IQ level

The application displays the bonus points based on the following conditions:

1. No bonus point is given, when the total score equals to 10.

2. A bonus of 2 points is given, when the total score equals to 20.

3. A bonus of 5 points is given, when the total score equals to 30.

4. A bonus of 10 points is given, when the total score equals to 40.

The final score will be decided after adding the total score and bonus points.

Based on the final score obtained, the following message will be displayed for IQ level:

1. If the final score is greater than or equal to 40, then a message stating “You are a genius” is displayed.

2. If the final score is greater than or equal to 30, then a message stating “You are intelligent” is displayed.

3. If the final score is greater than or equal to 20, then a message stating “Your IQ level is average” is displayed.

4. If the final score is greater than or equal to 10, then a message stating “Your IQ level is below average” is displayed.

5. Otherwise, a message stating “You need to re-appear the test” is displayed.