Class-X
ARTIFICIAL INTELLIGENCE (Subject Code:417)
Subjective Practice Paper-2
(Unsolved)

Answer Key

1. Common myths regarding entrepreneurship are:
    *   Entrepreneurs are born not made: Entrepreneurship is a learned skill, not a natural-born ability. It takes immense dedication, discipline, and hard work to become a successful entrepreneur. It involves creating unique business ideas followed by launching and running a new venture.
    *   All entrepreneurs have great ideas: It is not always a new idea that makes you an entrepreneur. You can take an existing idea and make your own business out of it. Only it needs a potential idea and a proper execution to become reality.
    *   The only requirement is a good idea: Only a good idea is not enough to make you a successful entrepreneur. You need resources, capital, a good market to sell your products, things in your favour to make the business happen the way you want.

2. The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.

3. Automatic Text Summarization is the process of creating the most meaningful and relevant summary of voluminous texts from multiple resources. Google news, Blogspot, Inshorts app and many other apps dealing with data summarization works by using Machine learning algorithms that helps in producing short and relevant data from the scattered resources, by identifying the important sections in a huge textual data.

4. Precision = TP /(TP+FP)*100

    20/(20+15) *100
    57.14%

5. Chat bot is a short form of "Chat Robot", also known as conversational agents. It is an AI enabled computer program that communicates with the user in Natural Human Language either through voice or text used in mobile apps, websites, messages etc. Natural Language Processing (NLP) is the technology used in chat bots. Examples of chat bots are Mitsuku Bot and CleverBot.

6. Accuracy = (TP+TN) /(TP+TN+FP+FN)*100

   (20+940)/1000 *100 = 96%

   While 96% accuracy may seem good at first glance, our model is no better than one that has no predictive ability to distinguish between healthy people and covid patients. Accuracy alone doesn't tell the full story when you're working with a class-imbalanced data set, like this one, where there is a significant difference between the number of positive and negative labels.

7. (i)
   Recall, Precision and F1 Score are calculated as follows:
   - Precision = TP/ (TP+FP)*100
     = 86/(86+12) = 87.75%
   - Recall = TP/ (TP+FN)

     = 86/(86+10) = 0.89
   - F1 Score = 2*(Precision*Recall)/ (Precision+Recall)

     = 2*(0.87*0.89) /(0.87+0.89)
     = 0.88

   (ii)

   No. of Predictions "YES" – 96
   No. of Predictions "NO" - 91

8. a. Yes, AI can provide a solution to the given problem.

   b. The existing system has endless menu options which leaves the customers frustrated and sometimes even wrongly sorts the customer department-wise.

   c. Chat bot

   d. Natural Language Processing (NLP)

   e. The goal of sentiment analysis is to identify sentiments among several social media posts or even in a post where emotion is not always explicitly expressed. Companies use NLP to understand what customers think about their products and services. Sentiment analysis reflects the overall positive, negative or neutral opinion by person and can be quantified as discrete. In real world sentiment analysis can be considered as customer satisfaction, brand or product popularity or fashion trends.