Rome afterwards encouraged it by every means, and many of her most eminent warriors, statesmen and citizens produced treatises on agriculture and practised it as a pursuit. Among them, Columella, Varro, Cincinnatus, Virgil, &c., from whose writings may be gathered many practical principles, that have never been improved.

Agriculture was introduced into the British Island by the Romans, but did not appear to have made much progress till the Norman conquest, 1066, when many Norman Barons came over and encouraged and cultivated it extensively. They are described by a comtemporary historian as being "exceedingly addicted to cultivating the land, and raising horses and cattle." When the dark ages came on, agriculture was preserved on the estates of the church alone, the Monks being the conservators of this art, as they were of manuscripts and litterature ; and when learning revived the practice of husbandry diffused itself, and the noble art sprang as it were into new life.

Modern agriculture has for some of its leading characteristics a more general and effectual draining of wet lands, deeper and more thorough cultivation by means of improved implements as sub and trench ploughing ; a more scientific rotation of crops ; the economising and more effective application of manures, and the proper adjustment of animals to the amount of land cultivated.

Question 4.—How is matter divided ? Define and illustrate *elementary, compound, organic and inorganic* substances ? What are soils, plants and animals composed of ?

Answer .—Matter exists in the following states, viz :—solid, liquid, gasseous and vesicular. A familiar example is water, which by being exposed to a low temperature, becomes a solid, [ice] which is liquified by heat , and by still further heat is converted into an invisible vapour [steam.]

An elementary substance is matter that cannot be reduced to a simple form ; *i. e.*, iron, oxygen, sulphur, &c. A compound body is that which is made up of two or more elementary substances ; *i. e.*, oxide of iron or rust, consisting of oxygen and iron, sulphate of potassa, composed of sulphur and potassium, &c.

Organic substances are the result of life, in the vegetable or animal, and by heat become decomposed and converted into invisible gases, *i, e.*, carbonic acid, oxygen, hydrogen, &c.

Whereas inorganic bodies do not consume by heat, were never the seat of any sort of life, being purely mineral ; *i. e.*, iron, silica or sand, iodine, manganese, &c.

Some are generally composed of a number of different substances, the principle being clay, sand, lime, potash, soda, magnesia manganese, &c., are more or less found in connection with organic substances in all fertile land.

Plants consist mainly of carbon, oxygen, and hydrogen, with small portions of nitrogen, combined with the several substances mentioned in soils.

Animals consist of the same organic elements constituting plants, but with a much larger proportion of nitrogen, and a very great amount of the phosphate of lime in the bones, so valuable as a manure.

Question 5.—State the compositiou and uses of *atmospheric air and water*, and their relations to vegetable and animal life ?

Answer.—Atmospheric air mainly consists of two gases, nitrogen and oxygen ; about 79 parts of the former and 21 of the latter in every 100 of common air. There are also diffused through the atmosphere small quantities of carbonic acid gas, ammonia, and some aqueous vapour.

Water consists of a chemical combination of oxygen and hydrogen, in the proportion of 8 of the former wrth 1 of the latter. This is pure rain water, but the waters of springs, rivers, &c., have in them a number of other ingredients, as lime, soda, &c., in varying proportions.

Neither plants nor animals can live without air and water. The former de-