

T.C:020

108/DD/20

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DEPARTMENTAL EXAMINATIONS

DEPARTMENTAL TEST FOR AUDIT SUPERINTENDENTS OF HIGHWAYS

DEPARTMENT – FIRST PAPER (PRECIS AND DRAFT)

(Without Books)

Maximum Time : 2.30 hours

Maximum Marks : 100

Answer ALL the questions.

- I. Write an essay on any ONE of the following topics in not more than 6 pages. (30)
- (a) Discuss the effects of population growth on our country's economic development.
 - (b) The State of our Educational System
 - (c) Environment as a Necessity and Luxury.

- II. Make a précis of the following passage reducing it to one third of its length: (20)

Ideally, on the few occasions that one gets a grand-stand view of a bird for a long time, one should put down everything about it. This would include its size (compared with some familiar bird), general colour, any special markings and their positions, the size, shape and colour of the bill, legs, wings, tail, neck and if possible eyes. A sketch made on the spot, howsoever rough and ready, usually helps. It is also important to note where the bird was seen-on the ground or among leaves, on a stump or on the water. etc. and its action at the time. Some birds have definite or characteristic modes of action like hopping or a special way of flying. Which make their identification easy and this should certainly be noted. The call or song of birds is another useful identification mark, but often this is difficult to describe in words. Still, even a slight hint at the sort of sound it makes (eg: a single note, whistle or clicking sound made in flight, or sharp chirrup) can be a useful guide to its identity. The date and the type of habitat in which the bird was seen are of course, all-important. Some dates may rule out certain migrants or help to explain unfamiliar breeding plumage, while a good description of the habitat can often narrow down the field of possibles to manageable limits.

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Although books and pictures describe a bird's colouring in detail, the newcomer to bird watching will soon discover that it is very unlikely that he will be able to see all the colours and markings clearly the first time. This is particularly true in the case of birds seen on the wing and also of tree-haunting species which are usually seen between the light and shade of foliage. Even open sunlight can be surprisingly deceptive and colours seen from certain angles especially with the naked eye or apt to look very different from what they are in fact. It is therefore important not to rely for identification simply on a bird's colouring but to note atleast one other feature like the bill, legs, crest or tail.

- III. (a) Write a letter to your friend describing India's performance in the recent cricket match in about 200 words. (15)
- (b) Write a letter to the editor of a newspaper on the increasing level of pollution in your city and express your views on the crackers ban imposed by the Supreme court during Deepavali. (15)
- IV. Make a note on the following passage: (20)

Until the beginning of the 20th century, the cause for the occurrence of a condition called diabetes was totally unknown. But gradually it was suspected that it had a functional origin. When carbohydrates are not absorbed properly, diabetes occurs. The main symptom was excess excretion of urine. Diabetes is of various types. Symptoms include chronic skin lesions, damage to the heart, retina and nerves.

The link between diabetes and pancreas was not established until 1889. Before this, in 1869, the German, Langerhans observed that pancreas contained two types of cells. The acinus glands, produced digestive enzymes. These enzymes traveled through the pancreatic duct to reach the duodenum. The second type of cells was called as islets of cells whose functions were not known at that time.

The Germans, Minkowski and Von Mering, in 1889 studied the role of pancreas in metabolism. They dissected the pancreas of a dog in order to establish the role of pancreatic juices in the digestion of fats. To their surprise they observed abnormally excess production of urine in the dog, a sign of diabetes. This urine was analyzed and it was found that contained high percentage of sugar, a possible sign of diabetes.

Thus, Minkowski and Von Mering established the link between diabetes and the role played by pancreas in it. They did not stop their research with this discovery. They carried out more experiments to establish the undebatable theory regarding the role played by the pancreas. In one experiment, the pancreatic duct of another dog was tied in order to stop the passage of pancreatic juice into the duodenum. It was observed that the dog suffered from digestive trouble rather than diabetes. Another experiment performed by the French man, Hedon, proved that the internal secretions of pancreas are poured directly into the blood. These secretions control the mechanism of carbohydrates. These two experiments led to the discovery of insulin.
