

2nd year

Dat :3-9-2014

Time:2 hour



Benha University

Faculty of science

Botany Department

Taxonomy examination (232 n)

Answer the following questions:-

1. Explain the following

a- Placentation

b- Cohesion of stamens

2:- Compare between:

a:-Fleshy and false fleshy.

b:- Racemose and Cymose inflorescence

3- Write on:-

a- Dry fruits

b- Function of the calyx.

نموذج إجابة مادة المرفولوجى ٢٣٢ ن
تاريخ الامتحان : ٢٠١٤/٩/٣
أستاذ المادة : د/ أحمد عبد الرازق
كلية العلوم – جامعة بنها

1. Explain the following

a- Placentation

Placenta; may be defined as a cushion- like structure to which ovules are found attached within the ovary. The arrangement and distribution of the placentae within the ovary is known as placentation.

b- Cohesion of stamens

When the stamens are free from each other, the androecium is said to be polyandrous but if united, then can be classified under the following types:

- Adelphous: this explain the different degrees of the cohesion of the filaments only, the anthers always remain free. According to one, two or more bundles formed due to the cohesion of the filaments, the condition may be.
- Syngenesious or synantherous: in this type of cohesion, the filaments of the stamens are always free, but the anthers are united into a ring. This is characteristic of.
- Synandrous: in this case the stamens are united along their entire length i.e. both filaments and anthers are united.

2:- Compare between:

a:-Fleshy and false fleshy.

True fleshy fruits: which consist of ripened ovary only, i.e. pericarp enclosing one or more seed. There are two types as follows.

False fleshy fruits: here, non- ovarian parts such as the receptacle, participate in the formation of the fruit. These fruits are called pseudocarps. The fruit results from an inferior ovary with a leathery and tough pericarp that is surrounded by a fleshy receptacle.

b:- Racemose and Cymose inflorescence

Racemose mono podial branche cymose on symopodial branche.

3- Write on:-

a- Dry fruits

The pericarp is dry and not differentiated to its normal three layers. Dry fruits may be indehiscent, dehiscent, or schizocarpic.

a- Dry indehiscent fruits: the pericarp is dry and normally closed. The fruit results either from one or more united carpels with a unilocular ovary. The nature of the pericarp differs in different types of dry indehiscent fruits as follow:

b- Dry dehiscent fruits: the pericarp opens uniformly in different ways when the fruit dries up.

b- Function of the calyx.

1- protection: the main function of the calyx is to enclose the flower in the bud condition and protect the essential organs of the flower from mechanical injury, sunshine, rain and from drying out.

2- photosynthesis: being the calyx is green in colour, it can help in manufacture of simple carbohydrates during the photosynthesis process.

3- dispersal of fruits: in many flowers, the sepals become modified into a whorl of hairs known as hairy pappus which helps in the dispersal of fruits.

4- defensive: in certain flowers the sepals are greatly reduced and form spiny structure which help in defense of the plants against animals.