DPP
DAILY PRACTICE PROBLEMS

Class : XIIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 5

Topic :- Sexual Reproduction in Flowering Plants

1 **(a)**
Occurrence of more than one embryo is called polyembryony. It is generally formed in family-Citraceae. Orange and lemon are common examples of polyembryony in which nucellar polyembryony is formed

2 **(c)**
Flowers of grass family (Poaceae) are generally pollinated by the wind. They have exposed stigma and versatile anther

3 **(c)**
2:1 is the right answer.

4 **(b)**
Pollen grains protoplast is uninucleate (1-celled) in the beginning but at the time of liberation, it becomes 2, 3-celled.

5 **(d)**
Central cell is the largest cell of embryo sac and is mother cell of endosperm. The enlargement of the embryo sac after the last nuclear division is largely due to inflation of the large central vacuole of central cell.

6 **(d)**
In orthotropous (atropous) ovule, the micropyle, funicle and chalaza lie in a straight line.

7 **(d)**
True fertilization together with triple fusion is known as double fertilization, a unique phenomenon only occurs in angiosperms (absent in gymnosperms) and first time demonstrated by **Nawaschin** in *Fritillaria* and *Lilium*.

8 **(b)**
In onagrad type embroyo development, the apical cell of two-celled proembryo dividies by a vertical

wall. Basal cell play little or no role in development, e.g., *Capsella.*

9 **(b)**
Before pollination, the pollen grain cytoplasm divides in generative cell and vegetative cell. The generative cell divides to form two male gametes.

10 **(c)**
A fully organised *Polygonum* type of embryo sac in a 7-celled, 8-nucleate structure. The cells of egg appratus and antipodal are haploid, whereas the central cell is diploid, *i.e.,* contains two polar nuclei. Triploid endosperm is formed after triple fusion, *i.e,* fusion of second male gamete with polar nuclei.

11 **(c)**
Megaspore is commonly called as ovum. These terms are generally used in case of plants and animals. The process of formation of ova or megaspore called oogenesis or megasporogenesis respectively

12 **(b)**
Endothecium is an unilayer of radially elongated cells occurs between the epidermis and middle layers of an angiospermic anther wall.

Cells of endothecium have fibrous thickening in their cell walls due to which they become hygroscopic and thus, help in the dehiscence of mature anther.

13 **(c)**
In **amphitropous** ovule, the body of embryo becomes curved and looks like anatropous ovule but here the embryo sac also curves and becomes horse shoe shaped, *e.g.*, Alismaceae.

14 **(a)**
In angiosperm the functional megaspore develops into the embryo sac, which is having synergid cells, egg cell, polar nuclei and antipodal cell respectively

15 **(b)**
Allogamous pollination performed by birds is called ornithophily. Entomophily is pollination carried out by insects.

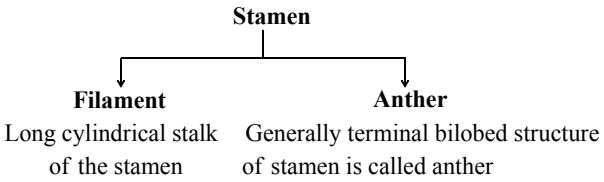
16 **(c)**

In anatropous ovule, the funiculus fuses with body of ovule beyond the hilum to give rise to longitudinal ridge called **raphe.**

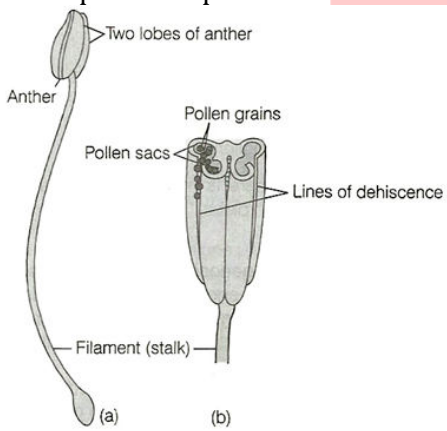
17 **(d)**

Valvular dehiscence is found in *Cassytha*, in which slits are present in anther lobes, through these slits pollen grains are liberated.

18 **(d)**



(i) A typical angiospermic anther is a bilobed structures having two theca at each lobe
(ii) It is tetragonal in shape with 4 microsporangia located at each lobe in its corners
(iii) Microsporangia develop into pollen sac, which produces pollen



1. A typical stamen
2. Three-dimensional cut section of an anther

19 **(a)**

In insect pollinated plants, a sticky material is deposited on the pollen grains known as 'pollen kit material', which is secreted by the tapetum.

20 **(a)**

True, in wind pollination the stigma is large and open for more chances of pollination as there is no biotic agency for pollination

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**A**	**C**	**C**	**B**	**D**	**D**	**D**	**B**	**B**	**C**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**C**	**B**	**C**	**A**	**B**	**C**	**D**	**D**	**A**	**A**