S.S.R. DEGREE COLLEGE, (AUTONOMOUS) NIZAMABAD (C.C:5029)
M.Sc. BOTANY
GYMNOSPERMS AND EMBYOLOGY
SEM 2 INTERNAL 2
QUESTION BANK

I. Multiple question answers

1. The outer wall layer of the microsporangium is called:

A. Tapetum

B. Endothecium

C. Epidermis

D. Middle layer

Answer: C. Epidermis

2. Which layer nourishes developing pollen grains?

A. Epidermis

B. Endothecium

C. Tapetum

D. Exine

Answer: C. Tapetum

3. Pollen grains are produced inside:

A. Ovule

B. Embryo sac

C. Anther

D. Nucellus

Answer: C. Anther

4. The process of transfer of pollen grains from anther to stigma is:

A. Fertilization

B. Pollination

C. Germination

D. Sporogenesis

Answer: B. Pollination

5. Opening of anther to release pollen grains is known as:

A. Pollination

B. Dehiscence

C. Germination

D. Double fertilization

Answer: B. Dehiscence

6. The male gametophyte in angiosperms is:

A. Ovule

B. Embryo sac

C. Pollen grain

D. Nucellus

Answer: C. Pollen grain

7. Double fertilization is characteristic of:

A. Gymnosperms

B. Bryophytes

C. Angiosperms

D. Pteridophytes

Answer: C. Angiosperms

8. The female gametophyte is also called:

A. Ovary

B. Embryo sac

C. Nucellus

D. Endosperm

Answer: B. Embryo sac

9. Megasporogenesis occurs in the:

A. Anther

B. Stigma

C. Ovule

D. Filament

Answer: C. Ovule

10. The nutritive tissue surrounding embryo sac is:

A. Integument

B. Nucellus

C. Endosperm

D. Synergid

Answer: B. Nucellus

11. The fusion of one male gamete with egg cell forms:

A. Endosperm

B. Zygote

C. Embryo sac

D. Antipodal cells

Answer: B. Zygote

12. Endosperm develops from:

A. Egg cell

B. Synergid

C. Primary endosperm nucleus

D. Nucellus

Answer: C. Primary endosperm nucleus

13. The pollen tube enters the ovule usually through:

A. Chalaza

B. Funicle

C. Micropyle

D. Hilum

Answer: C. Micropyle

14. Self-incompatibility prevents:

A. Pollination

B. Fertilization

C. Self-fertilization

D. Seed formation

Answer: C. Self-fertilization

15. The protective covering of ovule is:

A. Tapetum

B. Integument

C. Endosperm

D. Nucellus

Answer: B. Integument

16. Mature embryo sac in most angiosperms is:

A. 4-nucleate

B. 6-nucleate

C. 8-nucleate

D. 16-nucleate

Answer: C. 8-nucleate

17. Which cells guide the pollen tube toward the egg?

A. Antipodals

B. Synergids

C. Endosperm

D. Tapetal cells

Answer: B. Synergids

18. The process of pollen grain producing pollen tube is:

A. Pollination

B. Germination

C. Fertilization

D. Dehiscence

Answer: B. Germination

19. Endosperm mainly functions in:

A. Protection

B. Photosynthesis

C. Nutrition of embryo

D. Pollination

Answer: C. Nutrition of embryo

20. Embryology is important in taxonomy because it helps in:

A. Seed dispersal

B. Classification of plants

C. Pollination

D. Vegetative propagation

Answer: B. Classification of plants

II.FILL IN THE BLANKS

1.The outer wall of the anther is called the **epidermis.**

2.**Sporogenous** tissue gives rise to microspore mother cells.

3.The process of formation of pollen grains is called **microsporogenesis.**

4.A mature pollen grain generally contains **two cells**.

5.The outer wall of pollen grain is called **exine.**

6.The inner wall of pollen grain is called **intine.**

7.The female gametophyte in angiosperms is called the **embryo sac.**

8.The ovule is attached to the placenta by the **funicle.**

9.The opening present in the integuments of the ovule is called the **micropyle.**

10.The nutritive tissue present inside the ovule is the **nucellus.**

11.Development of embryo sac from megaspore is known as **megagametogenesis.**

12.The common type of embryo sac in angiosperms is the **Polygonum type.**

13.A mature embryo sac usually **contains seven cells and eight nuclei**.

14.Fusion of male and female gametes is called **syngamy**.

15.Fusion of one male gamete with two polar nuclei is called **triple fusion**.

16.The phenomenon in which two fusions occur in the same embryo sac is called **double fertilization.**

17.The primary endosperm nucleus develops into the **endosperm**.

18.The pollen tube usually enters the ovule through the **micropyle.**

19.Incompatibility that prevents self-fertilization is called **self-incompatibility**.

20.Embryology helps in understanding **plant taxonomy and evolution**.

III.

1.Microsporangim

2.Development of male gametophyte

3.Development and function of Endosperm

4.Embryology in relation to Taxonomy

5.Megasporangium