

**HOWARD UNIVERSITY
COLLEGE of ARTS and SCIENCES
COMPREHENSIVE SCIENCES**

LIFE SCIENCES – UNIT V: REPRODUCTION and DEVELOPMENT STUDY QUESTIONS

1. List one type of asexual reproduction and give a specific form of life that exhibits that type of reproduction.
2. List one type of sexual reproduction and give a specific form of life that exhibits that type of reproduction.
3. List two types of sexual reproduction.
4. Designate the following as sexual or asexual reproduction:

cloning	zygote formation
fertilization	formation of a seed
hormones involved	meiosis needed as a pre-requisite
binary fission	conjugation
N cells involved	2N organs involved
two sets of DNA	stamens and pistils

5. Where are the following gametes (N cells) produced?
6. Does mitosis begin with a N or 2N cell?
7. Does meiosis begin with a n or 2N cell?
8. How many cells result from mitosis? How many cells result from meiosis?
9. Why is meiosis important to sexual reproduction? (one sentence)
10. List two parts, and their respective functions of a seed.
11. List two types of cones. List the reproductive cells produced by each cone.
12. List the male reproductive parts of a blossom.
List the female reproductive parts of a blossom.
13. Is the fertilization of the chicken egg internal or external?
Are commercial chicken eggs fertile or infertile?

14. What is a zygote? What is the origin of a plant or animal zygote?

15. List one organ system derived from each layer of the gastrula:

ectoderm –
endoderm –
mesoderm –

16. Calculate the infertile periods of the 31-day cycle of a human female.

Once ovulation has occurred, how long is a human ovum viable?

How long are human sperm viable?

17. What are some stages of animal life cycles? What are some stages of plant life cycles?

18. How does single fertilization differ from double fertilization in plants?

19. Cite two similarities between an animal embryo and a plant embryo.

20. Cite one similar factor about senescence and senility.

21. What is in vitro fertilization? What is in vivo fertilization?

22. Cite two differences between: fraternal twins and similar twins.

23. A news article details information about the birth of septuplets. There are four males and three females. How many zygotes were involved in this event?

24. What is a fruit? What is its origin? What is always found inside any "mature" fruit?

25. Cite a source of nourishment for a developing:

plant zygote/embryo
animal zygote/embryo