

Porifera (Sponge) Worksheet Biology 11 (51 marks)

1. How does the name *Porifera* relate to the structure of a sponge? (2 marks)
2. List five characteristics of all sponges. (5 marks)
3. Describe how a sponge obtains and digests food. (3 marks)
4. What is the function of the osculum in a sponge? (1 mark)
5. What roles do amoebocytes play in sponges? (2 marks)
6. How is being hermaphroditic an advantage to sponges? (2 marks)
7. Describe asexual reproduction in sponges by: ( 3 marks)
   1. Budding
   2. Fragmentation & regeneration
   3. Gemmules
8. Describe sexual reproduction of Porifera, including details about the life cycle. (2 marks)
9. What structures and materials make up the skeletons of Porifera? (3 marks)

# Complete the table by writing a cell type or structure in sponges that fits each description. (4 marks)

|  |  |
| --- | --- |
| Type of Cell or Structure | Description |
| 10. | Aid in reproduction and nutrient transport. Helps produce spicules. |
| 11. | Form the outside surface of the sponge body. Contract to close porocytes. |
| 12. | Line the interior of sponges’ body.  Use flagella to draw water through pores. |
| 13. | Found as a jellylike substance between the two layers.  Make up sponges’ support system. |

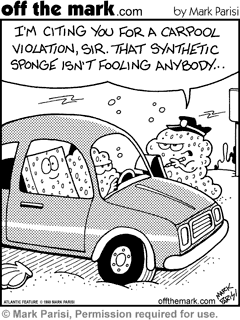
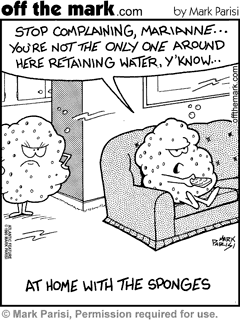
**Use each of the terms below just once to complete the passage. (7 marks)**

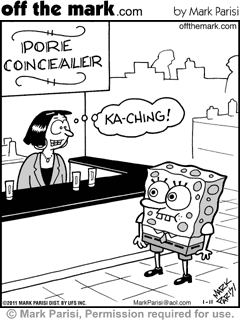
|  |  |  |  |
| --- | --- | --- | --- |
| External buds | Eggs | Hermaphroditic | Internal fertilization |
| Larvae | Sexual | Sperm |  |

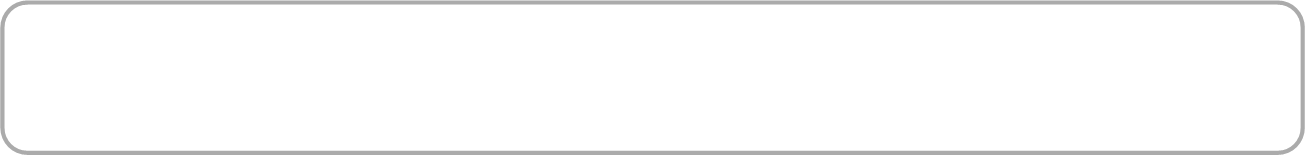
Sponges sometimes reproduce asexually by forming \_14. . Being

15. , a sponge can produce both 16. and sperm. During

17. reproduction, 18 from one sponge fertilize the eggs of another. Fertilization can be external, but 19. is more common. Free- swimming 20. settle and develop into sessile adults.

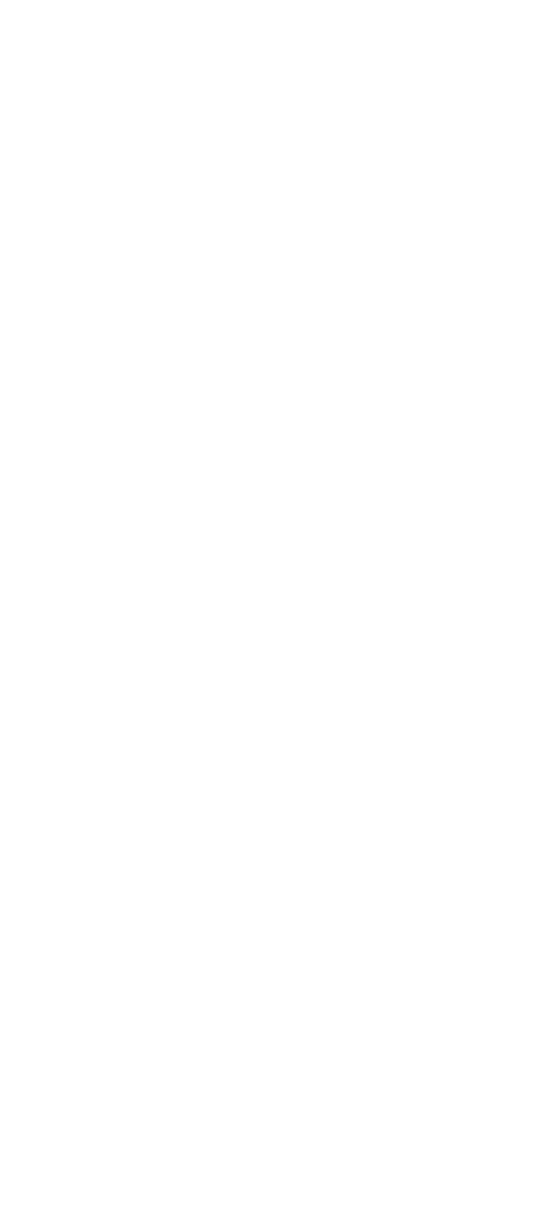
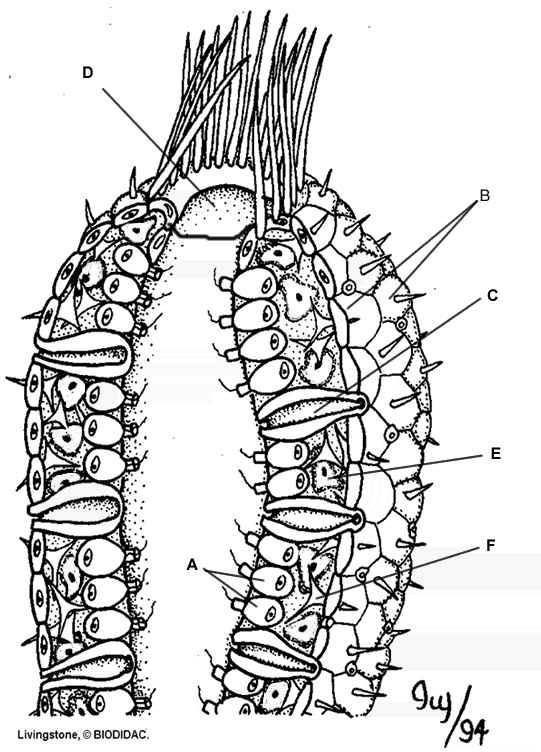




**Anatomy of a Sponge Phylum Porifera**

**(17 marks)**

1. **Label the structure.**
2. **Give one function for each structure.**
3. **Indicate whether the structure is found in the ectoderm layer, the endoderm layer, or the mesoglia.**



A. 1.

2.

3.

B. 1.

2.

3.

C. 1.

2.

3.

D. 1.

2.

E. 1.

2.

3.

F. 1.

2.

3.