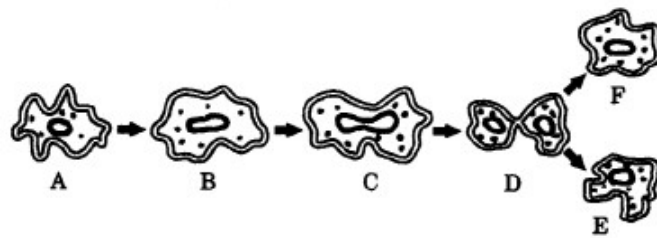


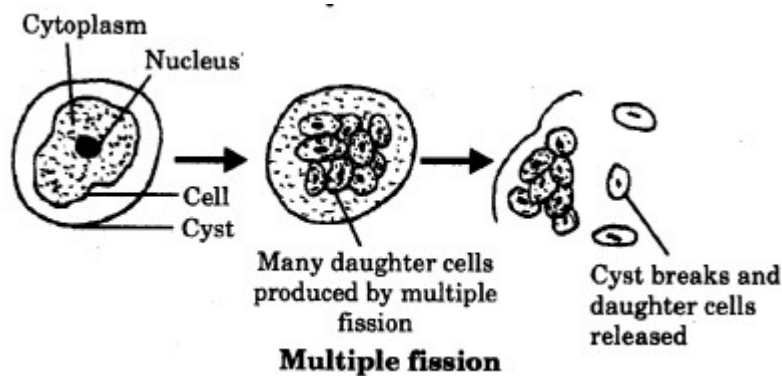
How do Organisms Reproduce

63. Compare the process of binary fission and multiple fission using diagrams.

2012/2015 [3 Marks]



Binary fission



Multiple fission

64. Define a zygote.

2014/2015 [1 Mark]

The single cell formed by fusion of two gametes (male and female) is called zygote.

65. Mention the role of the tail of the sperm.

2014/2015 [1 Mark]

Tail of the sperm helps it to move in the reproductive tract of female and reach to meet the egg (ovum).

66. Mention the function of stamen.

2014/2015 [1 Mark]

Stamen bears the anther which produce the pollen grains (the male gamete).

67. Give any two suitable differences between radicle and plumula.

2012/2014 [2 Marks]

Radicle	Plumule
(i) It gives rise to root. (ii) It grows downwards toward the Earth.	(i) It gives rise to shoot. (ii) It grows upwards towards the Sun.

68. List two preparations shown every month by the uterus in anticipation of pregnancy in humans.

2014/2015 [3 Marks]

- The development of follicle, which releases the hormones which helps in the release of ovum (egg) from the ovary.
- The thickening of inner wall of uterus to help in proper implantation of foetus after fertilization.
- If fertilization does not occur, the thickened inner lining of uterus breaks down along with blood vessels and start bleeding. This is known as menstruation and occurs almost every month.

69. Explain what happens when:

- (a) Testosterone is released in males.
- (b) Pollen grain falls on the stigma of the flower.
- (c) Egg fuses with sperm cell.
- (d) *Planaria* is cut into many pieces.
- (e) Buds are formed on the notches of the *Bryophyllum* leaf.

2014/2015 [3 Marks]

- (a) At the age of 13-14 years in males, the 'testosterone' hormone is released. The release of this hormone brings about the development of secondary sexual characters during puberty and regulates the formation of sperms.
 - (b) Pollen grains absorb water and swell up. They start to germinate to produce pollen tube which moves towards ovary passing through style.
 - (c) The fusion of egg with sperm leads to fertilization. After fertilization, the zygote is formed. It undergoes division to increase the number of cells.
 - (d) When *Planaria* is cut into pieces, then each of its part (piece) is capable to grow into a new independent *Planaria* by the process of regeneration.
 - (e) When the buds present on the notches of the *Bryophyllum* leaf falls in moist soil, they give rise to the new plant. It is a type of vegetative propagation. (A model of asexual reproduction)
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