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Final

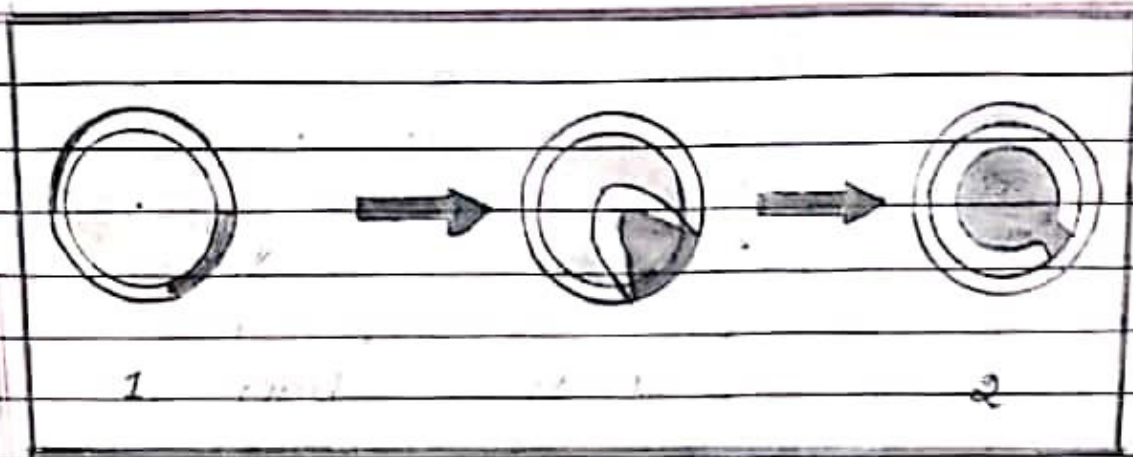
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Notes for B.Sc part 2nd, paper  
I V (A).

Question:- Development of chick upto 3  
germinal layers. put. Note like?

Answer:- A germ layer is a  
primary layers of cells that  
forms during embryonic development.  
The three germ layers in verte-  
brates are particularly pronounced;  
however, all outelozhans animals  
more complex than the sponges  
produce two or three primary  
germ layers. Some animals,  
like cnidarians, produce two  
germ layers (the ectoderm and  
endoderm) making them diploblastic.  
Other animals such as chordates  
produce a third layer (the meso-  
derm) between these two layers, making  
them triploblastic. Germ layers essentially  
give rise to all of an animal's  
tissues and organs through the process  
of organogenesis.

Evolution :-

21/02/20



Gastrulation of a diploblast : The formation of germ layers from a (1) blastula to a (2) gastrula. Some of the ectoderm cells (orange) move inward forming the endoderm (red).

Among animals, sponges show the simplest organization, having a single germ layer. Although they have differentiated cells (e.g. collar cells), they lack true tissue coordination. Diploblastic animals, cnidaria and animals are organized into recognizable tissues. All higher animals (from flatworms to humans) are triploblastic possessing a mesoderm in addition to the germ layers found in diploblasts. Triploblastic animals develop recognizable organs.

The germ layers :-

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Animal  
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Gate maps of chick blastoderm. A - surface view of epiblast; B - Diagrammatic section of discoblastula showing the gate map of epiblast and hypoblast at a glance.

### Mesoderm:-

The mesoderm germ forms in the embryos of triploblastic animals. During gastrulation, some of the cells migrating inward contribute to the mesoderm, an additional layer between the endoderm and the ectoderm. The formation of a mesoderm leads to the development of a coelom. Organs formed inside a coelom can freely move, grow, and develop independently of the body wall while fluid cushions and protects them from shocks.

The mesoderm has several components which develop into tissues: intermediate mesoderm, paraxial mesoderm, lateral plate mesoderm, and chorda - mesoderm. The chorda - mesoderm develops into the notochord. The intermediate mesoderm develops into cartilage, kidneys and gonads.

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Bimal

pancreas; the epithelium of the auditory tube and tympanic cavity; the trachea, bronchi, and alveoli of the lungs; the bladder and part of the urethra; and the follicle lining of the thyroid gland and thymus.

