



**BIOLOGY**

**CONTINUITY OF LIFE**

# *SYNOPSIS*

- ***GAMETOGENESIS***
- ***TYPES OF EGGS***
- ***STRUCTURE OF EGG & SPERM***

# *SYNOPSIS*

- *FERTILIZATION*
- *TYPES OF FERTILIZATION*
- *MECHANISM*

# **SYNOPSIS**

- ***EARLY DEVELOPMENT IN FROG***

# *SYNOPSIS*

- *HUMAN REPRODUCTION*
- *FERTILIZATION*
- *IMPLANTATION*
- *PLACENTA*

# *SYNOPSIS*

- *ROLE OF SEX HARMONES*
- *FERTILITY CONTROL*
- *INFERTILITY CONTROL*
- *STD*



**1. Who is regarded as 'Father of Embryology.'?**

- A. Von Baer.**
- B. Aristotle.**
- C. R. de Graaf**
- D. Leeuwenhock**

**Ans: B. Aristotle**





## 2. Embryology deals with the study of ?

- A. Phylogeny**
- B. Ontogeny**
- C. Ethology**
- D. Edephology**

**Ans: A. Phylogeny**



**3. Generally sexual reproduction is biparental process. In which of the following organism uniparental sexual reproduction takes place ?**

- A. Tape worm**
- B. Leech**
- C. Cockroach**
- D. Silver fish**

**Ans: A. Tape worm**



## **4. Distal centriole of sperm controls**

- A. Attracting the egg**
- B. Movement of tail**
- C. Do not help in fertilization**
- D. No role to play**

**Ans: B. Movement of tail**

**5. Chorion is a egg membrane in**

- A. Class Pisces**
- B. Class Reptiles**
- C. Class Aves**
- D. Class Insects**

**Ans: D. Class Insects**

**6. In telolecithal egg yolk is present**

- A. At AP of the egg**
- B. At VP of the egg**
- C. Throughout the egg**
- D. Centre of the egg**

**Ans: B. At VP of the egg**

## **7. A matured sperm has**

- A. A pair of flagella**
- B. Two centriole & acrosome**
- C. Two centriole, acrosome & nucleus**
- D. Two centriole, acrosome & pronucleus**

**Ans: D. Two centriole, acrosome & pronucleus**



## 8. Eggs of insects are

- A. Alecithal**
- B. Isolecithal**
- C. Centrolecithal**
- D. Heavily telolecithal**

**Ans: C. Centrolecithal**





**9. 75 primary spermatocytes & equal number primary oocytes will give rise to**

- A. 300 spermatozoa & 150 ova**
- B. 300 spermatozoa & 75 ova**
- C. 150 spermatozoa & 150 ova**
- D. 75 spermatozoa & 75 ova**

**Ans: B. 300 spermatozoa & 75 ova**





**10. First menstrual cycle is**

**A. Implantation**

**B. Menarche**

**C. Menopause**

**D. Parturition**

**Ans: B. Menarche**



**11. Common duct formed by union of vas deferens & duct from seminal vesicle is**

- A. Urethra**
- B. Ejaculatory duct**
- C. Spermatic duct**
- D. None of the above**

**Ans: B. Ejaculatory duct**



## 12. Vaginal cavity of tunica vaginalis is found in

- A. Vagina
- B. Ovaries
- C. Testes
- D. All of the above

**Ans: C. Testes**



## 13. Cells of Leydig occurs in

- A. Liver
- B. Ovary
- C. Testes
- D. Spleen

**Ans: C. Testes**



**14. Statement A- Mobility is the main feature of all the sperms. There are sperms without tail.**

**Statement B- Eggs are immobile**

- A. Both the statements are correct**
- B. Both the statements are wrong**
- C. Statement A is correct & B is wrong**
- D. Statement B is correct & A is wrong**

**Ans: A. Both the statements are correct**



## **15. Monoecious animals possess**

- A. Only male sex organs**
- B. Only female sex organs**
- C. Male & female sex organs**
- D. None of these.**

**Ans: C. Male & female sex organs**





## **16. The process termed parthenogenesis**

- A. Artificial fertilization**
- B. Cleavage occurring without fertilization**
- C. Fusion of male & female gametes**
- D. Fusion of male & male gametes**

**Ans: B. Cleavage occurring without  
fertilization**



**17. Statement A- In all chordates fertilization is internal.**

**Statement B- In cartilage fish we see internal fertilization.**

- A. Both the statements are correct**
- B. Both the statements are wrong**
- C. Statement A is correct & B is wrong**
- D. Statement B is correct & A is wrong**

**Ans: D. Statement B is correct & A is wrong**

**18. During cleavage,  
nucleocytoplasmic ratio is**

- A. Maintained**
- B. Increased**
- C. Decreased**
- D. Variable**

**Ans: B. Increased**

A large, light gray, semi-transparent DNA double helix structure is shown in the background, winding across the slide from the top left towards the bottom right.

**19. Which cleavage confirms bilateral symmetry?**

- A. First**
- B. Second**
- C. Third**
- D. Fourth**

**Ans: A. First**

**20. The formation of grey crescent in frog's egg indicates**

- A. Egg is determined type**
- B. Egg is non-determined type**
- C. Both A & B**
- D. None of the above**

**Ans: A. Egg is determined type**

## 21. Match the stages of gametogenesis

### COLUMN 1

- a. Primary Oocyte
- b. Primary Spermatocyte
- c. Secondary Oocyte
- d. Secondary Spermatocyte

### COLUMN 2

- p. 22A+Y
- q. 22A+X & 22A+Y
- r. 22A+X
- s. 44A+XY
- t. 44A+XX

- A. a-q, b-p, c-s, d-t
- B. a-q, b-p, c-s, d-r
- C. a-t, b-s, c-r, d-t
- D. a-t, b-s, c-r, d-q

**Ans: D. a-t, b-s, c-r, d-q**



**22. A cross section at the midpoint of the middle piece of a sperm will show**

- A. Only 9+2 arrangement of microtubules**
- B. Mitochondria & 9+2 arrangement of microtubules**
- C. Mitochondria & centriole**
- D. Mitochondria & centriole 9+2 arrangement of microtubules**

**Ans: D. Mitochondria & centriole 9+2 arrangement of microtubules**



## 23. Third cleavage of frog takes place

- A. Vertical**
- B. Latitudinal & on the equator**
- C. Latitudinal & below the equator**
- D. Latitudinal & above the equator**

**Ans: D. Latitudinal & above the equator**





## 24. Function of protein binding in acrosomal process is to

- A. To prevent polyspermy**
- B. Digest vitelline membrane**
- C. Ensure fertilization of egg by a sperm of the same species**
- D. Sever the sperm tail**

**Ans: C. Ensure fertilization of egg by a sperm of the same species**



**25. Corpus luteum is derived from**

- A. Follicular cells**
- B. Cumulus oophorus**
- C. Antrum**
- D. Corona radiata**

**Ans: A. Follicular cells**



## **26. Correct sequence of hormone secretion from beginning of menstrual cycle**

- A. FSH, Progesterone, Estrogen**
- B. Estrogen, FSH, Progesterone**
- C. Progesterone Estrogen, FSH**
- D. FSH, Estrogen, Progesterone**

**Ans:D. FSH, Estrogen, Progesterone**



**27. The sterilization technique is**

- A. Loop**
- B. Cervical cap**
- C. Diaphragm**
- D. Tubectomy**

**Ans. D. Tubectomy**



## **28. A contraceptive pill prevents ovulation by**

- A. Blocking the fallopian tube**
- B. Stimulating the release of FSH & LH**
- C. Inhibiting the release of FSH & LH**
- D. Degenerating released egg**

**Ans: C. Inhibiting the release of FSH & LH**



## **29. AIDS is due to**

- A. Autoimmunity**
- B. Destruction of killer –T cells**
- C. Destruction of helper –T cells**
- D. Lack of interferons**

**Ans: C. Destruction of helper–T cells**



# 30. Match the terms given in column 1 with the functions listed in column 2

## Column 1

1. Amphimixis
2. Synapse
3. Syngamy
4. Synkaryon

- A. 1-r, 2-s, 3-q, 4-t  
B. 1-t, 2-s, 3-q, 4-p  
C. 1-p, 2-q, 3-r, 4-s  
D. 1-s, 2-r, 3-t, 4-p

## Column 2

- p. Fusion of nucleus
- q. Fertilization
- r. Parthenogenesis
- s. Nerve connection
- t. Fusion of male & female pronucleus

**Ans: B. 1-t, 2-s, 3-q, 4-p**



**31. Bartholin gland of female  
corresponding to the glands in  
male**

- A. Rectal gland**
- B. Prostrate gland**
- C. Testes**
- D. Cowper's gland**

**Ans: D. Cowper's gland**

**32. If the amount of yolk & its distribution in the egg changed which one of the following is affected?**

- A. Fertilization**
- B. Formation of zygote**
- C. Pattern of cleavage**
- D. Number of blastomere**

**Ans: C. Pattern of cleavage**



**33. If a unfertilized egg is pricked with red hot needle it will**

- A. Die**
- B. Survive & remain undivided**
- C. Survive & start dividing**
- D. Develop into tadpole at faster rate**

**Ans: C. Survive & start dividing**

**34. In V.S of the gastrula of frog, parts have been indicated by alphabets. Identify them.**

**A.**

**m- blastocoel**

**n- ectoderm**

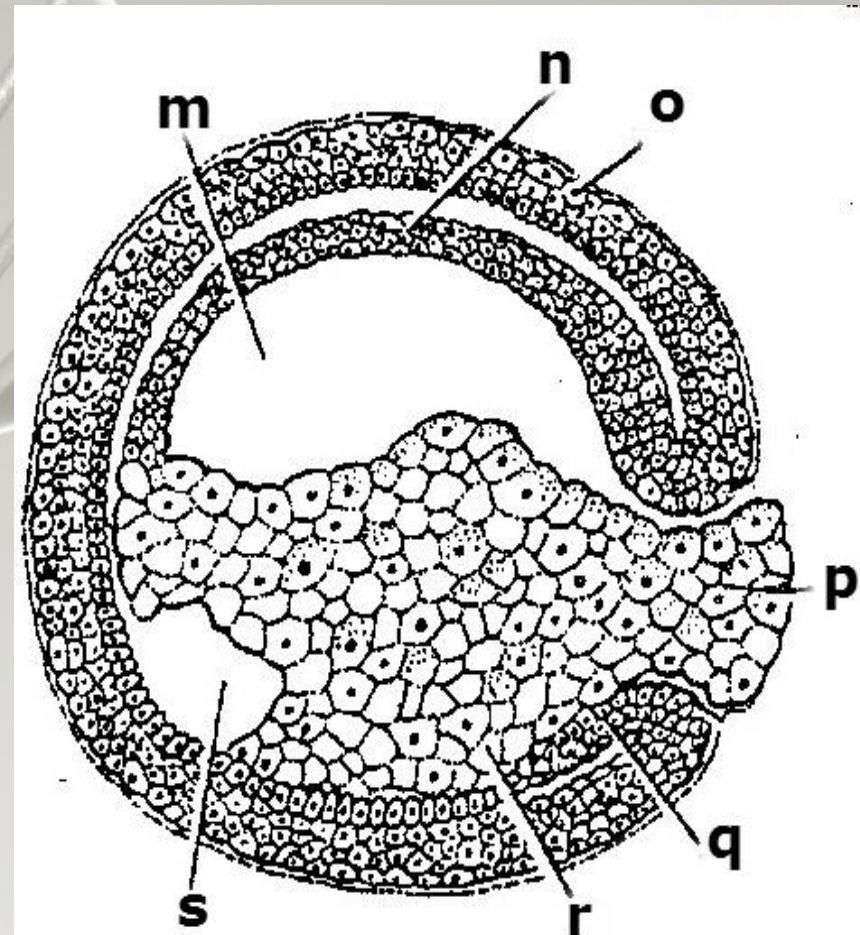
**o-endoderm**

**p – dorsal lip**

**q- mesoderm**

**r- chordomesoderm**

**s- archenteron**





**34. In V.S of the gastrula of frog, parts have been indicated by alphabets. Identify them.**

**B.**

**m- blastocoel**

**n- endoderm**

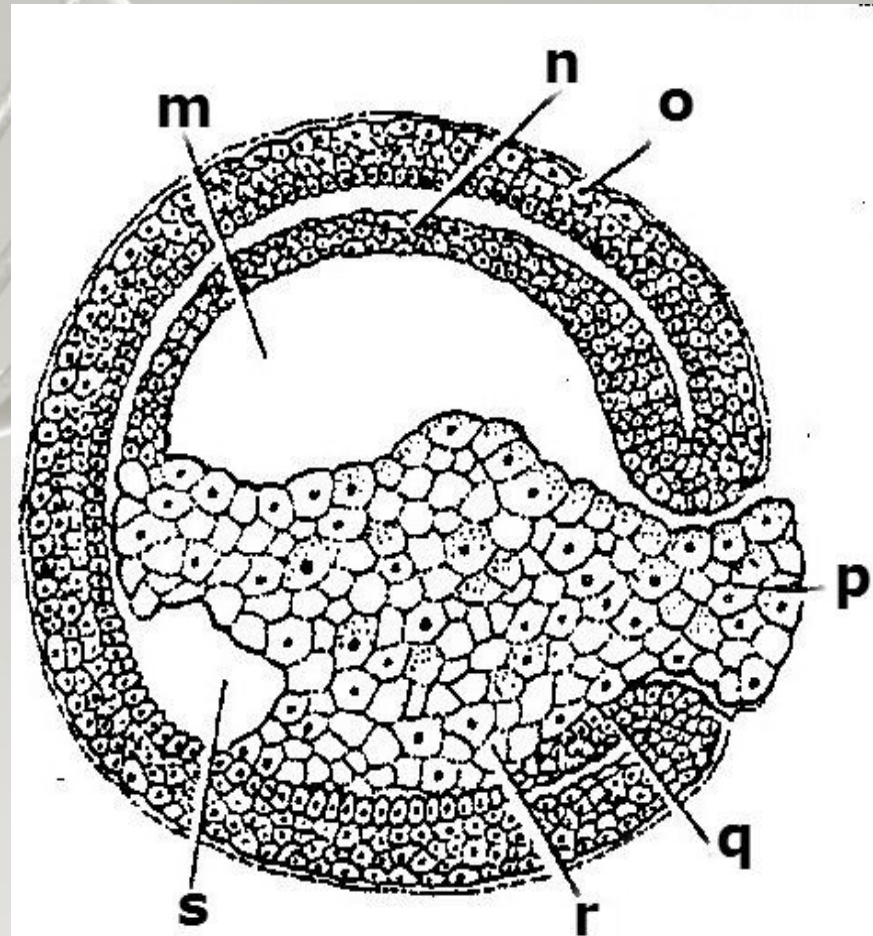
**o- ectoderm**

**p – mesoderm**

**q- dorsal lip**

**r- chordomesoderm**

**s- archenteron**



**34. In V.S of the gastrula of frog, parts have been indicated by alphabets. Identify them.**

**C.**

**m- archenteron**

**n- chordomesoderm**

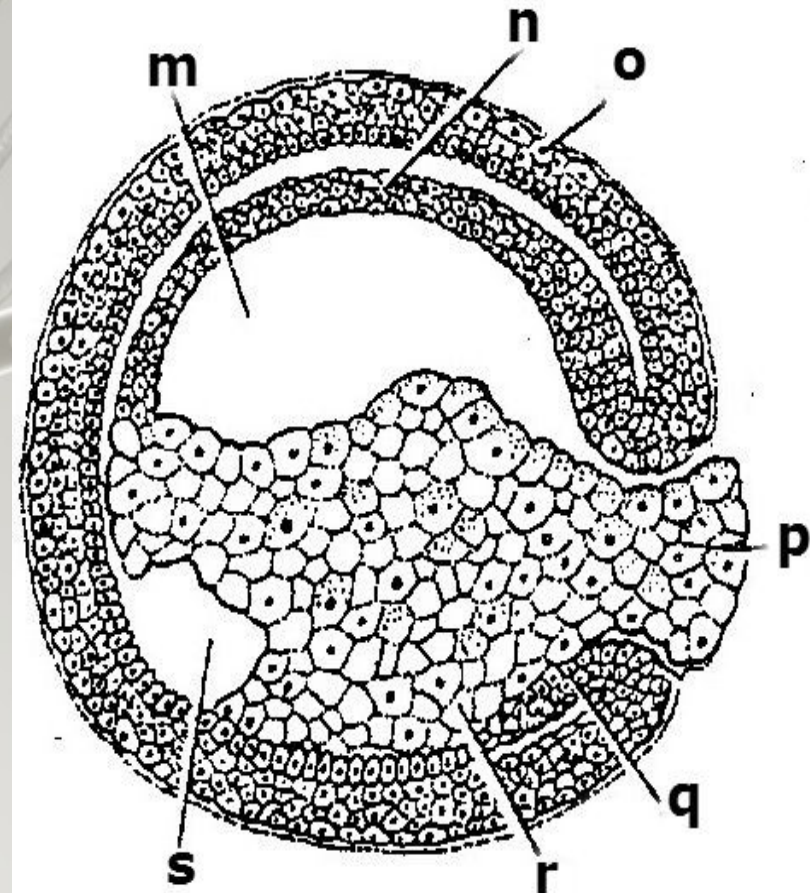
**o- ectoderm**

**p - yolk plug**

**q- mesoderm**

**r- endoderm**

**s- blastocoel**





**34. In V.S of the gastrula of frog, parts have been indicated by alphabets. Identify them.**

**D.**

**m- archenteron**

**n- ectoderm**

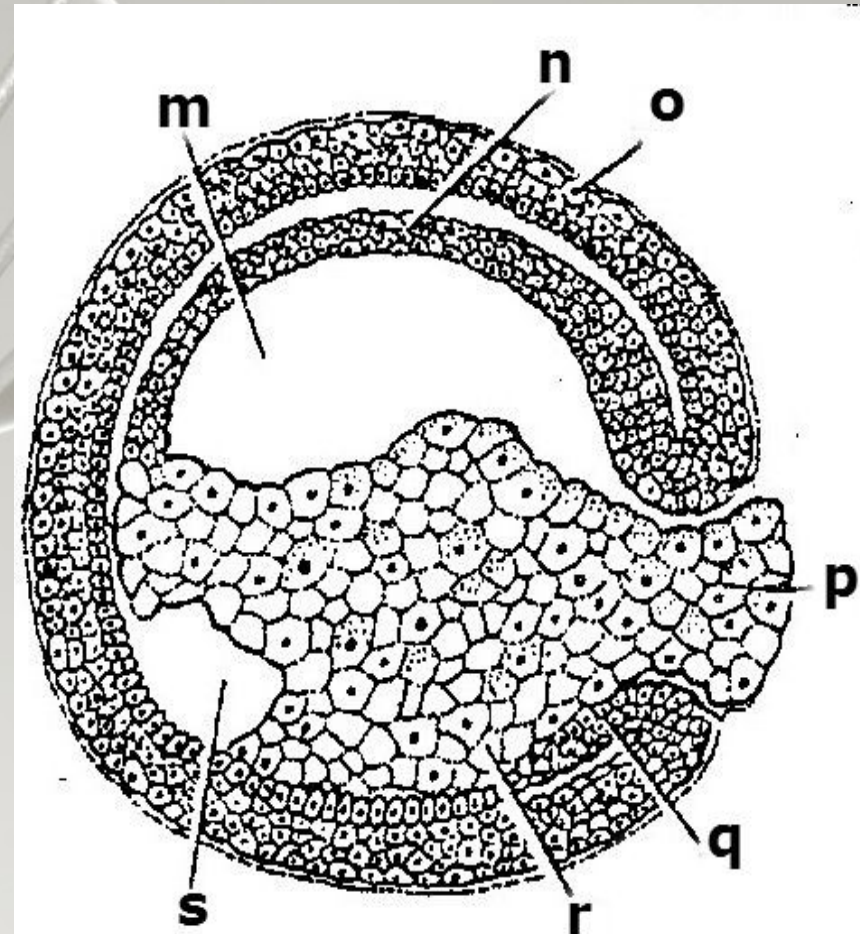
**o- mesoderm**

**p - yolk plug**

**q- chordomesoderm**

**r- endoderm**

**s- blastocoel**



**34. In V.S of the gastrula of frog, parts have been indicated by alphabets. Identify them.**

**Ans: C**

**m- archenteron**

**n- chordomesoderm**

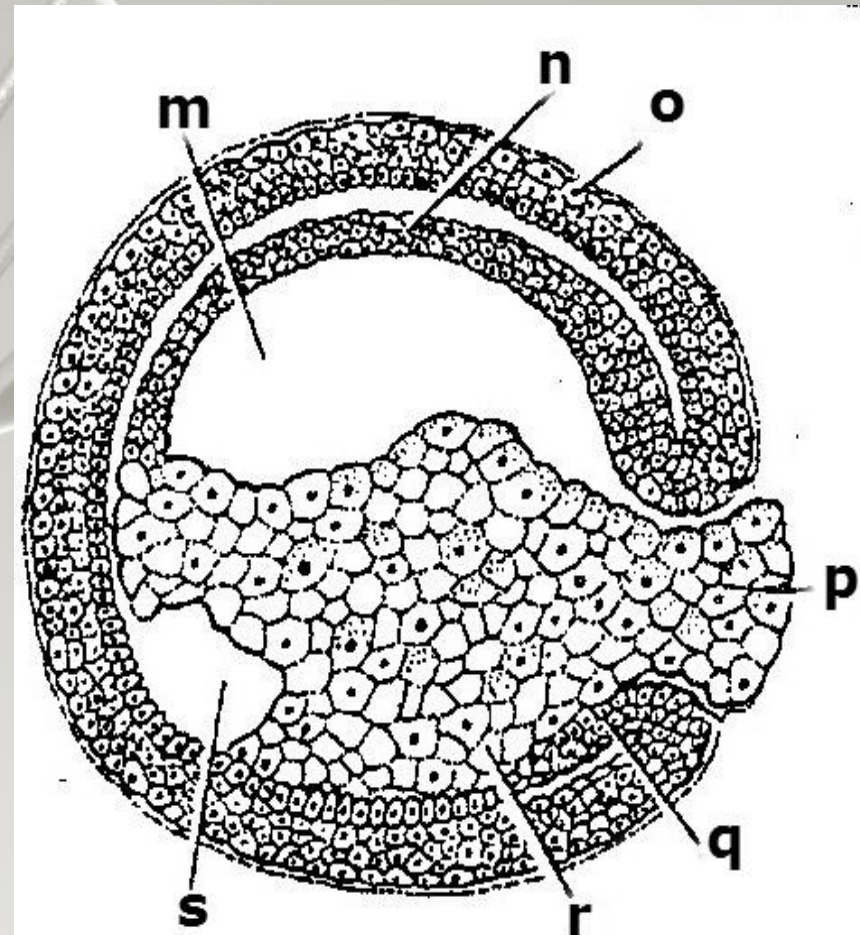
**o- ectoderm**

**p - yolk plug**

**q- mesoderm**

**r- endoderm**

**s- blastocoel**





**35. Hormone administered for hastening child birth is meant for**

- A. Stimulating striped muscles**
- B. Stimulating unstriated muscles**
- C. Increasing blood pressure**
- D. Increasing energy level**

**Ans: B. Stimulating unstriated muscles**



## 36. Identify indicated by alphabets in the structure of Graafian follicle.

**A.**

**m- ovum**

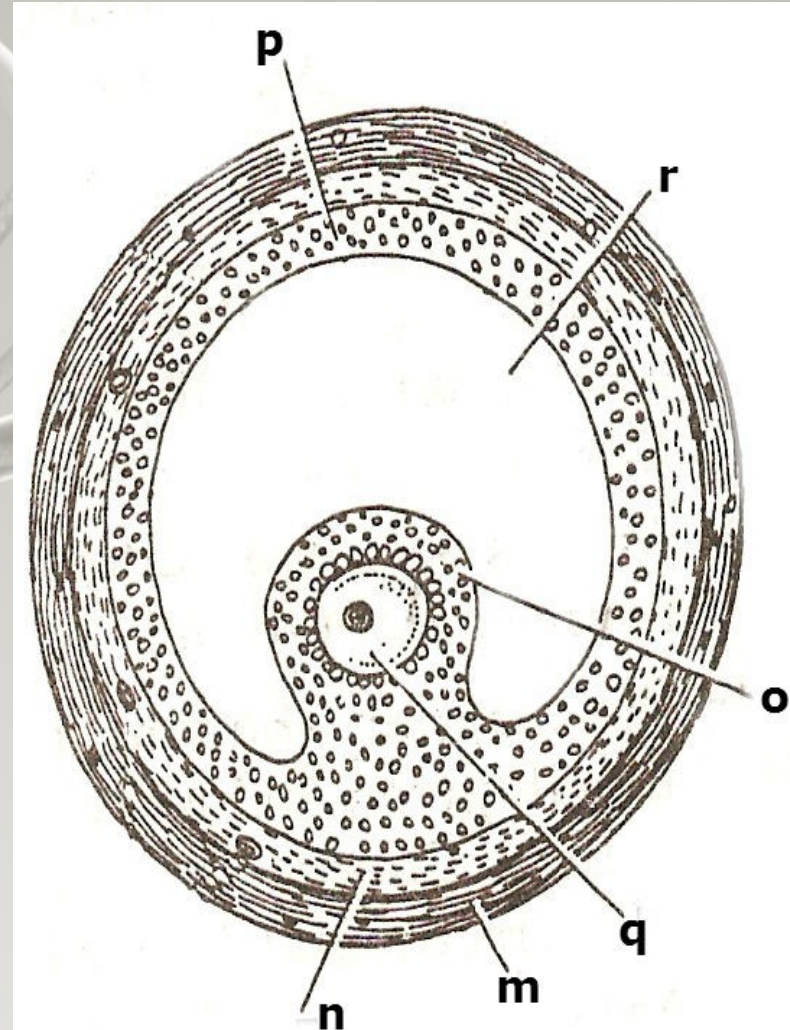
**n-theca interna**

**o- theca externa**

**p-membrane granulosa**

**q- antrum**

**r- cumulus oophorus**



# 36. Identify indicated by alphabets in the structure of Graafian follicle.

**B.**

**m- theca externa**

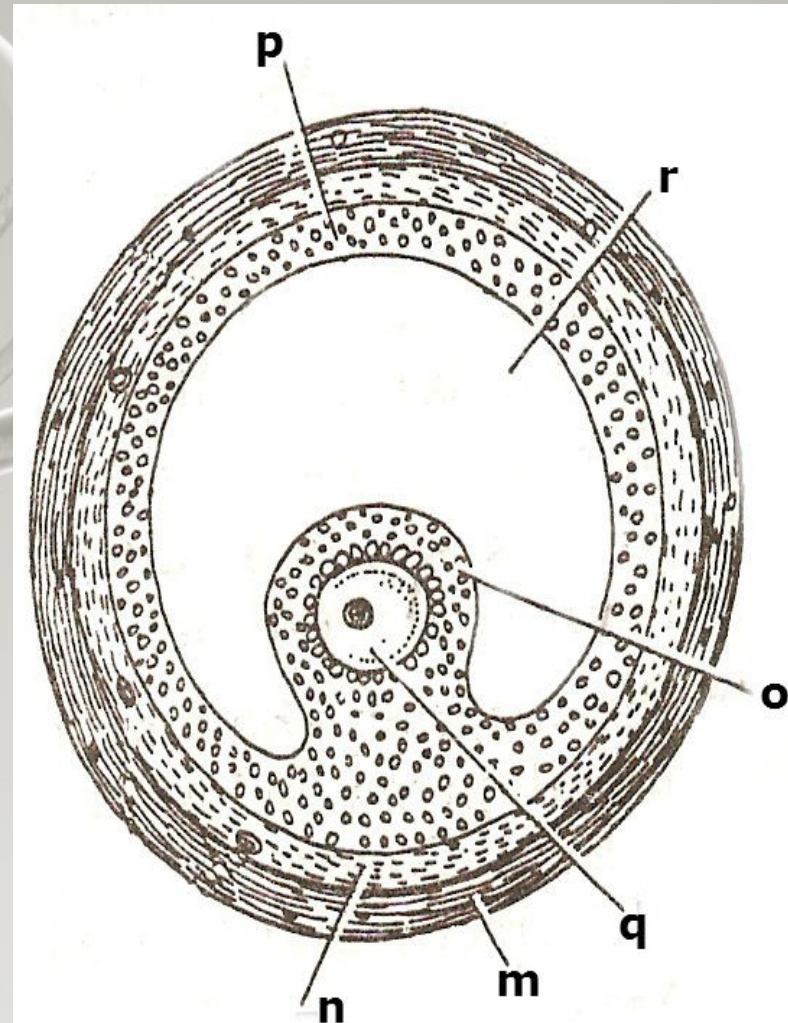
**n-theca interna**

**o- cumulus oophorus**

**p-membrane granulosa**

**q- ovum**

**r- antrum**



## 36. Identify indicated by alphabets in the structure of Graafian follicle.

**C.**

**m- antrum**

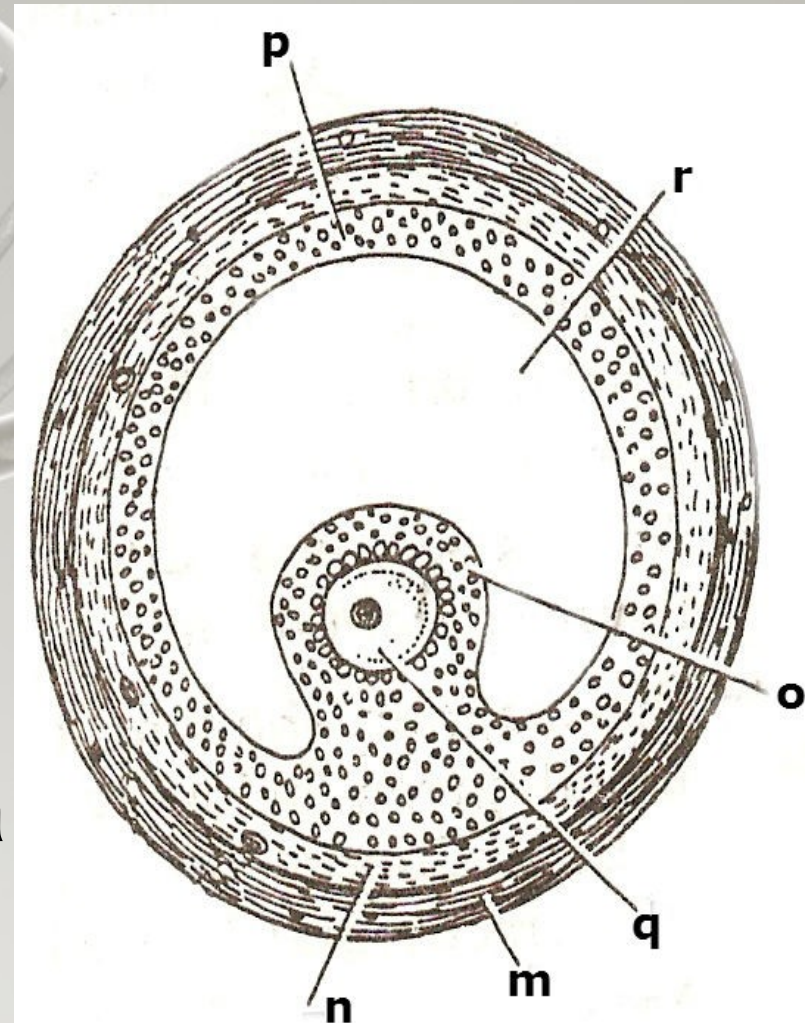
**n-theca interna**

**o- theca externa**

**p- cumulus oophorus**

**q- ovum**

**r- membrane granulosa**





## 36. Identify indicated by alphabets in the structure of Graafian follicle.

**D.**

**m- theca externa**

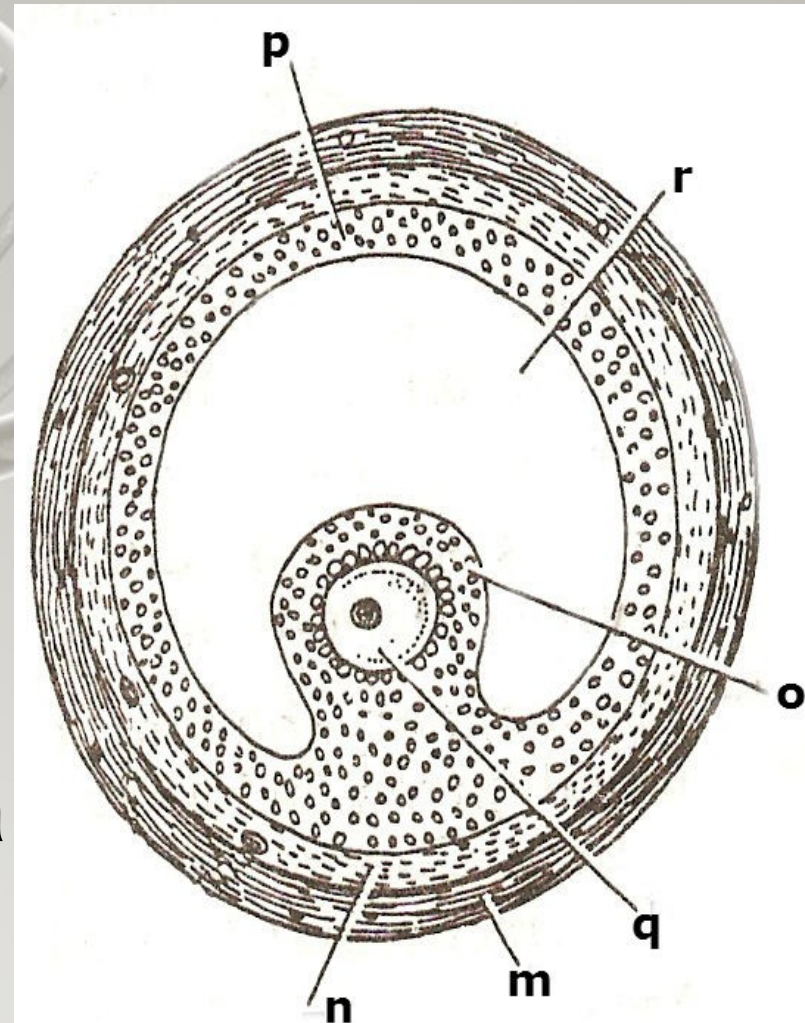
**n-theca interna**

**o- ovum**

**p- cumulus oophorus**

**q- antrum**

**r- membrane granulosa**



## 36. Identify indicated by alphabets in the structure of Graafian follicle.

Ans: B

m- theca externa

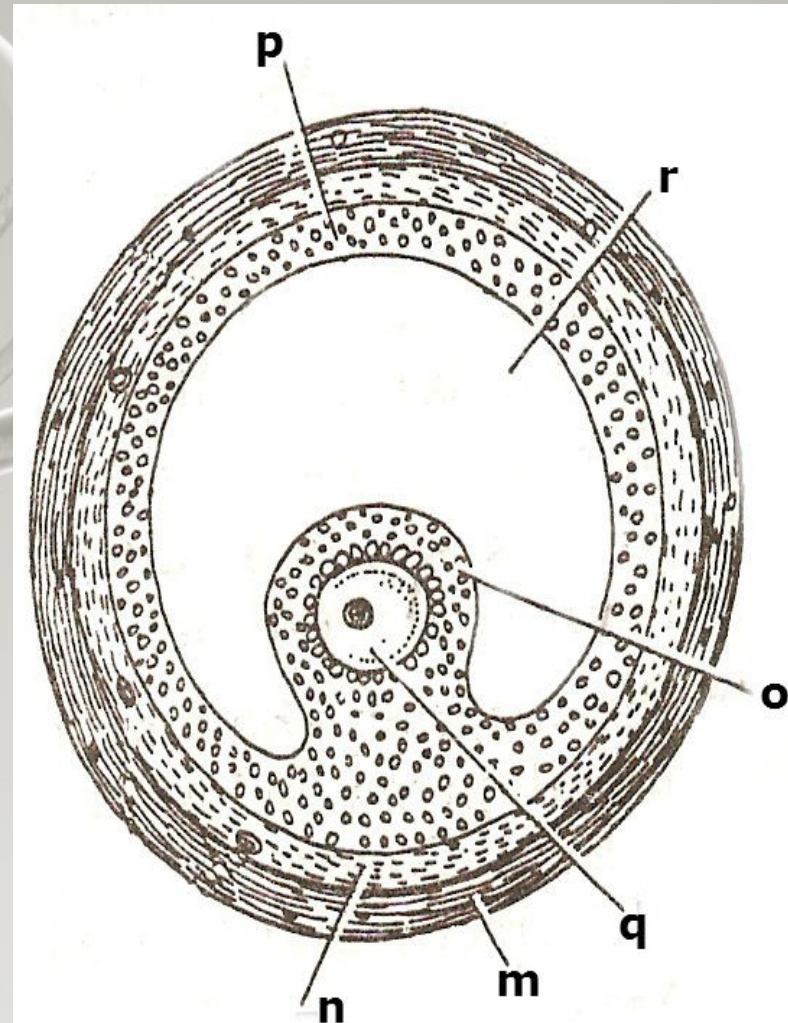
n-theca interna

o- cumulus oophorus

p-membrane granulosa

q- ovum

r- antrum



## 37. Identify the agent causing Syphilis

- A. Bacteria**
- B. Virus**
- C. Fungus**
- D. None of these**

**Ans: A. Bacteria**



**THANK YOU**