



### **BIOLOGY**

# BOOKS - CHETAN BIOLOGY (TAMIL ENGLISH)

# LIFE PROCESSES IN LIVING ORGANISM PART-2

Fill In The Blanks And Rewrite The Completed Statement

**1.** In humans , sperm production occurs in the organ \_\_\_\_\_



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**2.** In humans, \_\_\_\_ chromosomes is responsible for maleness.



3. In male and female reproductive sys	stem of			
human, gland is same.				
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<b>4.</b> Implantation of embryo occurs in				
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<b>5.</b> type of reproduction without fusion of gametes.	occurs			
without rasion of Ballicies.				



**6.** Body breaks up into several fragments and each fragment starts to live as a new individual . This is \_\_\_\_\_ type of reproduction.



**7.** Pollen grains are formed by \_\_\_\_\_\_

division in locules of anthers .



**8.** Yeast cell produces two daughter nuclei by division.



**9.** The zygote divides by mitosis and \_\_\_\_\_\_

is formed.



**10.** breaks open on arrival of favourable condition and many amoebulae are released.



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and digestive cavity of the 11. budding Hydra are in continuity with those of parent Hydra.



**12.** A is formed in the process of fertilization by union of haploid male and female gametes.



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is male whorl and its members are called as stamens.



14. Embryonic development is completed approximately within \_\_\_\_\_ after the fertilization.



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**15.** Encysted Amoeba or any other protist is called \_\_\_\_\_



16. Reproduction in plants with the help of
parts like root , stem , leaf and bud is called as

**17.** Planaria reproduced by \_\_\_\_\_



18.	Fungi	like	 have	filamentaous
boo	dy.			



**19.** In \_\_\_\_\_, chromosome number is reduced to half.



<b>20.</b> is	the structural unit of sexual
reproduction is រ	plants .
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<b>21.</b> are ca	lled essential whorls.
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<b>22.</b> Many flowers	s have stalk for support called
as	



**23.** Members of gynoecium are called as



**24.** \_\_\_\_\_ is present at the tip of the style.



<b>25.</b> Testes contain numerous				
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<b>26.</b> present in seminiferous tubules divide by meiosis to produce sperms.				
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<b>27.</b> is the stoppage of functioning of female reproduction system.				



<b>28.</b> The two	main methods of reproduction are
and	



29. Cell organelles like \_\_\_\_\_ and \_\_\_\_\_
perform asexual reproduction by binary
fission.



**30.** A flower is called as \_\_\_\_\_ if both whorls i.e., androecium and gynoecium are present in the same flower .



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**31.** Formation of zygote by union of sperm and ovum is called as \_\_\_\_\_



**32.** An organ called as \_\_\_\_\_ is formed for the supply of food material to the embryo in the uterus.



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33. Endometrium of the uterus starts to develop or regenerate under the effect of



**34.** Corpus luteum secrets the hormone\_\_\_\_



**35.** In \_\_\_\_\_ technique , fertilization is brought about in test tube .



**36.** Women who have problem in implantation of embryo in uterus can take the help of modern technique called



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**37.** Twins formed from single embryo are called

twins.



**38.** If embryonic cells are divided into two groups, 8 days after the zygote formation , there is high possibility of formation of \_\_\_\_



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**39.** A person's state of physical mental and social strongness is called as



**40.** If oocyte is not fertilized within 24 hours, corpus luteum becomes inacitve and transforms into



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**41.** In plants, second male gametes fuses with two polar nuclei to form.



**42.** Testes are present in the \_\_\_\_\_ outside the abdominal cavity .



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**43.** \_\_\_\_\_ is formed of sperms and the secrections of prostate glands, cowper's glands and seminal vesicles.



**44.** The action of giving birth to young baby is called \_\_\_\_.



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**45.** All the organs of male reproductive system are paired except urinogenital duct, penis and

\_\_\_\_\_



1. Stigma, style, anther, ovary.



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2. Vagina, uterus, testes, ovaries.



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3. Bryophyllum, carrot, raddish, Spirogyra.



**4.** Rete, testes, urinogenital duct, oviduct, epidiymis.



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### Complete The Analogy

**1.** Prokaryote: Bacteria:: Protist: \_\_\_\_\_



2. Paramoecium :::Euglena :longitudinal
binary fission
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<b>3.</b> Hydra: Budding :: Bryophyllum ::
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<b>4.</b> Androecium : :: Gynoecium :
Carpels

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<b>5.</b> XX-chromosomes : Female ::: male
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<b>6.</b> Calyx and Corolla : Accessory whorls ::
Androecium and Gynoecium :
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7. Ovule: Seed :: Ovary :



**8.** Calyx : Sepal :: Corolla : \_\_\_\_\_



**9.** Single embryo : Monozygotic twins :: Two embryos :



<b>10.</b> Planaria : Regeneration :: Mucor :		
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11. Root, stem, leaf: Vegetative propagation ::		
Flower :		
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<b>12.</b> Length of epididymis : 6 meters :: Length of		
a sperm :		

#### **Match The Columns**

	Column 'A'	9888	Column 'B'
(1)	Amoeba	(a)	Fragmentation
(2)	Yeast	(b)	Vegetative propagation
(3)	Bryophyllum	(c)	Binary fission
(4)	Mucor	(d)	Budding
		(e)	Spore formation

1.



Column 'A'		Column 'B'		
(1)	FSH	(a)	Regeneration of endometrium	
(2)	Luteinizing hormone	(b)	Secretion of endometrial glands	
(3)	Progesterone	(c)	Development of follicle	
(4)	Estrogen	(d)	Ovulation	

2.



	Column 'A'	THE R	Column 'B'
(1)	44 + XY	(a)	Female
(2)	44 + XX	(b)	Identical twins
(3)	Monozygotic twins	(c)	Non-identical twins
(4)	Dizygotic twins	(d)	Male

3.



## State Whether The Following Statements Are True Or False Correct The False Statements

**1.** Absence of genetic variation is an advantage of asexual reproduction .



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**2.** Binary fission is usually performed by living organisms under favourable conditions.



**3.** Spirogyra reproduces by



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4. Diversity in living organism occurs due to genetic variation.



5. Calyx and corolla are called as essential whorls.



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**6.** Members of calyx are called as petals.



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**7.** Papaya is a bisexual flower.



**8.** Y-chromosomes is present in men and women.



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**9.** After fertilization , ovule develops into seed and ovary into fruit .



**10.** The minimum age for marriage in India is 18 for girls and boys.



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11. Sperm and ovum are formed by mitosis.



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12. Fertilization in humans is internal.



**13.** Approximately 2-4 million oocytes are released upto the age of menopause .



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**14.** When pollination involves two flowers borne on the same plant, it is called as cross-pollination.



15. Flowers with stalk are called as sessile.



**16.** Each embryo sac consists two haploid egg cell and one haploid polar nuclei.



17. The mother is responsible for a girl child.



**18.** X-chromosomes is present in men and women.



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**19.** Paramoecium divides by longitudinal binary fission.



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Name The Questions

**1.** Hormones related with male reproductive system



**2.** Hormones secreted by ovary of female reproductive system.



**3.** Type of twins



4. Any two sexual diseases .



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5. Methods of family planning



**6.** Advanced medical techniques for reproduction



7. Hormones that control menstrual cycle.



**8.** Organs of female reproductive system in human.



**9.** Organs of male reproductive system in human



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**10.** Four floral whorls.



**11.** Accessory whorls in a flower .



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12. Essential whorls in a flower.



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**Answer In One Sentence** 

**1.** Which are the important life processes in living organisms ?



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**2.** Which life processes are essential for production of energy required by body?



**3.** Whether the new organism is genetically exactly similar to earlier one that has produced it?



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**4.** Who determines whether the two organism of a species will be exactly similar or not?



**5.** What is gamete formation?

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**6.** When is a flower called bisexual?



7. When a flower is called unisexual?



8. What is pedicel?



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**9.** What is a sessile flower?



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**10.** Which hormone is released from pituitary of mother once the fetal development is completed?



11. Under effect of that hormone, which organ of the female reproductive system starts to contract and thereby birth process (Parturition ) is facilitated ?



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**Choose And Write The Correct Option** 

- **1.** \_\_\_\_\_ divides by simple binary fission .
  - A. Paramoecium
  - B. Amoeba
  - C. Euglena
  - D. Hydra

**Answer: B** 



2.	reproduces	by	longitudinal
binary fission.			

- A. Paramoecium
- B. Amoeba
- C. Euglena
- D. Hydra

### **Answer: C**



**3.** Hydra reproduces by \_\_\_\_\_

A. (a) binary fission

B. (b) budding

C. (c) fragmentation

D. (d) multiple fission.

### **Answer: B**



**4.** Which of the following is a mode of asexual reproduction?

A. (a) Multiple fission

B. (b) Spore formation

C. (c) Budding

D. (d) All of these

**Answer: D** 



<b>5.</b> For binary fission, Amoeba requires
parent cells.

- A. (a) Three
- B. (b) Two
- C. (c) one
- D. (d) zero

### **Answer: C**



- **6.** Yeast reproduces by \_\_\_\_\_
  - A. (a) budding
  - B. (b) binary fission
  - C. (c) spore formation
  - D. (d) multiple fission.

#### **Answer: A**



**7.** \_\_\_\_\_ reproduces from the buds on the leaf margin .

A. (a) Lotus

B. (b) Hibiscus

C. (c) Bryophyllum

D. (d) Papaya.

#### **Answer: C**



8	is present at the tip of the style.	
A. (a) S	stigma	
B. (b) Anther		
C. (c) C	Ovary	
D. (d) (	Ovule	
Answer: A	tch Video Solution	
9	_ is present in each ovule by meiosis.	

A. (a) Pollen grains
B. (b) Seeds
C. (c) Embryo sac
D. (d) Fruit
Answer: C  Watch Video Solution
<b>10.</b> Zygote develops at the cost of the food stored in

A. (a) endosperm		
B. (b) pollen grain		
C. (c) fruit		
D. (d) ovary		
Answer: A		
Watch Video Solution		
<b>11.</b> Testes secrete the hormone		
A. (a) progesterone		

- B. (b) FSH
- C. (c) estrogen
- D. (d) testosterone

#### **Answer: D**



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**12.** At the time of birth , there are \_\_\_\_\_ immature oocytes in the ovary of females foetus.

- A. (a) 2-4 hundred
- B. (b) 5-6 hundred
- C. (c) 2-4 million
- D. (d) 8-10 million

#### **Answer: C**



years.

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**13.** Menopause occurs at the age of \_\_\_\_\_

- A. (a) 18-20
- B. (b) 45-50
- C. (c) 20-30
- D. (d) 18

### **Answer: B**



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**14.** Menstrual cycle occurs at an interval of every \_\_\_\_ days .

A.8 - 10

 $\mathsf{B.}\,15-20$ 

C.28 - 30

 $\mathsf{D.}\,6-7$ 

### **Answer: C**



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**Define Or Explain** 

1. Asexual reproduction



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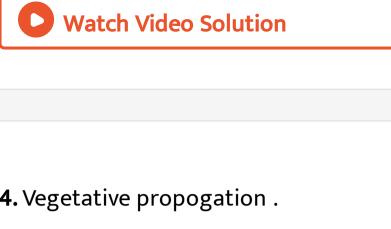
2. Sexual reproduction



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**3.** Reproduction in plants with the help of parts like root, stem, leaf and bud is called as

\_\_\_\_\_



**4.** Vegetative propogation .



5. Regeneration



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6. Pollination



7. Germination



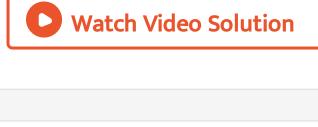
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8. Menopause



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9. Pedicellate flowers



10. Sessile flowers



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11. Fertilization



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12. Ovulation



13. Parturition



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**14.** Twins



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**Short Notes** 

### 1. Multiple fission



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### 2. Fragmentation



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### 3. Regeneration



### 4. Pollination



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### **5.** Surrogacy



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6. Sperm Bank/Semen Bank



# 7. Population Explosion



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**8.** Vegetative propogation .



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## **Distinguish Between**

1. Binary fission and Multiple fission



2. Human Male and female reproductive system



## **Answer The Questions**

**1.** Which are the main types of cell division ? What are the differences ?



**2.** What is the role of chromosomes in cell division?



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**3.** What would have happened if the male and female gametes had been diploid?



**4.** What would have happened if any of the cells in nature had not been divided by meiosis?



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**5.** Why has the Government of India enacted this law to fix the minimum age of marriage as 18 in girls and 21 in boys ?



**6.** What do we mean by maintenance of species?



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**7.** What is the relationship between the cell division and formation of new organism of the same species by earlier existing orgnism?



**8.** Which hormones are responsible for changes in human body during onset of sexual maturity?



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**9.** Does the parent cell exist after sexual reproduction by fission?



**10.** Which different hormones control the functions of human reproduction system through chemnical co-ordination?



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11. Give an example of limited regeneration .



12. How does fertilization take place in humans

?



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# **Explain The Questions**

1. Explain the concept of IVF.



**2.** Which precautions will you follow to maintain the reproductive health?



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## **Draw A Neat And Labelled Diagrams**

**1.** Describe the human male reproductive system with the help of a neat labelled diagram.



**2.** Organs of female reproductive system in human.



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3. Flower with its sexual reproductive organs



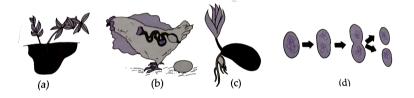
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**4.** What is Menstrual cycle? Describe it in brief.



### **Observe The Picture**

**1.** Observe the picture and tell and life process which you identified .





**Complete The Paragraph** 

1. Complete the paragraph with the help of words given in the bracket. (Luteinizing hormone, endometrium of uterus , follicle stimulating hormone , estrogen , progesterone, corpus luteum, Ovarian follicle along with oocyte) Growth of follicles present in the ovary occurs under the effect of \_\_\_\_\_. This follicle secretes estrogen . grows/regenerates under the effect of estrogen. Under the effect of fully grown up follicle burst, ovulation occurs and is formed from

remaining part of follicle. It secretes				
and Under the effect of hormones ,				
glands of are activated and it				
becomes ready for implantation				

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# Complete The Chart

1. Complete the chart



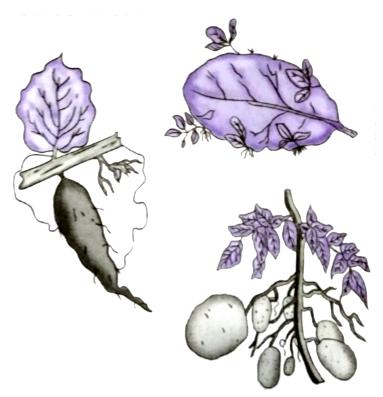
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# 2. Complete the chart



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**Observe The Figure** 



1.

Which method of reproduction is shown in the diagram?

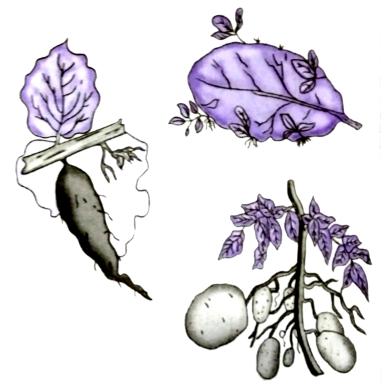




2.

It is an asexual or sexualn method of reproduction? Why?

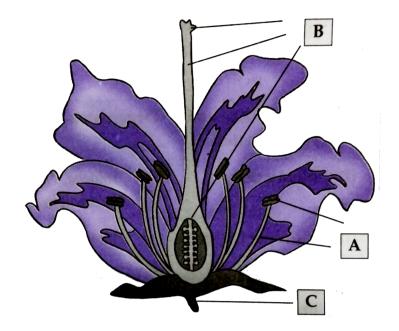




3.

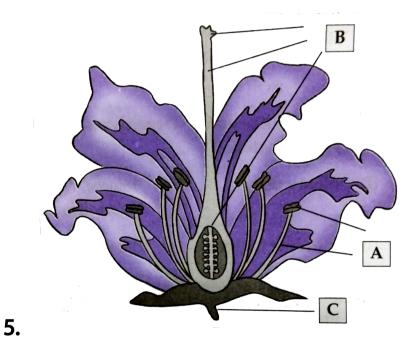
Give example of plant undergoing this method of reproduction ?





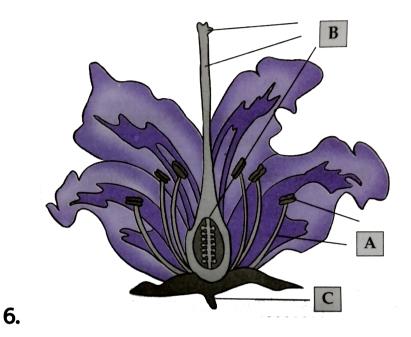
(a) Label the parts (A),(B) and (C)





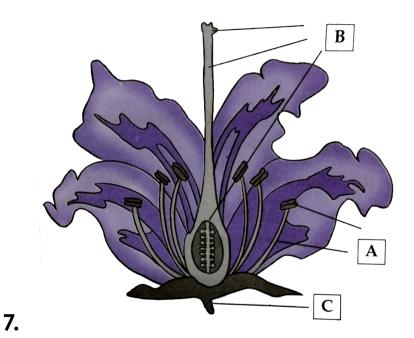
Is this flower unisexual or bisexual? Why?





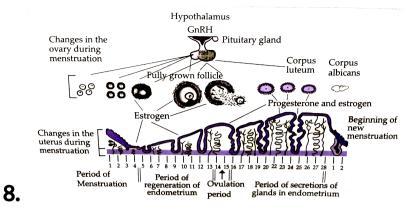
Where are the male and the female gametes present?





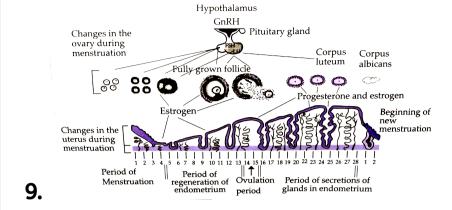
What is a flower without part (C) called?





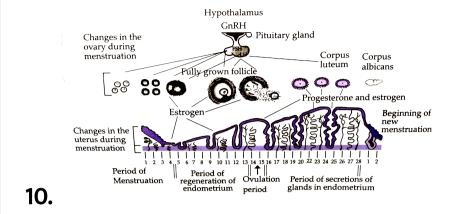
Name the hormones involved in menstrual cycle.





What is the meaning of ovulation?





Under what condition will corpus luteum get transformed into corpus albicans?



Answer In Detail

1. What is Menstrual cycle? Describe it in brief.



**2.** In case of sexual reproduction , newborn shows similarities about character . Explain this statement with suitable example .



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**3.** Gender of child is determined by the male partner of couple. Explain with reasons whether this statement is true or false .



**4.** Explain the asexual reproduction in Rhizopus.



**5.** Explain budding in Yeast.



**6.** Explain the process of spore formation.



**7.** Describe the process of development and birth in humans.



**8.** Name two common sexual diseases. What are their symptoms ?



**9.** Describe the human male reproductive system with the help of a neat labelled diagram.



**10.** Human Male and female reproductive system



11. What are twins? What are their types?



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**12.** Modern techniques like surrogate mother, sperm bank and IVF technique will help the human beings. Justify this statement.



13. Sexual reproduction



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14. Explain with examples types of asexual reproduction in unicellular organisms.



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**15.** Explain budding in Hydra.



# **Assignment 3 Answer The Following**

1. Fill in the blanks.

Implantation of embryo occurs in .....



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2. Give name of: Types of twins.



**3.** Select odd man out: Stigma , style, anther , ovary .



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# Assignment 3 Choose And Write The Correct Option

**1.** Yeast reproduces by \_\_\_\_\_

A. (a) budding

B. (b) binary fission

- C. (c) spore formation
- D. (d) multiple fission.

#### **Answer:**



- **2.** Testes secrete the hormone \_\_\_\_\_
  - A. (a) progesterone
  - B. (b) FSH
  - C. (c) estrogen

D. (d) testosterone

#### **Answer:**



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# Assignment 3 Answer The Following

**1.** What is regeneration? Give an example of limited regeneration.



## 2. Complete the following table

## Female Reproductive System Hormone

#### function

Hormone	Functions			Functions		
(i)	(i) Endometrium develops or regenerates.					
(ii)	(ii) Follicles in the ovary develop.					

(iii)	iii) Endo	metrial glands secrete their secretions.
(iv)	iv) Ovul	ation where oocyte is released.



3. Write short note on: IVF.

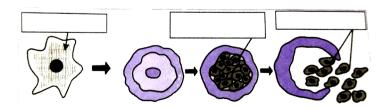


**4.** Give 3 points of differentiation between Asexual and Sexual methods of reproduction .



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**5.** Complete the given figure and explain the method of reproduction.





**6.** A lady in a village was blamed to deliver a baby girl for the third time and was ill-treated by her family. Do you think that the blame was right? Explain with reason.



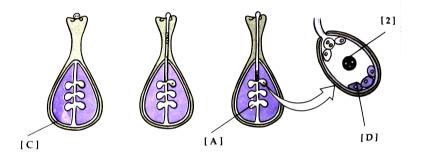
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**7.** Draw a labelled diagram of male reproductive system.



## **Assignment 3 Answer In Detail**

**1.** Observe the figure and answer the following questions.



- (i) Label (A) to (D)
- (ii) What process is shown in the diagram?
- (iii) Explain the process



