



CHAPTER 18

Reproduction



- **Exercise Short Answers**
- **Important Short Answers**
- **Exercise MCQ's**
- **Important additional MCQ's**
- **Past MDCAT MCQ's**

Exercise Short Answers

Q:1 What changes occur in ovulation and menstruation during pregnancy?

Ans: Changes during pregnancy:

Ovulation and menstruation stops during pregnancy and progesterone hormone starts working.

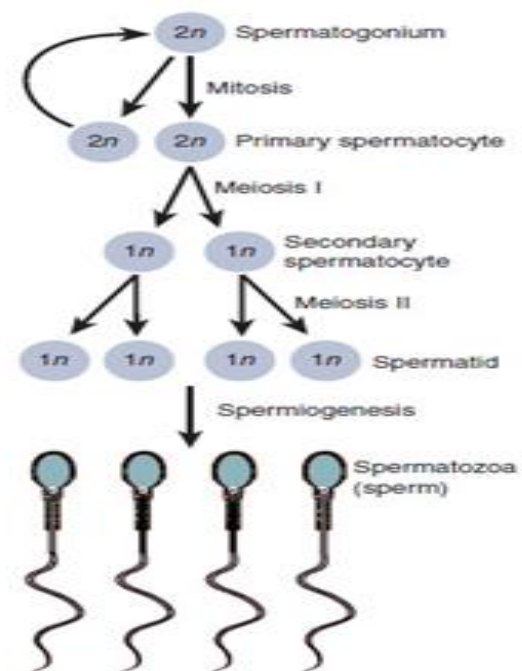
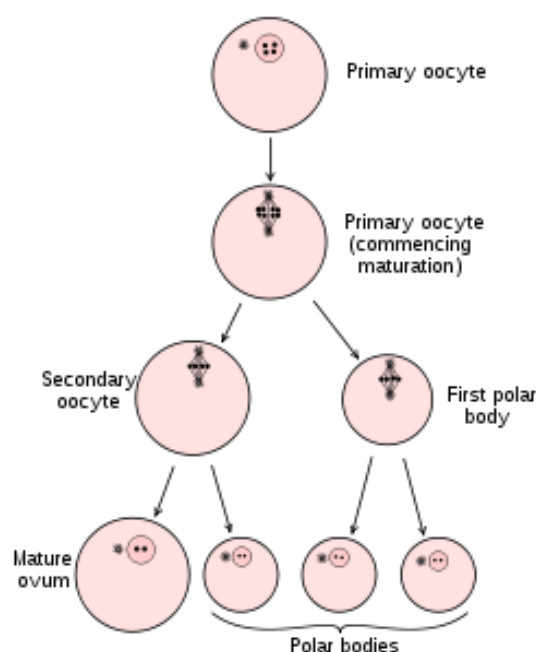
Explanation:

- Ovulation is the release of ovum from the follicle. During pregnancy FSH remains inhibited, so the follicles are not stimulated and no evolution takes place.
- Menstruation is the periodic vaginal discharge in human females. It occurs due to low level of progesterone. During pregnancy the progesterone level is maintained initially by corpus luteum and later by placenta so no menstruation occurs.

Q:2 What is the difference between oogenesis and spermatogenesis.

Ans:

Oogenesis	Spermatogenesis
• Process of production of egg/ovum/oosphere is called oogenesis.	• Process of production of sperms is called spermatogenesis.
• The germ cells in the ovaries of human female produce many oogonia which divide mitotically to form primary oocyte.	• In testis of human male germinal epithelium of seminiferous tubules produce spermatogonia.
• These are enclosed in a group of cells called follicle cells.	• These differentiate into primary spermatocytes which undergo meiotic division to form secondary spermatocytes and spermatids.
• In oogenesis ova is produced which is one in number.	• In spermatogenesis sperms are produced which are four in number.
• Ovum (egg) contains large amount of cytoplasm and yolk.	• Sperm cell does not contain any food like ovum (egg).
• Sperm cells are much smaller but large in numbers than egg.	• Eggs are larger but few in numbers.
• Sperm cells are motile.	• Ovum is immotile.
• Spermatogenesis is completed while it is inside the testes.	• In contrast, secondary maturation division in oogenesis occurs outside the ovary (it occurs in the oviduct).
• Spermatogenesis occurs continuously after puberty.	• Oogenesis occurs in a cyclic pattern.
• Spermatogenesis begins at puberty.	• Oogenesis begins even before the birth during the embryonic development stages.



Q:3 How a seed is formed?

Ans: Seed Formation:

Male and female gametes of plants fertilize to form a zygote. This zygote develops into an embryo which is covered by a seed coat and thus a seed is formed.

OR

Seed Formation:

- Mature and fertilized ovule is called a seed.
- An ovule is an integumented indehiscent megasporangium.
- After fertilization, the zygote develops into an embryo and the integuments develop into the seed coat, and endosperm develops into the food storing tissue.

Q:4 What is the importance of seed in the life cycle of a plant.

Ans:**Importance of seed in life cycle of plants:**

- Seed is a dormant embryo. It is important as:
- It provides protection to the embryo in harsh terrestrial conditions.
- It helps to delay germination and initial growth.
- Seed is the most important evolutionary step in the history of plants.

Important Short Answers

Q:1 Differentiate between spores and seed.

Ans:

Spores	Seed
Spores are produced before fertilization by spore mother cells in order to carry out fertilization.	Seed are developed from the ovule after fertilization.
Microspores are found within the pollen sacs of anther, and megaspores are formed inside the ovule.	The entire ovule becomes the seed after fertilization.
Spores do not contain embryos inside.	Seeds are not as small as that.

Q:2 What is the function of germinating pollen grain?

Ans:

Germinating pollen grain is not only an important structure for safe transfer of gametes and insurance for fertilization but also a rich source of auxins as well as commonly stimulating the tissues of the style and ovary to produce more auxin. This auxin is necessary for fruit set, i.e. retention of ovary, which becomes the fruit after fertilization.

Q:3 How does parthenocarp differ from parthenogenesis?

Ans:

Parthenocarp	Parthenogenesis
In some cases fruit development proceeds without fertilization and thus no seed formation takes place, such development is called parthenocarp.	Development of an egg into adults without fertilization.
In it only fruit is formed.	In it only organism is developed.
It takes place due to hormonal imbalance. Usually high auxins level occurs in ovaries.	- In it 1N and 2N eggs are produced that develop into offsprings. - Eggs producing cell of these animals undergo a normal or modified form of meiosis i.e. total non-disjunction.
It has the advantage of accelerating the fruit production rate.	It has the advantage of accelerating the normal reproductive rate.
Example: Banana, pineapple, grapes and some varieties of oranges.	- Example: Ants, honey bees, termites, aphids, rotifers and wasps. - Haploid Parthenogenesis in honey bees. - Diploid Parthenogenesis in aphids.

Q:4 Define seed dormancy and give its importance.

Ans: Seed dormancy:

Seed dormancy is the special condition of rest which enables an embryo to survive the long periods of unfavorable environmental conditions such as water scarcity or low temperature.

- During this period of rest the embryo ceases or limits its growth.
- Some hormones as abscisic acid promote seed dormancy.

Importance of seed dormancy:

- Seed dormancy is of great survival importance to the plant in that it prevents the dormant seed from germinating in response to conditions such as warm spell in winter, which, although apparently favorable, are only temporary.
- Germination or resumption of normal growth by a dormant embryo requires certain very precise combinations of environmental cues, to avoid any accidental stimulus which may prove fatal later on.

Q:5 Define vernalization and give significance of vernalization.

Ans: Vernalization:

Biennials and Perennial plants are stimulated to flower by exposure to low temperature. This is called vernalization.

OR

Phenomenon which shortens vegetative period and initiate/fastens flowering by applying low temperature treatment to the plants is called vernalization.

- Low temperature stimulus is received by the shoot apex of mature stem or embryo.
- The duration of low temperature treatment required varies from 4 days to 3 months.
- Temperature around 4°C is found to be very effective.

Significance of vernalization:

- It ensures reproduction at favorable conditions and times of the year.
- Vernaliation and photoperiodism ensure that members of the same species flower at the same time.
- Vernalization and photoperiodism encourage cross pollination for genetic variability.
- It also saves our time and energy.

Q:6 define vernalin.

Ans: Vernalin:

It is considered as plant hormone which is produced by giving chilling treatment to plants. It induces vernalization. It is now believed that it is actually gibberellins.

Q:7 define photoperiodism and write its effect in plants.

Ans: Photoperiodism:

Response of a plant to 24 hours/day night cycle is called photoperiodism.

OR

Response of a plant to the relative length of day or night particularly with respect to flowering is called photoperiodism.

OR

The variations in day length are called photoperiod and the phenomenon is called photoperiodism.

Effect of light on plant growth:

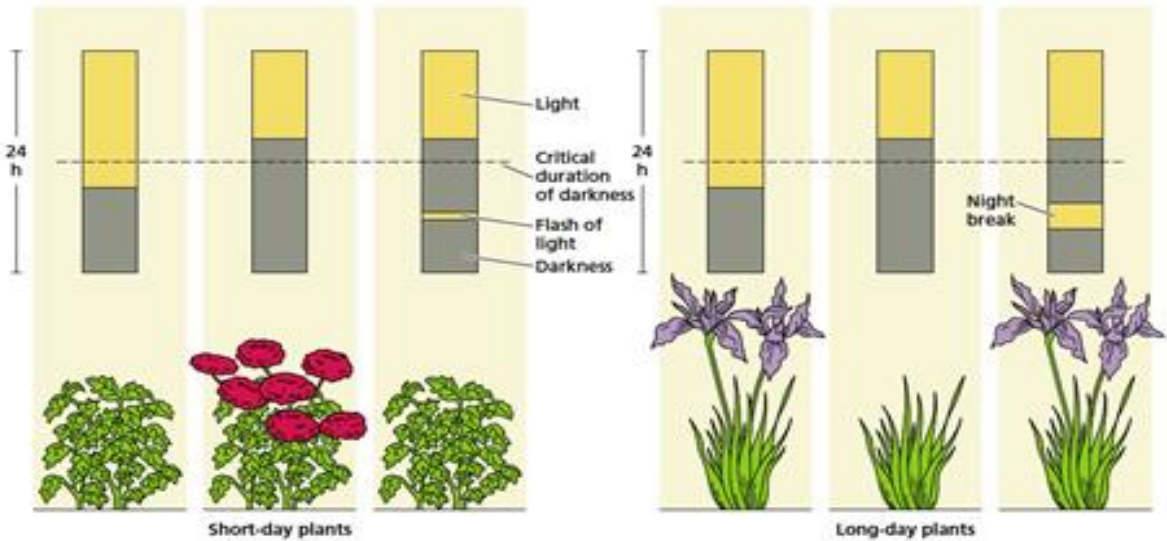
Light exerts influence on living organisms. Photoperiod (light) and temperature effects plants processes as:

- Flowering in plants
- Food and seed production
- Bud and seed dormancy
- Leaf fall and germination
- Photoperiod effects flowering when shoot meristems starts producing floral buds. It doesn’t affect leaf and lateral buds.

Q:8 Differentiate between short day plants and long day plants?

Ans:

Short day plants	Long day plants
• Flowering induced by dark periods longer than critical length, e.g. Cocklebur 8.5 hrs. ; Tobacco 10-11 hrs. OR • Plants which flower in short days or long night are called short day plants.	• Flowering induced by dark periods shorter than critical length, e.g. Henbane 13 hrs. OR • Plants which flower in long days or short night are called long day plants.
• Under natural conditions equivalent to days shorter than critical length, e.g. Cocklebur 15.5 hrs. ; Tobacco 13-14 hrs.	• Under natural conditions equivalent to days longer than critical length, e.g. Henbane 11 hrs.
• Example: Cocklebur, soyabean, tobacco etc.	• Example: Henbane, cabbage spring wheat and barley etc.



Q:9 What is phytochrome? Write its types and importance.

Ans. Phytochrome:

These are blue light sensitive protein pigments involved in flowering.

Types: Phytochromes exist in two forms i.e. P660 and P730.

- 1. P660 a quiescent form absorb red light and is converted to active P730.
- 2. P730 absorb far red light and is converted to P660.

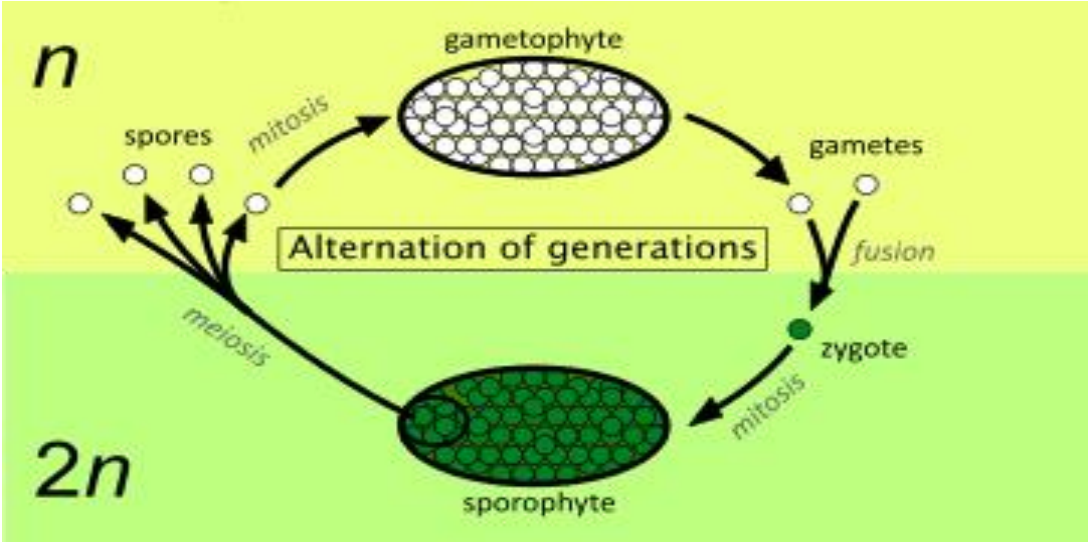
Importance of phytochrome:

They help to control the germination, flowering, seed and fruit formation, leaf fall, bud-dormancy, leaf expansion, greening preventing etiolation and unhooking of plumule in dicotyledons.

Q: 10 Differentiate between sporophyte and gametophyte.

Ans:

Sporophyte	Gametophyte
Sporophyte phase produce spores.	Gametophyte phase produce gametes (Eggs and sperms)
Sporophyte phase is asexual.	Gametophyte phase is sexual.
Sporophyte is a diploid phase (2N) due to the formation of zygote.	Gametophyte is a haploid phase (1N) due to the occurrence of meiosis.
In Bryophytes etc. the sporophyte stage is growing on the gametophyte stage.	In Bryophytes etc. the gametophyte stage is dominant and independent.
In angiosperms, the sporophyte phase is larger.	In angiosperms, the gametophyte phase is smaller.



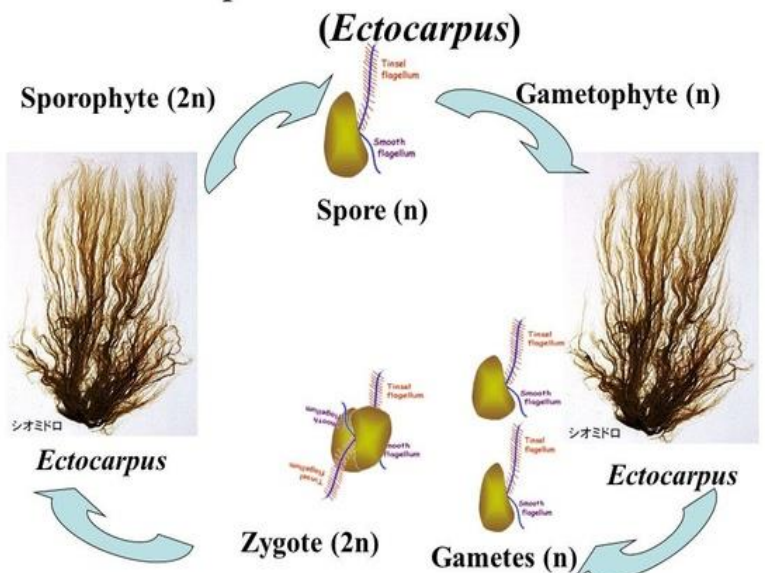
Q:11 Differentiate between haploid and diploid parthenogenesis.

Ans:

Haploid parthenogenesis	Diploid parthenogenesis
The haploid egg develop into haploid offspring's, it is called haploid parthenogenesis.	- Diploid parthenogenesis is that in which the egg-producing cells of the female undergo a modified form of meiosis involving total non-disjunction of the chromosomes. OR - The diploid egg developed into diploid offspring is called diploid parthenogenesis.
Eggs are produced by normal meiosis with 1N number of chromosomes.	Eggs are produced by modified form of meiosis (total non-disjunction) and retain 2N number of chromosomes.
Eggs may/ may not be fertilized from stored sperms.	Eggs are never fertilized usually.
Males are haploid (N) & produce sperms by mitosis.	These 2N eggs develop into young females.
Example: Drones (Males) of honey are produced by haploid parthenogenesis.	Example: Females in Aphids are produced by diploid parthenogenesis.

Q:12 Differentiate between isomorphic and heteromorphic alternation of generations.

Ans:

Isomorphic Alternation of Generations	Heteromorphic alternation of generations
- When diploid sporophyte and haploid gametophyte generations are vegetatively similar during the process of alternation of generations, then it is called isomorphic alternation of generation. - Mostly occurs in green algae.	- When diploid sporophyte and haploid gametophyte generations are vegetatively dissimilar during the process of alternation of generations, then it is called heteromorphic alternation of generation. - This occurs in all plants.
Isomorphic Alternation of Generations (<i>Ectocarpus</i>) 	Heteromorphic Alternation of Generations (<i>Laminaria</i>) 

Q:13 What is apomixes?

Ans: Apomixes:

In this a diploid cell of the ovule, either from the nucellus or megaspore, develops into a functional embryo in the absence of a male gamete.

- The rest of the ovule develops into the seed and the ovary into the seed and the ovary into the fruit
- It is a type of parthenogenesis in flowering plants.
- It has the advantage of accelerating the normal reproductive rate.

Q:14 What are different methods of asexual reproduction?

Ans. Methods of asexual reproduction are as follow:

- Fission
- Sporulation
- Budding
- Vegetative Propagation
- Artificial Propagation
- Parthenogenesis
- Apomixes

Q:15 Describe terms fruit set, climacteric, florigen.

Ans:

Fruit set:

Fruit set is the retention of the ovary, which becomes the fruit after fertilization. After fertilization, the ovary and the ripe seeds continue to produce auxin which stimulates fruit development.

Climacteric:

Fruit ripening is often accomplished by a burst of respiratory activity called the climacteric. This is associated with ethane production, which helps in ripening of the fruit.

Florigen:

Florigen is a hormone in leaves, which travel through phloem to the floral buds and initiates flowering.

Q:16 Define cloning. What are its advantages and disadvantages?

Ans: Cloning:

The type of asexual reproduction in which genetically identical copies of organism is produced by genetic engineering is known as cloning.

OR

An asexual artificial method, during which identical copies of genes, embryos and organisms can be produced from a single gene or cell, these organisms are called clones and phenomenon is called cloning.

Advantages of cloning:

- Desirable animals e.g.; prize bulls; racing horses etc. can be cloned.
- Useful varieties of plants and herbs can also be cloned.
- Quantitative study of action of hormones, drugs and antibodies on cells can be studied by using cloning.

Disadvantages of cloning:

- There are serious moral questions for the application of cloning on man.
- As all organisms will behave similarly so no resistant strains against any disease.
- Any cloned cell will have to pass through all stages of development once again i.e. embryo, foetus, baby and childhood in case of human.
- The degree of environmental influences on the phases of clone development is not fully known.

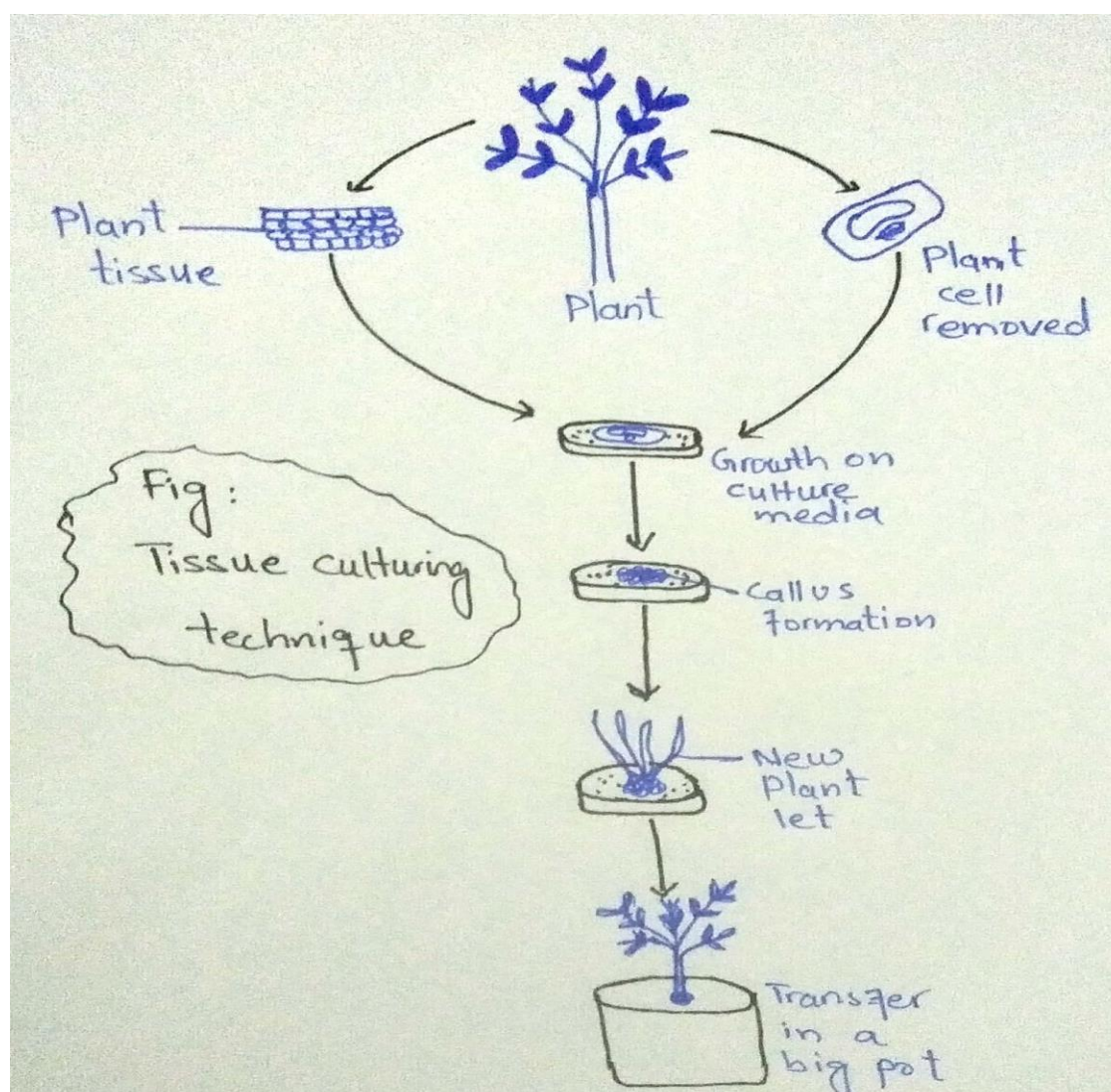
Q:17 What is tissue culturing?

Ans: Tissue culturing:

The culturing of tissues for reproducing new identical varieties is called tissue culturing.

Tissue culturing technique:

In tissue culturing techniques in plants cambium tissues are cut from plants can be stimulated by addition of nutrients, cytokinins, and IAA. These cells show continued growth and differentiate into new plants genetically identical to their parent on artificial culture medium.



Q:18 Define reproduction and gives its importance.

Ans: Reproduction:

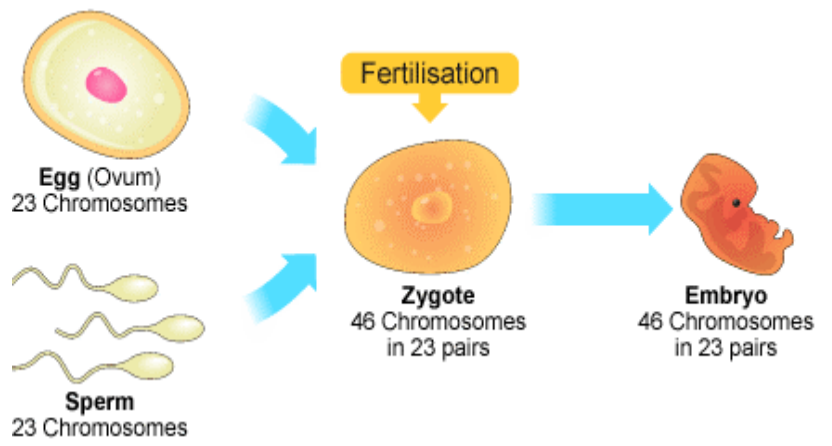
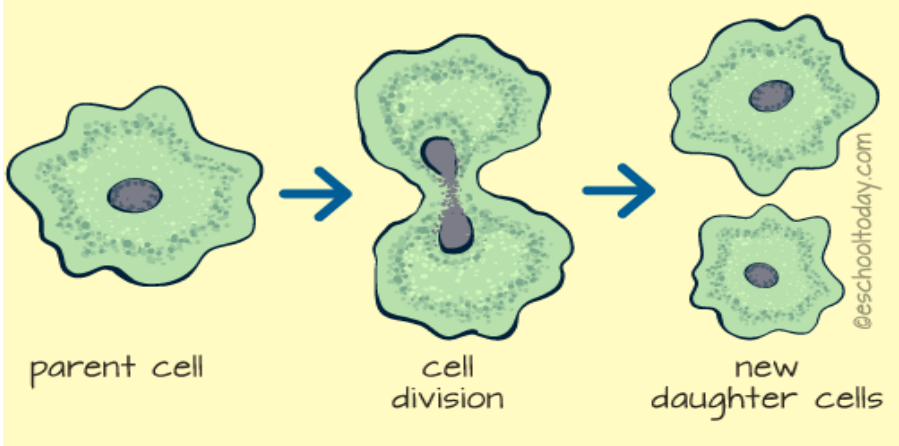
It is the mechanism that produces new generation and maintains a species.

Importance:

It is very important to the survival of a species or a population.

Q:19 Compare sexual reproduction and asexual reproduction.

Ans:

	Sexual reproduction	Asexual reproduction
Definition	Sexual Reproduction is a type of reproduction in which one or two organisms or individuals are involved.	Asexual Reproduction is a type of reproduction in which only one organism is involved.
Number of organisms involved	Two parents are required to mate.	One parent needed.
Cell division	Cells divide by Meiosis.	Cells divide by Fission, budding, or regeneration.
Unit of reproduction	Gamete.	May be whole parent body or a bud or a fragment or a single somatic cell.
Time taken	Sexual reproduction can take several months to complete.	Asexual reproduction is completed in a very short period of time.
Advantages	Variation, Unique. Organism is more protected.	Time Efficient; no need to search for mate, requires less energy.
Disadvantages	Requires two organisms, requires more energy.	No variation - if the parent has a genetic disease, offspring does too.
Evolution	Sexual reproduction leads to genetic variation in new generations of offspring. This is fundamental to evolution.	There is very little chance of variation with asexual reproduction. Mutations in DNA can still occur but not nearly as frequently as in sexual reproduction.
Types	Syngamy and conjugation.	Budding, vegetative reproduction, fragmentation, spore formation.
Occurrence	Occurs in majority of plants and animal species.	Commonly occurs in plants, less differentiated animals and micro-organisms. Absent in more differentiated organisms.
Diagram		

Q:20 What is fertilization? Differentiate between external and internal fertilization.

Ans: Fertilization:

Fertilization is the process, which leads to union of gametes.

- Fertilization may occur outside the body or inside the body of the female.

Internal fertilization	External fertilization
Fertilization occurs inside the body of the female is called internal fertilization.	Fertilization takes place outside the female body is called external fertilization.
Sperms are lodged in the female body which fuses with egg to form zygote.	Male gametes swim towards the female gametes and fuse to form zygote in water medium.
Development may be internal or external.	Development is external.
Examples: Reptiles, mammals and birds etc.	Examples: Frog, Fish etc.

Q:21 Differentiate between twins and clone.

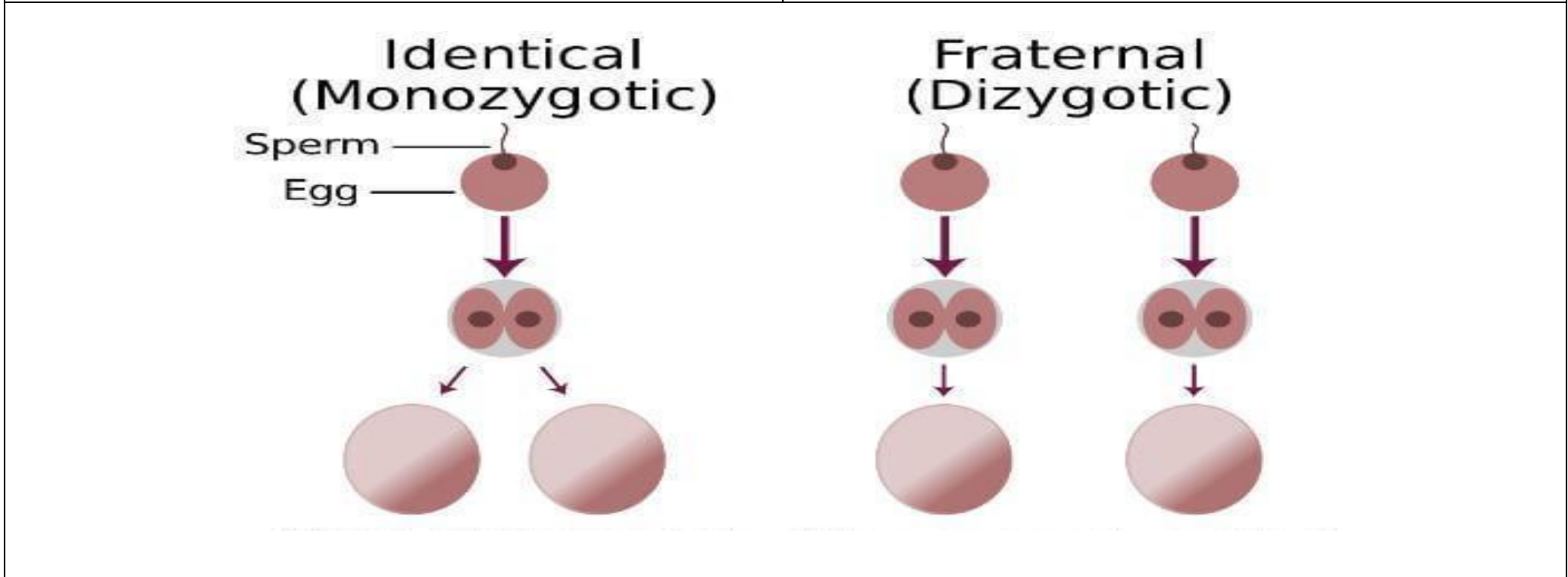
Ans:

Twins	Clones
Twins are naturally formed.	Usually clones are artificially formed.
The twins are may be result of splitting of one egg into two parts or result of fusion of multiple eggs fertilized by different sperms.	Clones are derived from a foreign egg implanted with the DNA of the donor.
Twins are born at the same time.	Clones are created later.
Twins can be formed from chromosome from both mother and father cells.	Clones can be developed from a single somatic cell taken from the mother/donor.

Q:22 Differentiate between identical twins and fraternal twins.

Ans:

Identical twins	Fraternal twins
In higher vertebrates including man, zygote after fertilization undergoes cleavage (cell division by mitosis). When embryo is at two cell stage, two blastomere instead of remaining together may separate and behave as independent zygotes, each give rise to two individual.	In some cases, more than one egg is produced by the female and all of these eggs are independently fertilized forming two or more zygote. Such a twin or triplets are called fraternal twins or triplet.
These offsprings have identical genetic makeup.	These offsprings have different combination of genetic makeup.
They are produced mitotically (asexually).	They are produced sexually.
They are called monozygotic as both develop from single zygote.	They are called dizygotic as each develops from separate zygote.
Identical twins have same sex always.	Non-identical twins have same or may be different in their sexes.
Both must be females or both must be males.	- Both may be males. - Both may be females. - One may be male and one may be female.



Q:23 Describe terms hermaphrodite and embryo.

Ans:

Hermaphrodite:

Organisms which contain both the sexes (testes and ovaries) in the same individual are known as hermaphrodite or bisexual.

Embryo:

The embryo is early stage of the development and the organs formed during this period.

Q:24 Differentiate between oviparous and viviparous.

Ans:

Oviparous	Viviparous
These are organisms in which fertilization is internal. Sperms are lodged in the female body where fertilization occurs and development is external.	- These are organisms in which internal fertilization leads to the internal development. OR - Mammals in which internal fertilization leads to internal development of the embryo inside body of the female which gives birth to young ones are called as viviparous.
Development of the embryo is in shelled egg.	Development of the embryo is accomplished inside of female body.
They lay shelled egg from which young ones hatched.	They give birth to young ones.
Oviparous animals ensure less protection for the embryo.	Viviparous animals ensure a greater protection for the embryo or the foetus than oviparous animals.
Example: Most of the fishes, reptiles and birds.	Example: Mammals.

Q:25 What is ovoviviparous condition?

Ans: Ovoviviparous:

The organisms in which internal fertilization leads to internal development of the young one in a shelled egg and when development is completed, shelled egg is laid which hatches the offspring are called ovoviviparous.

- Ovoviviparous animals ensure a greater protection for the embryo or the foetus than viviparous.
- Example:** In some mammals like duckbill platypus and spiny ant-eater.

Q:26 What is external genitalia in human male?

Ans: External genitalia consist of a pair of testes which lie outside the body, in the sac like scrotum.

Q:27 What are various parts of the female reproductive system?

Ans: The ovaries, the oviducts, uterus and the external genitalia are parts of the female reproductive system.

Q: 28 What are testosterone?

Ans: Testosterone:

The interstitial cells of testes secrete testosterone. This hormone is essential for the successful production of sperms and also controls the development of male secondary characteristics during puberty.

Q:29 What are sertoli cells?

Ans: Sertoli cells:

Sertoli cells are present in testes. They secrete fluid that provides liquid medium, protection and nourishment to sperms while they are in the tubules.

Q:30 What are spermatocytes and spermatids?

Ans:

The spermatogonia present in seminiferous tubules differentiate into primary spermatocytes which undergo meiotic division to form secondary spermatocytes and spermatids which ultimately form sperms.

Q:31 What is FSH?

Ans:

The pituitary gland on the onset of puberty, releases follicle stimulating hormone (FSH) which stimulates the development of several primary follicles.

Q:32 Differentiate between zygote and embryo.

Ans:

Zygote	Embryo
Zygote is the diploid cell that results from the fertilization between an egg and a sperm.	The embryo is early stage of the development and the organs formed during this period.
Zygote is unicellular and becomes multicellular stage.	While embryo starts as a multicellular stage.
Zygote does not undergo organogenesis.	Embryo undergoes through organogenesis.
Zygote does not perform specialization of cells.	Embryo performs specialization of cells but not the zygote.

Q:33 How lactation differ from gestation.

Ans:

Lactation	Gestation
The production of milk by mammary gland is called lactation.	The period of development from conception to birth is called gestation.
Luteotrophic and lactation hormones stimulate mammary gland development for lactation.	Gestation is maintained by progesterone hormone.
It starts after 2-3 days of the birth of baby.	It lasts for 280 days in humans.

Q:34 Differentiate between menstrual cycle and oestrous cycle.

Ans:

Menstrual cycle	Oestrous Cycle
- In human females the periodic reproductive cycle is completed in approximately 28 days and involves changes in the structure and function of the whole reproductive system. It is called menstrual cycle and can be divided into four phases. - It involves (i) Ovarian cycle (ii) Uterine cycle.	It is a reproductive cycle found in all female mammals except human beings. In this cycle, estrogen production prepares the uterus for conception partly and also follicle develops ova.
At the end of this cycle, the blood and cell debris are discharged from female body through vagina which is called menstruation.	Blood does not flow during oestrous cycle.
Female does not require stimulus for ovulation.	At this stage female needs a physical stimulus of mating for ovulation. She exhibits the desire for mating or is said to be on heat.
Endometrium sheds in absence of pregnancy.	Endometrium is reabsorbed in the absence of pregnancy.
Example: This is found in human females only.	Example: This is found in all female mammals except human being.

Q:35 Differentiate between birth initiation and after birth.

Ans:

Birth initiation	After birth
- The fetal pituitary releases Adreno-Corticotrophic Hormone (ACTH) which stimulates the fetal adrenal glands to release corticosteroids. - This hormone crosses the placenta and enters the maternal blood circulation, causing a decrease in progesterone level in mother. - The reduction of progesterone stimulates maternal pituitary to produce oxytocin which induces labour pain, so initiate the birth. - Oxytocin also provides the force to expel the fetus from the uterus.	- Within 10-45 minutes after the birth, the uterus contracts, and separates the placenta from the wall of the uterus and placenta than passes out through the vagina. - Average loss of blood during this period is 350 cm³. - It consists of placenta, umbilical cord and endometrium tissues. - It is released to prepare the uterus for next pregnancy. - Bleeding is controlled by the contraction of smooth muscle fibers surrounded the placenta.

Q:36 Differentiate between estrogen and progesterone.

Ans:

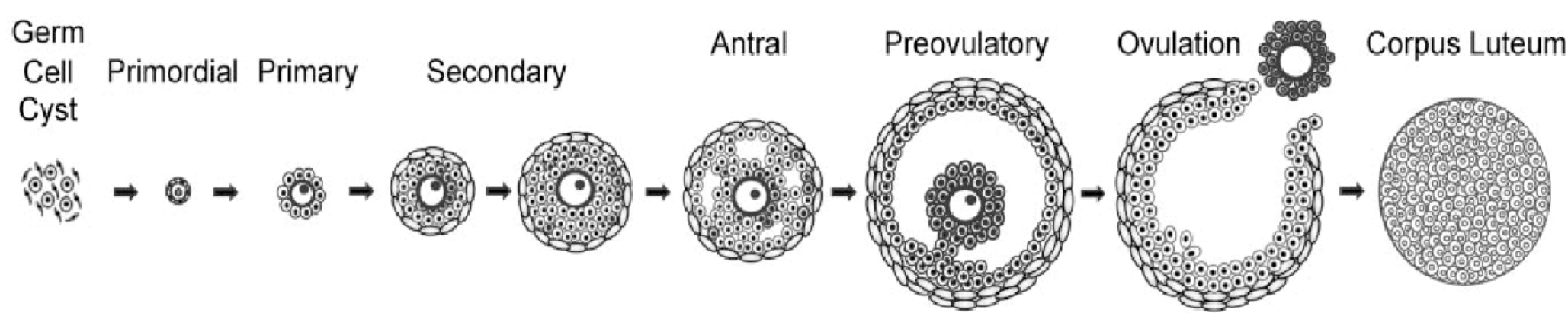
Estrogen	Progesterone
• Release from the ovary under the stimulus of FSH. • Develops the endometrium and make it receptive for the implantation of zygote. • Inhibit ovulation & FSH as well. • It brings about the development of secondary sexual characters in female. • It also helps in healing and repair of uterine wall after menstruation.	• Release from the yellowish glandular structure called corpus luteum. • Stimulates endometrium and vascularizes it. • Inhibits the secretion of FSH from pituitary gland. • It suppresses ovulation so it is a major constituent of birth control pills.

Q:37 What is corpus luteum? Give its function.

Ans: Corpus luteum:

The follicle cells, after release of the egg, are modified to form a special structure called corpus Luteum.

- This yellowish structure starts secreting a hormone called progesterone.
- Progesterone develops the endometrium and makes it receptive for the implantation of the zygote (Placenta formation).



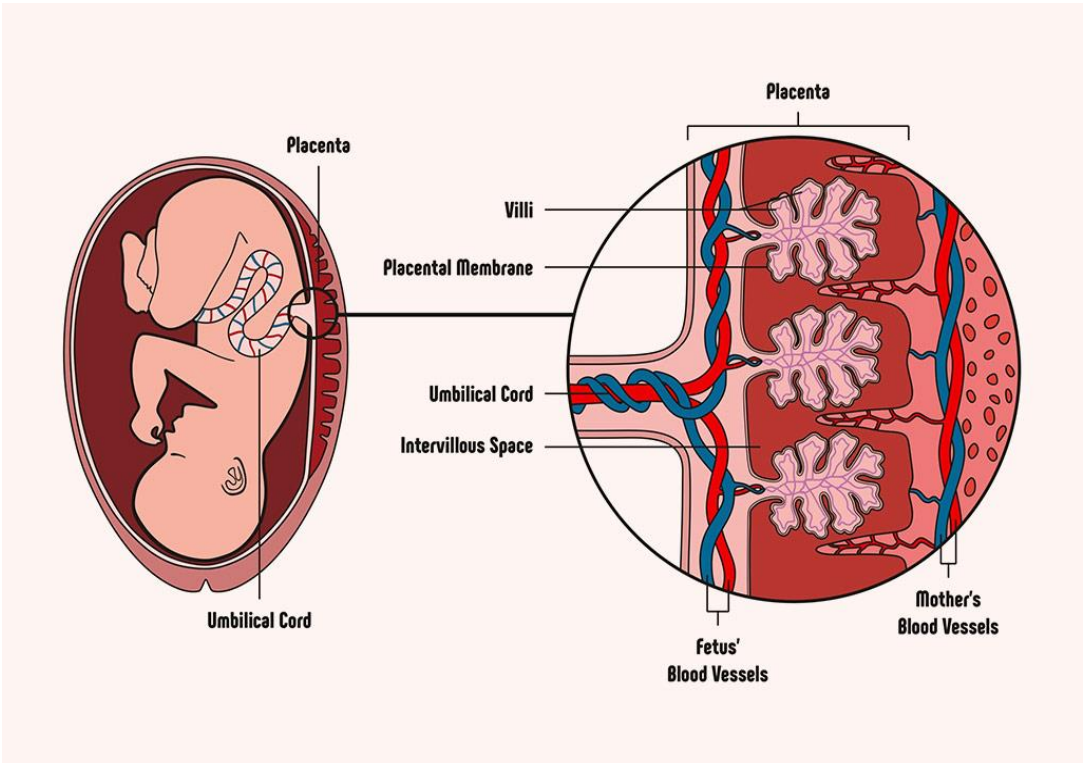
Q:38 What is placenta? What is the role of placenta in human?

Ans: Placenta:

Placenta is a temporary linkage and a region which provides an association between uterus and embryo.

Role of placenta:

- It serves as a site for exchange of oxygen, carbon dioxide, nutrients and wastes between mother and foetus.
- It produces progesterone hormone to maintain pregnancy.
- Human placental lactogen and LTH from pituitary both stimulate the development of mammary glands for lactation (milk production).
- Smooth muscle of placenta also protects the mother from over bleeding after birth.



Q:39 What is ovulation? In human where fertilization occurs?

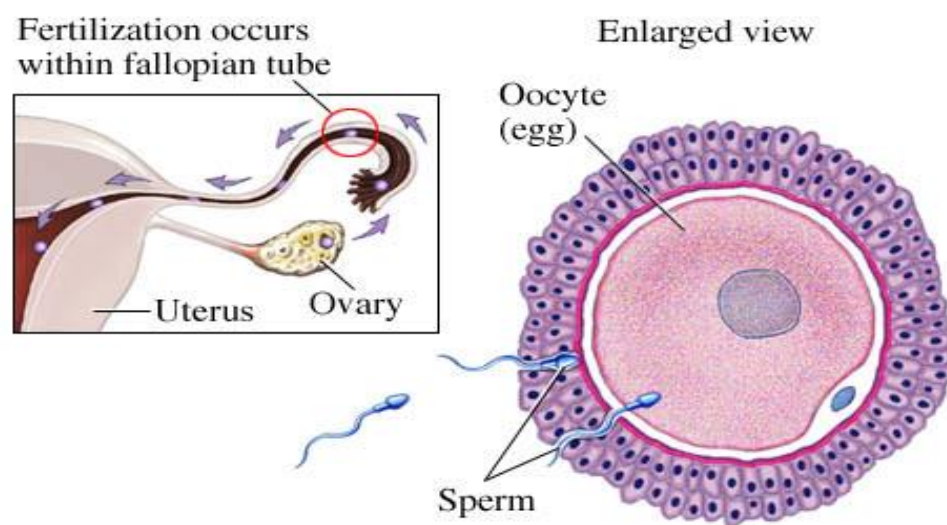
Ans: Ovulation:

The release of ovum from the follicles is called ovulation.

- Decrease of FHS and increase of estrogen, cause the pituitary gland to secrete luteinizing hormone (LH) which induce ovulation.

Fertilization in Human:

Fertilization in humans commonly occurs at proximal part of oviduct.



Q:40 What is follicle atresia?

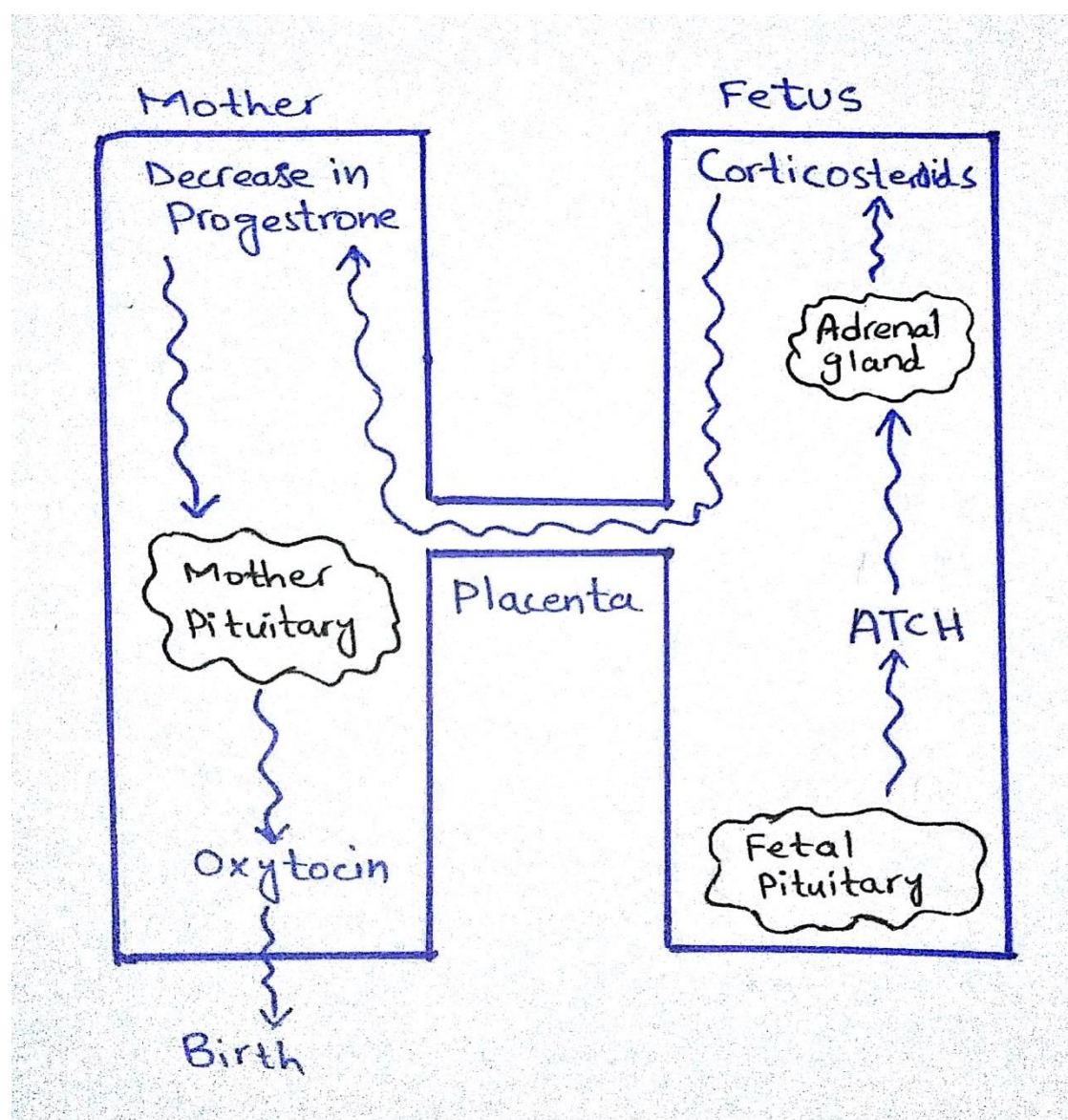
Ans: Follicle atresia:

In human females, the pituitary gland on the onset of puberty release FSH (Follicle stimulating hormone) which stimulates development of several primary follicles. Only one of these follicles continues to grow with its primary oocyte, while the rest break down by a degenerative process known as follicle atresia.

Q:41 Name fetal hormones involved in triggering of birth.

Ans:

The ACTH released from fetal pituitary stimulates the fetal adrenal gland to release corticosteroids, which cross placental barrier and enter the maternal blood circulation causing a decrease in progesterone production. The reduction of progesterone level stimulates the pituitary gland to produce oxytocin hormones. This induces labour pains, i.e. contraction of uterus wall. The release of oxytocin occurs in waves during labour and provides the force to expel the fetus from the uterus.



Q:42 What is a test tube baby?

Ans: Test tube baby:

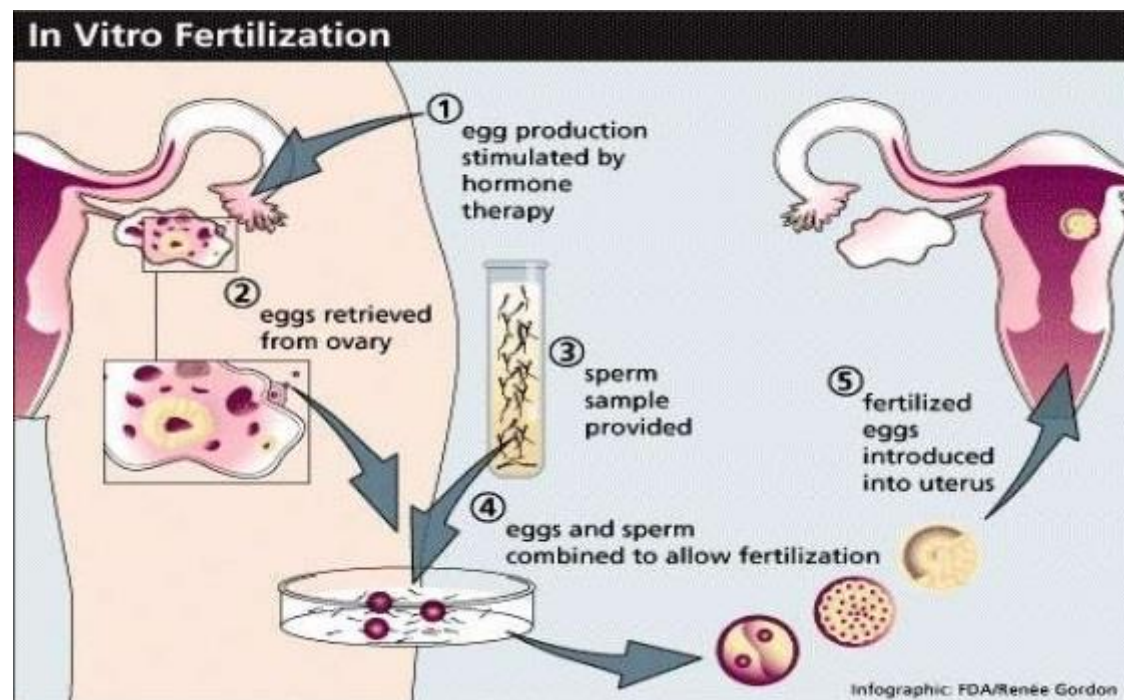
A baby developed from an egg that was fertilized outside the body and then implanted in the uterus of the mother is called as test tube baby.

Reasons:

- One of the important aspects is that some parents have physiological and physical abnormalities.
- Due to the problems such parents are unable to enjoy the normal process of fertilization and birth of their offspring.

Procedure:

- Ovum is fertilized with the parent sperm and in vitro i.e. outside the body in test tube.
- Zygote is implanted back into the mother uterus.
- Placenta is established and remaining development takes place in the body of the mother. It leads to normal birth.



Q:43 What are STDs. Write names?

Ans: Sexually transmitted disease (STD):

Sexually transmitted disease (STD) is a term used to describe different infections that are transmitted through exchange of semen, blood and other body fluids, or by direct contact with the affected body areas of people. Sexually transmitted diseases are called venereal diseases.

- Example: Gonorrhea, Syphilis, Genital Herpes and AIDS etc.

Q:44 Explain the disease gonorrhoea.

Ans: Gonorrhoea:

- It is caused by a gram positive bacteria *Neisseria gonorrhoeae*.
- It mainly affects the mucous membrane of urinogenital tract.
- New born infect may acquire serious eye infections if they pass through the infected birth canal.
- It is highly contagious sexual disease. It is transferred through sexual contacts.

Q:45 Explain one bacterial and one viral STD.

Ans:**Syphilis:**

- It is caused by a bacterium spirochete *Treponeme pallidum*.
- It damages the reproductive organs, eyes, bone joints, central nervous system, heart and skin.
- Source of dissemination is sexual contact.

Genital Herpes:

- It is caused by herpes simplex type 2 virus.
- It is most frequently transmitted by sexual contact causing infection of the genitalia.
- It produces genital soreness and ulcers in the infected areas.

Q:46 What is AIDS?

Ans: AIDS:

AIDS or Acquired Immunodeficiency Syndrome is caused by HIV. It is characterized by weakened immune system and may lead to fatal infections by other pathogens. It is one of the sexually transmitted diseases.

Q:47 Why in every STD eyes of neonate are effected?

Ans:

In women suffering from STD's birth canal is infected. As the baby passes through this canal its eyes becomes infected also.

Exercise MCQ's

❖ Encircle the correct answer from the multiple choices.

1. Reproduction is very important to the survival of:

a) Species

b) Individual

c) Population

d) Both a & b
2. In plants photoperiod and temperature affect:

a) Flowering

b) Buds and seed dormancy

c) Fruit and seed production

d) All a, b, c.
3. Developing seed are rich source of:

a) Auxins

b) Cytokinin

c) Gibberellins

d) All a, b, c
4. Common methods of asexual reproduction are:

a) Tissue culture

b) Identical twins

c) Cloning

d) All a, b, c
5. Photoperiod affect flowering when shoot meristem start producing:

a) Floral buds

b) Leaves

c) Lateral bud

d) Both b & c

Answer key:

1	a	2	d	3	d	4	d	5	a
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Most important MCQ's

❖ Encircle the correct answer from the multiple choices.

Plant Portion

- 1) **Vehicle for transport of male gamete in land plants is:**
 - a) Water
 - b) Pollen tube
 - c) Pollen grain
 - d) Wind
- 2) **Evolution of pollen tube is parallel to the evolution of:**
 - a) Stem
 - b) Leaves
 - c) Flower
 - d) Seed
- 3) **Parthenocarpy is the development of fruit without:**
 - a) Pollination
 - b) Germination
 - c) Fertilization
 - d) Hormones
- 4) **In parthenocarpy which levels are high in ovaries?**
 - a) Gibberalins
 - b) Cytokinins
 - c) Auxins
 - d) All of these
- 5) **Parthenocarpy is induced in tomato and paper by adding:**
 - a) Auxins
 - b) Cytokinin
 - c) Ethene
 - d) Absciscic acid
- 6) **Fruit development without fertilization is called:**
 - a) Dormancy
 - b) Climacteric
 - c) Parthenocarpy
 - d) Parthenogenesis
- 7) **Seeds are dormant in conditions of:**
 - a) Water scarcity
 - b) Low temperature
 - c) Harsh winters
 - d) All of these
- 8) **Germinating pollen grain is rich source of:**
 - a) Gibberelins
 - b) Auxins
 - c) Cytokinins
 - d) Ethene
- 9) **Hormone absent in developing seed:**
 - a) Auxins
 - b) Gibberelins
 - c) Cytokinins
 - d) Ethene
- 10) **Which hormone is necessary for 'fruit set'?**
 - a) Gibberelins
 - b) Auxins
 - c) Cytokinins
 - d) Ethene
- 11) **Fruit ripening is due to the production of:**
 - a) Gibberelins
 - b) Auxins
 - c) Cytokinins
 - d) Ethene
- 12) **Fruit ripening is often accompanied by burst of respiratory activity called:**
 - a) Apomixis
 - b) Climacteric
 - c) Photoperiodism
 - d) Endosperm
- 13) **Which statement is incorrect?**
 - a) Climacteric is burst of respiratory activity in fruit ripening
 - b) It is associated with ethane production
 - c) It helps in fruit set
 - d) It helps in fruit ripening
- 14) **Effect of photoperiodism was first studied in 1920 by:**
 - a) Garner
 - b) Allard
 - c) Charles Lyell
 - d) Garner & Allard
- 15) **What is critical in photoperiodism?**
 - a) Length of light period
 - b) Length of dark period
 - c) Both a and b
 - d) None of these
- 16) **Photoperiod affects flowering, when shoot meristems start producing:**
 - a) Floral bud
 - b) Leaves
 - c) Lateral bud
 - d) Roots
- 17) **The long day plants produce flowers in the presence of phytochromes:**
 - a) P-660
 - b) P-700
 - c) P-730
 - d) P-600
- 18) **Which is a long day plant?**
 - a) Cucumber
 - b) Henbane
 - c) Soyabean
 - d) Strawberry
- 19) **Which statement is incorrect?**
 - a. In short day plants red light prevents flowering
 - b. Henbane is a short day plant
 - c. In long day plants for red light promotes flowering
 - d. Leaf unrolling occurs in grasses
- 20) **Tobacco plant produces flowers in:**
 - a) Spring
 - b) Summer
 - c) Autumn
 - d) Winter
- 21) **Identify the day neutral plants:**
 - a) Cabbage
 - b) Cotton
 - c) Tobacco
 - d) Cocklebur
- 22) **A light sensitive pigment found in plants cells is called:**
 - a) Cytochrome
 - b) Phytochrome
 - c) Cytokinin
 - d) Auxin

23) P660 is converted to active P730 by absorption of:

- a) Blue light b) Red light c) Orange light d) Far red light

24) In nature, P730 to P660 conversion occur in the:

- a) Day b) Red light c) Dark d) Dawn

25) P660 is a quiescent form is converted to active P730 by the absorption of:

- a) Red light b) Blue light c) Yellow light d) Orange light

26) The life effective in preventing flowering in Cocklebur is:

- a) Blue light b) Red light c) Yellow light d) Orange light

27) Unhooking of plumule is promoted by:

- a) Blue light b) Ultraviolet rays c) Red light d) Both a& c

28) Germination of some seeds e.g. some lettuce varieties, is promoted by:

- a) Green light b) Blue light c) Red light d) Violet light

29) The light which promotes germination of fern spores:

- a) Green b) White c) Blue d) Red

30) The temperature more effective for vernalization:

- a) 4°C b) 8°C c) 12°C d) 18°C

31) In biennials and perennials, low temperature stimulus is not received by

- a) Shoot apex of mature stem
b) Embryo of the seed
c) Leaves of the plants
d) None of the above

32) Condition in which biennial & perennial plants are stimulated to flower by exposure to low temperature is:

- a) Photoperiodism b) Florign c) Vernalization d) Chilling

33) Temperature around 4°C stimulates production of:

- a) Florign b) Vernalin c) Auxin d) Ethane

34) The duration of low temperature (Chilling) treatment varies from:

- a) 4 days to 2 months
b) 4 days to 3 months
c) 2 days to 3 months
d) 5 days to months

Asexual & sexual Reproduction in Animals

35) Type of a sexual reproduction is:

- a) Photoperiodism b) Apomixes c) Vernalization d) Fertilization

36) Diploid parthenogenesis occurs in:

- a) Bees b) Aphids c) Honey bee d) Ants

37) Development of an egg into embryo without fertilization is called:

- a) Parthenogenesis b) Parthenocarp c) Fragmentation d) Meiosis

38) Haploid males produce sperms by mitosis in:

- a) Hydra b) Earthworm c) Honey bee d) Man

39) In honey bee males are haploid and produce sperms by:

- a) Mitosis b) Binary fission c) Parthenogenesis d) Meiosis

40) During oogenesis, the total non-disjunction of chromosome occurs in:

- a) Queen bees b) Ants c) Wasps d) Aphids

41) Which characteristic is not of identical twins?

- a. Produced by separation of two blastomeres
b. Have different genetic makeup
c. Produced asexually
d. Produced when embryo is at two cell stage

42) Rapid aging and low resistance to environmental stress and diseases are limitations of:

- a) Parthenogenesis b) Vernalization c) Cloning d) Phototropism

43) In cloning, nucleus is introduced into:

- a) Somatic cell b) Egg cell c) Sperm cell d) None of these

44) Fertilization is the process which leads to the union of:

- a) Individuals b) Gametes c) Sperms d) Eggs

45) Union of gametes is called:

- a) Fertilization b) Gametogenesis c) Oogenesis d) Spermatogenesis

46) External fertilization occurs in:

- a) Terrestrial environment
b) Aquatic environment
c) The reproductive tract of female
d) None

47) Animals that lay shelled eggs to protect developing embryo from harsh terrestrial conditions are called:

- a) Oviparous b) Viviparous c) Ovoviviparous d) Egg laying mammals

48) Reptiles and birds are:

- a) Viviparous b) Ovoviviparous c) Both a& b d) Oviparous

49) Mammals are:

- a) Viviparous b) Ovoviviparous c) Marsupials d) Oviparous

50) Viviparous animals are those in which:

- a) Internal fertilization with external development in eggs
b) Internal fertilization with internal development inside female body
c) Internal fertilization and internal development followed by hatching of egg
d) External fertilization with external development

51) Example of ovoviviparous:

- a) Reptiles b) Mammals c) Duckbill platypus d) Frog

Male and female reproductive system

52) Sperms are formed in male reproductive system:

- a) Collecting ducts b) Seminephrous tubules c) Epididymis d) Vas deferens

53) Organs producing reproductive cells are called as:

- a) Gametes b) Gonads c) Globules d) Glands

54) Types of gametes produced by 2 pair of chromosomes can be:

- a) 4 b) 6 c) 8 d) 10

55) Sertoli cells:

- a) Provide liquid medium to cells in testes
b) Provide protection and nourishment to cells
c) Secrete testosterone
d) Both a and b

56) When sperms are in tubules protection & nourishment is provided by:

- a) Seminephrous tubules b) interstitial cells c) Epididymis d) Sertoli cells

57) External genitalia of human male consist of a pair of testes which lie outside the body in the sac like:

- a) Scrotum b) Penis c) Vas deferens d) Sertoli

58) Fluid secreted by sertoli cells provide liquid medium, protection and nourishment to:

- a) Oocyte b) Sperms c) Polar body d) Spermatids

59) Cells provide liquid medium for protection & nourishment to sperms:

- a) Vas deferens b) Epididymis c) Penis d) Scrotum

60) The highly convoluted part of vas deferens is:

- a) Scrotum b) Epididymis c) Sertoli d) Placenta

61) Between seminephrous tubules are interstitial cells, which secrete:

- a) Estrogen b) Testosterone c) Aldosterone d) Corticosteroids

62) In seminiferous tubules repeated division of the germinal epithelium produce:

- a) Oogonia b) Zoogonia c) Spermatogonia d) Ovogonia

63) Since formation of sperms requires a temperature below body temperature:

- a) Testes lie in scrotal sacs
b) More water intake is advised for mature males
c) Scrotal sacs are pouch like hanging extensions
d) Scrotal sacs are between the thighs

64) Sperms are nourished and activated:

- a) Through vas deferens
b) Through seminal vesicle
c) Through semen
d) Through prostate gland

65) Sperm duct finally opens into the:

- a) Ureter b) Urethra c) Testes d) Epididymis

66) Hormone responsible for sperm cells production & male secondary sexual characteristics during puberty:

- a) Progesterone b) Testosterone c) Thyroxin d) Estrogen

67) Which cells secrete testosterone:

- a) Prostate gland b) Seminal vesicle c) Interstitial d) Follicle cells

68) An external genitalia vary sensitive during copulation in female reproductive system is:

- a) Placenta b) Clitoris c) Uterus d) Cervix

69) Fertilization of ovum occur:

- a) In proximal part of oviduct
b) In distal part of oviduct
c) In uterus
d) In ovary

70) Oviduct open into:

- | | | | |
|-----------|-----------|-----------|-------------|
| a) Vagina | b) Uterus | c) Cervix | d) Placenta |
|-----------|-----------|-----------|-------------|

71) In human female uterine tube opens into:

- | | | | |
|----------|-----------|-----------|-----------|
| a) Ovary | b) Uterus | c) Vagina | d) Cervix |
|----------|-----------|-----------|-----------|

72) Oviduct is generally called as:

- | | | | |
|-------------------|-----------------|---------------|-----------|
| a) Fallopian tube | b) Uterine tube | c) Both a & b | d) Uterus |
|-------------------|-----------------|---------------|-----------|

73) Which one is a haploid cell:

- | | | | |
|----------------------|--------------------|------------|-----------|
| a) Secondary oocytes | b) Primary oocytes | c) Oogonia | d) Zygote |
|----------------------|--------------------|------------|-----------|

74) Second meiotic division in oocyte until fertilization proceeds as far as:

- | | | | |
|-------------|--------------|-------------|--------------|
| a) Prophase | b) Metaphase | c) Anaphase | d) Telophase |
|-------------|--------------|-------------|--------------|

75) Second meiotic division in oocyte is completed:

- a) When ovum is discharged from the ovary
- b) When oocyte is fertilized by sperm
- c) Just before fertilization
- d) Before the onset of menstruation

Female reproductive cycle

76) The ovary under the stimulus of FSH also produces a hormone i.e.

- | | | | |
|-----------------|--------------------|-------------|-------------|
| a) Progesterone | b) Corticosteroids | c) Oxytocin | d) Estrogen |
|-----------------|--------------------|-------------|-------------|

77) Periodic reproductive cycle in females is commonly known as:

- | | | | |
|-------------------|--------------------|--------------------|--------------|
| a) Oestrous cycle | b) Menstrual cycle | c) Ovulatory cycle | d) Menopause |
|-------------------|--------------------|--------------------|--------------|

78) Which of these cycles operate in human females?

- | | | | |
|-------------------|--------------------|------------------|------------------|
| a) Oestrous cycle | b) Menstrual cycle | c) Both of these | d) None of these |
|-------------------|--------------------|------------------|------------------|

79) Discharge of egg from ovary is called (Release of ovary from the ovary):

- | | | | |
|--------------|--------------|------------------|--------------------|
| a) Ovulation | b) Oogenesis | c) Gametogenesis | d) Menstrual cycle |
|--------------|--------------|------------------|--------------------|

80) Ovulation is induced by

- | | | | |
|--------|-------|-------------|----------------|
| a) FSH | b) LH | c) Estrogen | d) Progestrone |
|--------|-------|-------------|----------------|

81) Decrease of FSH & increase of estrogen cause pituitary to secrete:

- a) Luteotrophic hormone (LTH)
- b) Luteinizing hormone (LH)
- c) Vasopressin (ADH)
- d) Oxytocin

82) The end or complete stop of the menstrual cycle is called:

- a) Menopause
- b) Emotional stress
- c) Malnourishment effect of cycle
- d) Menstruation

83) In all female mammals except human being desire for mating is called:

- | | | | |
|---------|---------|--------------|--------------|
| a) Heat | b) Cold | c) Menopause | d) Gestation |
|---------|---------|--------------|--------------|

84) Duration of menstrual cycle is:

- | | | | |
|------------|------------|------------|------------|
| a) 25 days | b) 26 days | c) 27 days | d) 28 days |
|------------|------------|------------|------------|

85) Progesterone is secreted by:

- | | | | |
|-----------------------|-----------------------|------------------|-------------------|
| a) Ripening follicles | b) Uterine epithelium | c) Corpus luteum | d) Fertilized egg |
|-----------------------|-----------------------|------------------|-------------------|

86) A reproductive cycle found in all female mammals except human is called:

- | | | | |
|-------------------|--------------------|--------------|--------------------|
| a) Oestrous cycle | b) Menstrual cycle | c) Menopause | d) Ovulatory cycle |
|-------------------|--------------------|--------------|--------------------|

87) Female reproductive cycle may be disturbed by:

- | | | | |
|-------------------|-----------------------|----------------|-----------------|
| a) Malnourishment | b) Emotional stresses | c) Over-eating | d) Both a and b |
|-------------------|-----------------------|----------------|-----------------|

Birth

88) From the beginning of third month of journey the human embryo referred to as:

- | | | | |
|-----------|-------------|------------|--------------|
| a) Foetus | b) Placenta | c) Neonate | d) Young one |
|-----------|-------------|------------|--------------|

89) When will an embryo is called fetus:

- | | | | |
|--------------------------|-------------------------|--------------------------|-------------------------|
| a) 3 rd month | b) 3 rd week | c) 6 th month | d) 6 th week |
|--------------------------|-------------------------|--------------------------|-------------------------|

90) Human embryo remains enclosed in a sac called:

- | | | | |
|-------------|------------------|-----------------|--------------|
| a) Placenta | b) Chorionic sac | c) Amniotic sac | d) Egg shell |
|-------------|------------------|-----------------|--------------|

91) Total gestation period is human female is about

- | | | | |
|-------------|-------------|-------------|-------------|
| a) 350 days | b) 200 days | c) 280 days | d) 320 days |
|-------------|-------------|-------------|-------------|

92) Toward the end of pregnancy, the reduction in the progesterone level stimulates pituitary gland to produce:

- | | | | |
|-------------|-------------|-------------|--------------|
| a) Estrogen | b) Oxytocin | c) Androgen | d) Prolactin |
|-------------|-------------|-------------|--------------|

93) Labor pain is induced by.....hormone:

- | | | | |
|-----------------|-------------|--------------------|-------------|
| a) Progesterone | b) Oxytocin | c) Corticosteroids | d) Estrogen |
|-----------------|-------------|--------------------|-------------|

- 94) During delivery in human female, the average loss of blood is about:
- a) 150 cm³ b) 250 cm³ c) 350 cm³ d) 450 cm³
- 95) In which of the following animals, placenta is formed?
- a) Prototherians b) Metatherians c) Eutherians d) None of these
- 96) During birth which of following act as birth canal?
- a) Oviduct b) Uterine tube c) Uterus d) Vagina

STD's

- 97) Gonorrhea is caused by:
- a) Treponema pallidum
b) Neisseria gonorrhoeae
c) HIV
d) HCV
- 98) A spirochete, Treponema pallidum causes
- a) Genital Herpes b) Gonorrhea c) Syphilis d) AIDS
- 99) Causative agent of Genital Herpes is a:
- a) Virus b) Bacteria c) Fungi d) Protozoan
- 100) Syphilis is caused by:
- a) Mycobacterium b) Treponema c) Spirochete d) AIDS
- 101) Which statement is incorrect?
- a) Syphilis is caused by Treponema pallidum
b) Genital herpes produces genital soreness and ulcers
c) Syphilis affects eyes, bones, joints, CNS
d) Gonorrhea is caused by gram negative bacterium

Answer key:

1	b	2	d	3	c	4	c	5	a	6	c	7	d	8	b	9	d	10	b
11	d	12	b	13	c	14	d	15	b	16	a	17	c	18	b	19	b	20	d
21	b	22	b	23	b	24	c	25	a	26	b	27	c	28	c	29	d	30	a
31	c	32	c	33	b	34	b	35	b	36	b	37	a	38	c	39	a	40	d
41	b	42	c	43	b	44	b	45	a	46	b	47	a	48	c	49	a	50	b
51	c	52	b	53	b	54	a	55	d	56	d	57	a	58	b	59	b	60	c
61	b	62	c	63	c	64	c	65	b	66	b	67	c	68	b	69	a	70	b
71	b	72	c	73	a	74	b	75	b	76	d	77	b	78	b	79	a	80	b
81	b	82	a	83	a	84	d	85	c	86	a	87	d	88	a	89	a	90	c
91	c	92	b	93	b	94	c	95	c	96	d	97	b	98	c	99	a	100	c
101	d																		

Past MDCAT MCQ's

❖ Encircle the correct answer from the multiple choices.

2008

- 1) Syphilis is caused by:
a) Neisseria gonorrhoeae b) Treponema pallidum c) Cats worm d) Herpes simplex
- 2) Which of the following are called placental mammals?
a) Prototheria. b) Metatheria. c) Eutheria. d) All of these

2009

- 3) Which of the following will happen if fertilization does not occur?
a) Menopause starts
b) FSH secretion is increase
c) Corpus luteum degenerates
d) Progesterone secretion is increased
- 4) Newborn infant may acquire serious eye infections, if his/her mother has:
a) Genital herpes b) Gonorrhea c) AIDS d) Syphilis
- 5) Cloning is a form of:
a) Parthenogenesis b) Sexual Reproduction c) Apomixes d) Asexual Reproduction

2010

- 6) The first cells produced by the repeated cell division of germinal epithelium of testis are:
a) Interstitial cells b) Secondary spermatocytes c) Spermatogonia d) Spermatids
- 7) Which of the following sequence is correct?
a) LH → FSH → Estrogen → Progesterone
b) FSH → Estrogen → Progesterone → LH
c) FSH → LH → Progesterone → Estrogen
d) FSH → Estrogen → LH → Progesterone
- 8) Cloning is a form of:
a) Sexual Reproduction
b) Vegetative Propagation
c) Asexual Reproduction
d) Genetic Recombination

2011

- 9) A type of cell in human testes which produces testosterone is called:
a) Interstitial Cells b) Sertoli Cells c) Germ Cells d) Spermatocytes
- 10) Breakdown of endometrium during menstruation is due to:
a) Increase in Level of LH
b) Increase in Level of Progesterone
c) Decrease in Level of Progesterone
d) Increase in Level of Oestrogen
- 11) Oogonia are produced in the germ cells:
a) Both Uterus and Cervix b) Uterus c) Cervix d) Ovary
- 12) Luteinizing hormone triggers:
a) Cessation of Oogenesis
b) Ovulation
c) Breakdown of Oocyte
d) Development of Zygote
- 13) Syphilis is a sexually transmitted disease which is caused by
a) HIV / AIDS
b) Treponema Pallidum
c) Pseudomonas Pyogenes
d) Neisseria

2012

14) Syphilis is a sexually transmitted disease which is caused by:

- a) *Neisseria gonorrhoeae* b) *Treponema pallidum* c) *E. coli* d) *Mycobacterium avium*

15) Discharge of ovum or secondary oocyte from ovary or from Graafian follicle is called:

- a) Fertilization b) Follicle formation c) Pollination d) Ovulation

16) Second meiotic division in the secondary oocyte proceeds as far as:

- a) Metaphase b) Anaphase c) Prophase d) Telophase

17) Which one of the following differentiates directly into mature sperm?

- a) Primary spermatocytes
b) Spermatogonia
c) Secondary spermatocyte
d) Spermatid

18) Uterus opens into the vagina through:

- a) Cervix b) External genitalia c) Fallopian tube d) Vulva
-

2013

19) Spermatogonia differentiate directly into?

- a) Primary spermatocytes
b) Spermatozoa
c) Secondary spermatocytes
d) Spermatids

20) *Treponema palladium* causes?

- a) AIDS b) Syphilis c) Genital herpes d) Gonorrhea

21) What is the location of interstitial cells in testes?

- a) Inside the seminiferous tubules
b) Among the germinal epithelial cells
c) Between the seminiferous tubules
d) Around the testes

22) A type of cells in human testes which produce testosterone are called?

- a) Germ cells b) Interstitial cells c) Sertoli cells d) Spermatocytes

23) The hormone produced from corpus luteum is:

- a) Prolactin b) Progesterone c) FSH d) LH
-

2014

24) Testosterone is produced by which one of the following?

- a) Sertoli cells b) Interstitial cells c) Germinal epithelium d) Spermatogonia

25) The oocyte released during ovulation is in:

- a) Anaphase I b) Metaphase I c) Prophase I d) Metaphase II

26) Yellowish glandular structure formed after the release of egg from follicle is called:

- a) Corpus callosum b) Corpus luteum c) Graafian follicle d) Follicle atresia

27) On puberty, the development of primary follicles is stimulated by:

- a) ICSH b) LH c) FSH d) Estrogen

28) Causative agent of a sexually transmitted disease that affects mucous membrane of the urinogenital tract is:

- a) *Staphylococcus aureus*
b) *Neisseria gonorrhoeae*
c) *Treponema pallidum*
d) *Escherichia coli*
-

2015

29) In human testis, which structure is responsible for carrying sperm from inside the testis?

- a) Seminiferous tubules b) Seminal Vesicles c) Urinogenital duct d) Vasa efferentia

30) In which part of female reproductive system fertilization takes place?

- a) Proximal part of oviduct b) Placenta c) Uterus d) Vagina

31) In females, FSH stimulates the ovary to produce:

- a) Progesterone b) Oestrogen c) Lactin d) Oxytocin

32) Syphilis, sexually transmitted disease is caused by:

- a) HIV b) *Neisseria gonorrhoeae* c) *Treponema pallidum* d) Type '2' virus

33) In which phase of human female menstrual cycle, endometrium prepares for the implantation of embryo?

- a) Proliferative phase b) Secretory phase c) Menstrual phase d) Ovulation phase

2016

34) Events of menstrual cycle are regulated by the:

- a) Ethylene b) Auxins c) Gonadotrophins d) Gibberellins

35) Decrease of FSH and increase of estrogen cause pituitary gland to secrete:

- a) Somatotropin b) Testosterone c) Luteinizing Hormone d) Spermatogonium

36) Transmission of Neisseria gonorrhea is best described by which one of the following?

- a) Oro-fecal Route b) Vector Borne c) Unsafe Sex d) Droplet Infection

37) Syphilis is caused by:

- a) Spirochete b) Water blooms c) Nostoc d) Cyanobacteria

38) AIDS is caused by:

- a) Bacteria b) Fungi c) Virus d) Alga
-

2017

39)is the structure in female reproductive system in which fertilization takes place:

- a) Ovaries b) Cervix c) Uterus d) Oviduct

40) Which of the following directly develops into sperms:

- a) Primary spermatocytes b) Secondary spermatocytes c) Spermatids d) Spermatogonia

41) FSH stimulates the production of oestrogen hormone which has two targets.....and.....:

- a) Uterus, posterior pituitary b) Uterus, anterior pituitary c) Ovaries, uterus d) Ovaries, hypothalamus

42) Syphilis is a sexually transmitted disease and can also damage:

- a) Hair b) P.N.S c) Heart d) Birth canal

43) Ovulation is suppressed by progesterone via:

- a) Only by inhibition of LH
b) Inhibition of FSH & stimulation of LH
c) Inhibition of LH & stimulation of FSH
d) Inhibition of both FSH & LH

Answer key:

1	b	2	c	3	c	4	b	5	d
6	c	7	d	8	c	9	a	10	c
11	d	12	b	13	b	14	b	15	d
16	a	17	d	18	a	19	a	20	b
21	c	22	b	23	b	24	b	25	d
26	b	27	c	28	b	29	d	30	a
31	b	32	c	33	b	34	c	35	c
36	a	37	a	38	c	39	d	40	b
41	c	42	b	43	a				