

UNIT – V HUMAN ANATOMY AND PHYSIOLOGY

VB- REPRODUCTIVE HEALTH

Very Short Answer Questions

1. **What are the measures one has to take to prevent contracting STDs?**

A. The measures one has to be taken to prevent STDs are

- (a) Using condoms compulsorily during coitus.
- (b) Avoiding sex with unknown partners / multiple partners
- (c) Consulting qualified doctor for early detection of STDs and getting complete treatment in case of infections.

2. **What in your view are the reasons for population explosion, especially in India?**

A. The reasons for population explosion in India are

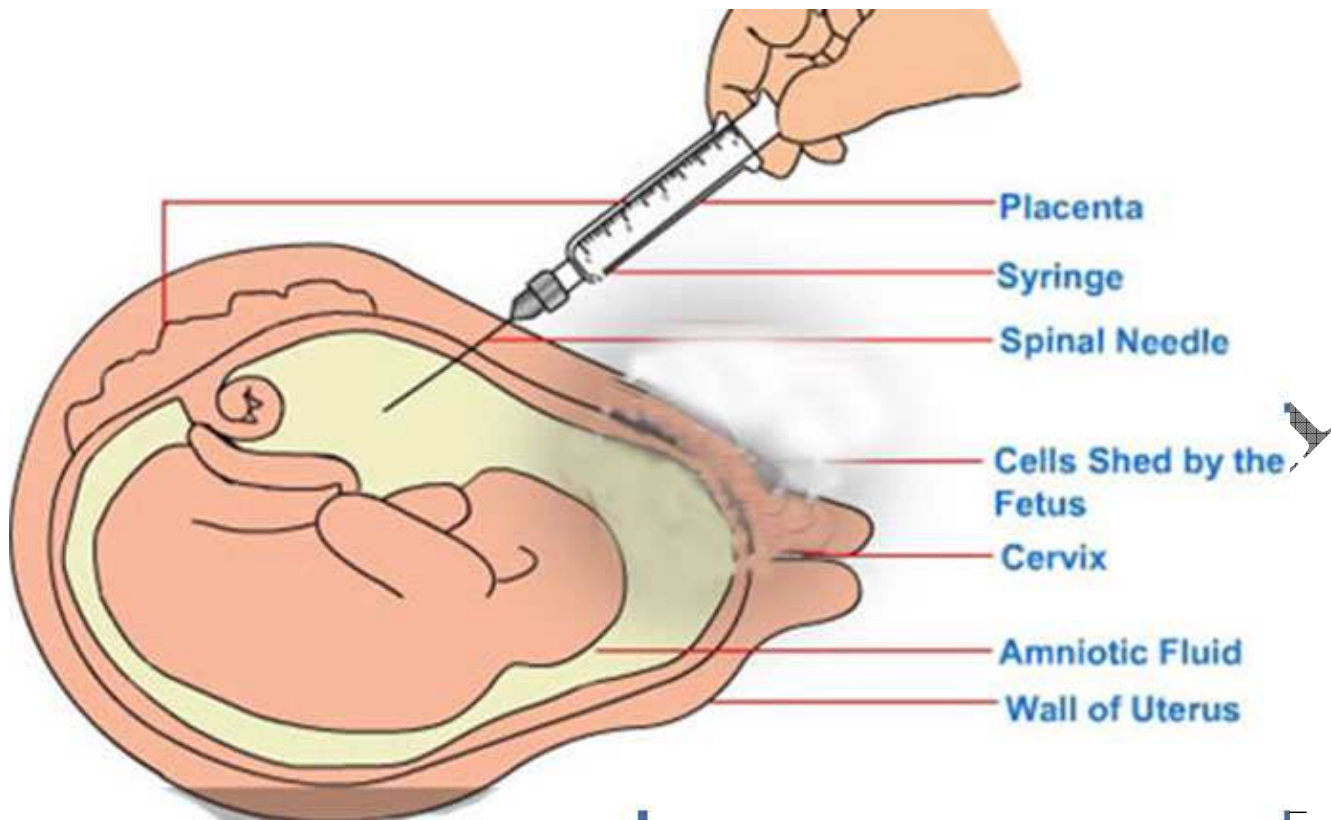
- a) Illiteracy among people
- b) Decline in death rate
- c) Increased health care facilities

3. **It is true that 'MTP is not meant for population control'. Then why did the Government of India legalize MTP?**

A. 'Medical Termination Pregnancy' (MPT) or induced abortion is the procedure to terminate pregnancy with the help of medications. Government of India legalized MTP in 1971 to avoid its misuse, this is necessary to keep a check on indiscriminate and illegal female foeticides.

4. **What is amniocentesis? Name any two disorders that can be detected by amniocentesis?**

A. Amniocentesis is a diagnostic procedure to detect genetic defects in the unborn baby, in which amniotic fluid is collected from foetus and diagnosed for abnormalities. Down's syndrome, Turner's syndrome and Edward's syndrome can be detected by amniocentesis.



5. Mention the advantages of 'lactational amenorrhea method'?

A. Amenorrhoea is the absence of menstruation. Ovulation generally will not occur during the period of intense lactation by the mother following parturition. Lactational amenorrhea is the absence of menstruation as long as mother breast feeds her baby.

The advantages of 'lactational amenorrhea' are

- 1) As long as the mother fully breast feeds her child, chances of conception are almost zero.
- 2) Breast feeding babies will have enhanced immunity, protection against allergies.

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Short Answer Questions

1. Briefly describe the common sexually transmitted diseases in human beings.

A. **Sexually Transmitted Disease (STDs):** Diseases or infections which are transmitted through sexual contact (intercourse) are collectively called sexually transmitted disease (STDs) or Venereal Diseases (VDs) or Reproductive Tract Infections (RTI).

Most common STDs and their causative organisms are shown in the following table.

S.No.	Name of the Disease	Causative Organism
1.	Gonorrhoea	Neisseria gonorrhoeae (bacteria)
2.	Syphilis	Treponema pallidum (spirochete bacterium)
3.	Genital herpes	Herpes simplex virus (HSV)
4.	Genital warts, cervical cancer	Human papillomavirus (HPV)
5.	Trichomoniasis	Trichomonas vaginalis (a protozoan parasite)
6.	Chlamydiasis	Chlamydia trachomatis (bacteria)
7.	Hepatitis – B	HBV
8.	HIV infection/AIDS	HIV (Human immunodeficiency virus)

Except for Hepatitis – B, genital herpes and HIV infection, all the above diseases are completely curable if they are detected early and treated properly.

The common modes of transmission of STDs are

- a) Sharing injection needles
- b) Sharing surgical instrument with infected persons
- c) Transfusion of contaminated blood
- d) From mother to foetus

The common symptoms of most of the STDs are:

- a) Itching
- b) Fluid discharge
- c) Slight pain and swelling in genital region
- d) Pelvic inflammatory diseases
- e) Abortions
- f) Still births
- g) Ectopic pregnancies

h) Infertility and cancer of reproductive tract persons in the age group of 15 – 24 years are more vulnerable to contract STDs.

The measures to be taken to prevent STDs are:

- a) Avoiding sex with unknown / multiple partners
- b) Using condoms compulsorily during coitus
- c) Consulting qualified doctor for early detection of STDs and getting complete treatment in case of infections

2. Describe the surgical methods of contraception?

A. Surgical procedure to prevent pregnancy is known as sterilization. There are two surgical methods of contraception. They are

- (a) Vasectomy
- (b) Tubectomy

a) Vasectomy: It will takes place in male. A small part of the vas deferens on either side is removed or tied up through a small incision on the scrotum. Thus the sperms are prevented from reaching the seminal vesicle so the semen in vasectomised males does not contain sperms.

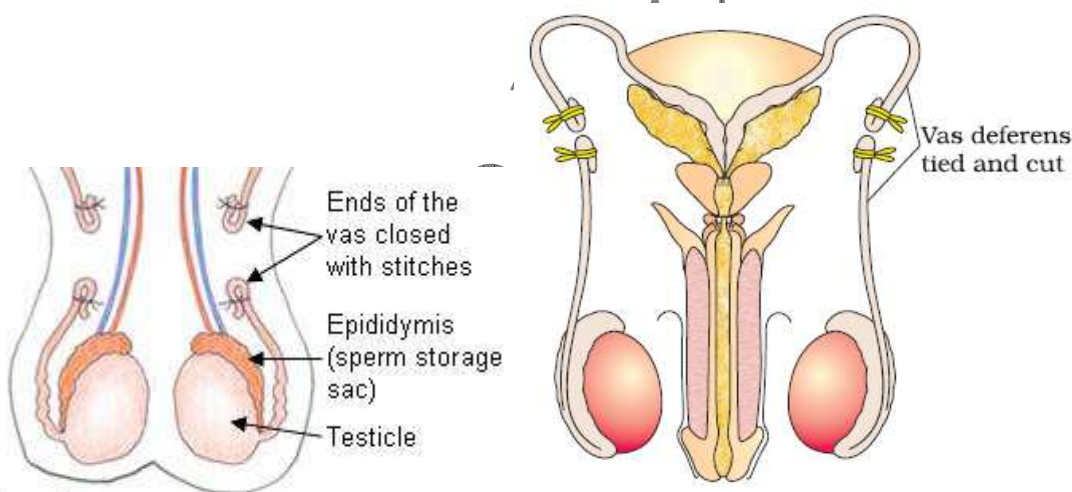


Figure 1

Bilateral vasectomy

Figure 4.4a Vasectomy

b) Tubectomy: It is the contraceptive method in females. A small part of the fallopian tube on both sides is removed or tied up through a small incision in the abdomen or through vagina. This will block the entry of ova into the fallopian tubes and thus pregnancy is prevented.

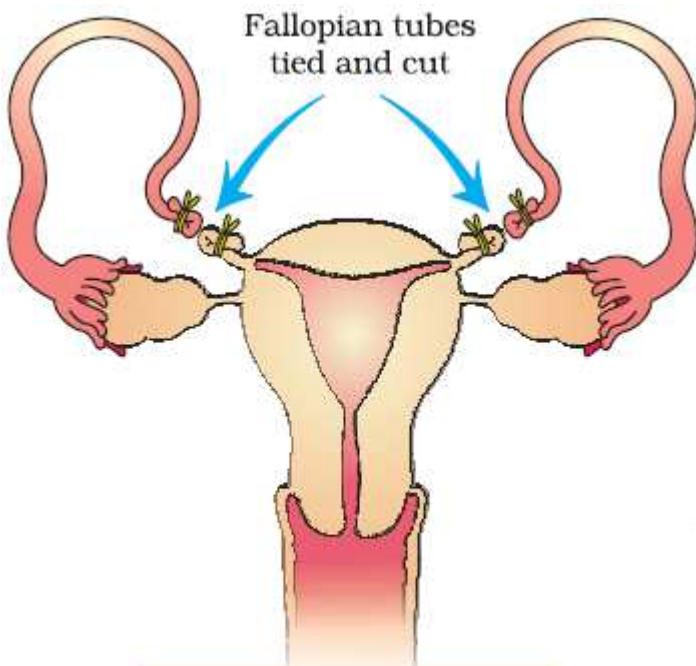


Figure 4.4 (b) Tubectomy

3. Write short notes on any two of the following.

(a) IVF

(b) ICSI

(c) IUDs

A. a) **IVF:** Fertilization of ovum by sperm outside the body of a woman is called In Vitro Fertilization (IVF). The resultant early embryonic stage is transferred into the mother's uterus for further development (Embryo Transfer or Intra Uterine Transfer – IUT).

In this method, which is popularly known as Test tube baby procedure, ova from the wife or female donor and sperms from the husband or male donor are collected, mixed and induced to form zygote under simulated conditions in the laboratory. If the mother's uterus is not medically fit to receive the embryo produced in vitro, it can be implanted in the uterus of surrogate mother who willing to carry this embryo.

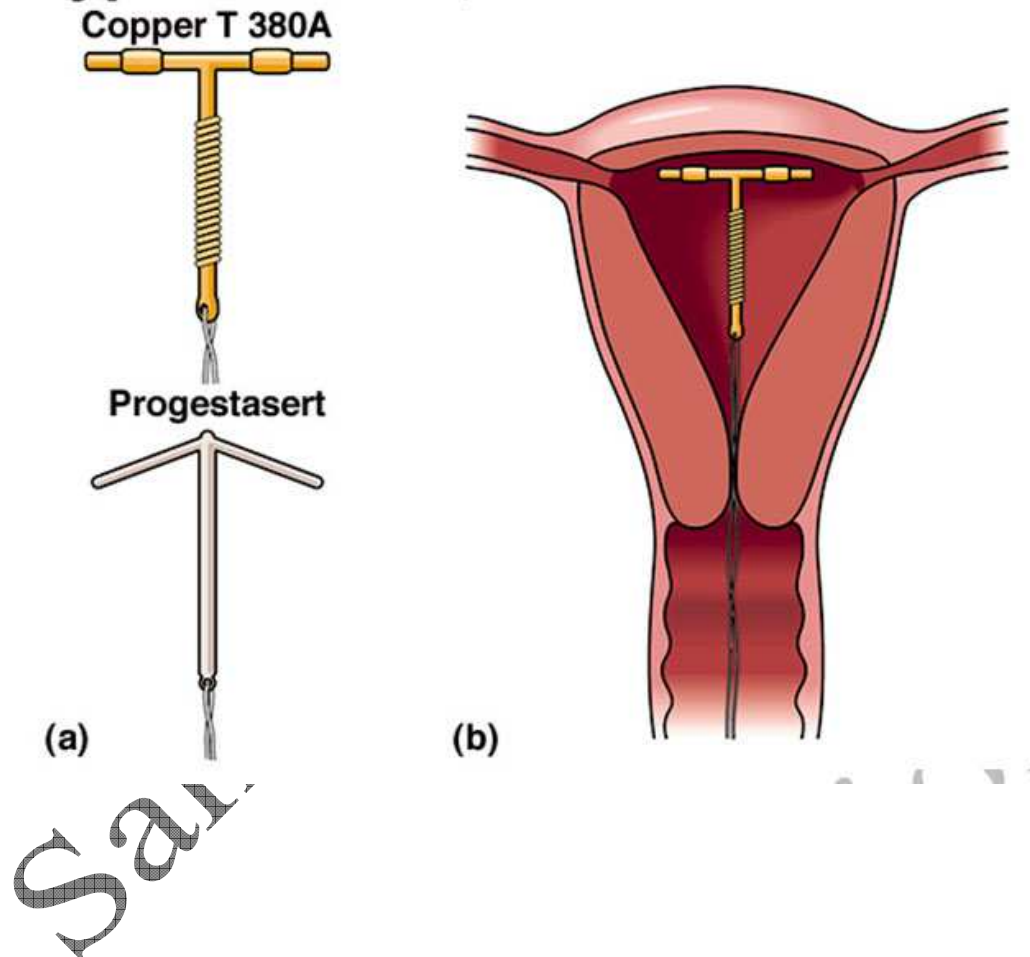
b) **ICSI:** Intra Cytoplasmic Sperm Injection is another specialized procedure in which a sperm is directly injected into the ovum with the help of microscopic needle to form an embryo in the laboratory. Later the embryo is transferred to the uterus or fallopian tube for further development. This method is employed to assist the couple where there are problems with the sperms such as decreased sperm count.

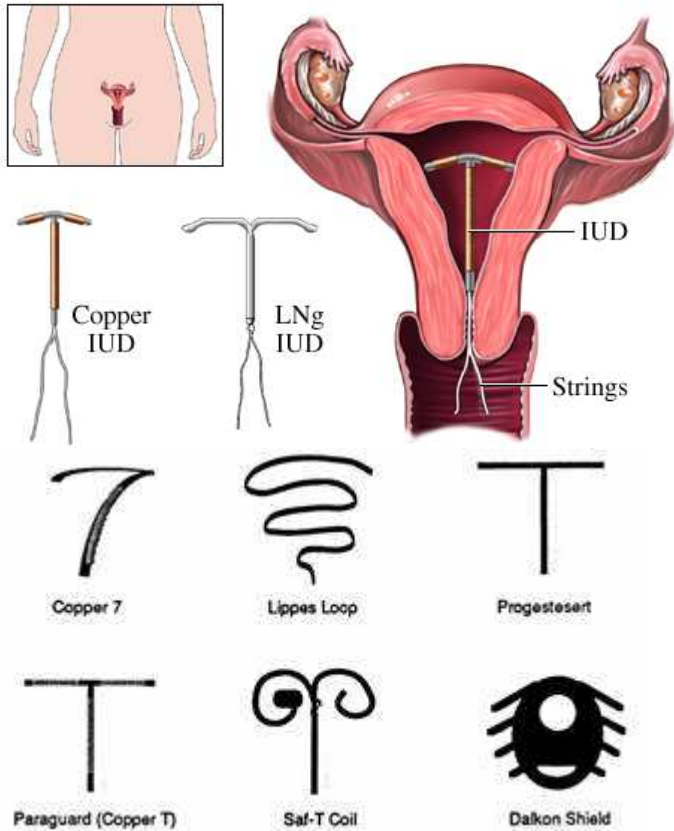
c) **IUDs:** Intra Uterine Devises (IUDs) are used by females in a process of contraception. IUDs are inserted into the uterus by doctors or trained nurses through vagina. IUDs promote phagocytosis of sperms by white blood corpuscles within the uterus and the copper ions released suppress the motility, viability and fertilizing capacity of the spermatozoa. The

hormone releasing IUDs, makes the uterus unsuitable for implantation and the cervix hostile to sperms. IUDs are ideal contraceptives to females who want to delay or have space between children. This is a widely accepted method of contraception in India.

S.No.	Type of IUDs	Example
1.	Non mediated	Lippes loop
2.	Copper releasing	CuT, Cu7, multiload 375
3.	Hormone releasing	Progestasert, LNG - 20

Types of IUDs; An IUD in Position





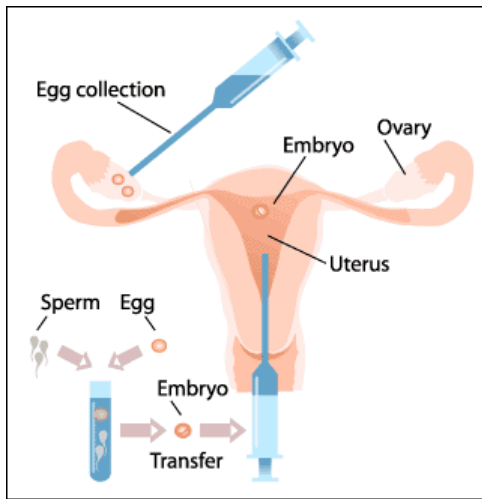
4. Suggest some methods to assist infertile couples to have children?

A. The infertility may be due to physical, genetic, certain diseases, drugs, immunological or even psychological. Infertility clinics could help in diagnosis and corrective treatment of some of these disorders and enable the couples to have children in natural way.

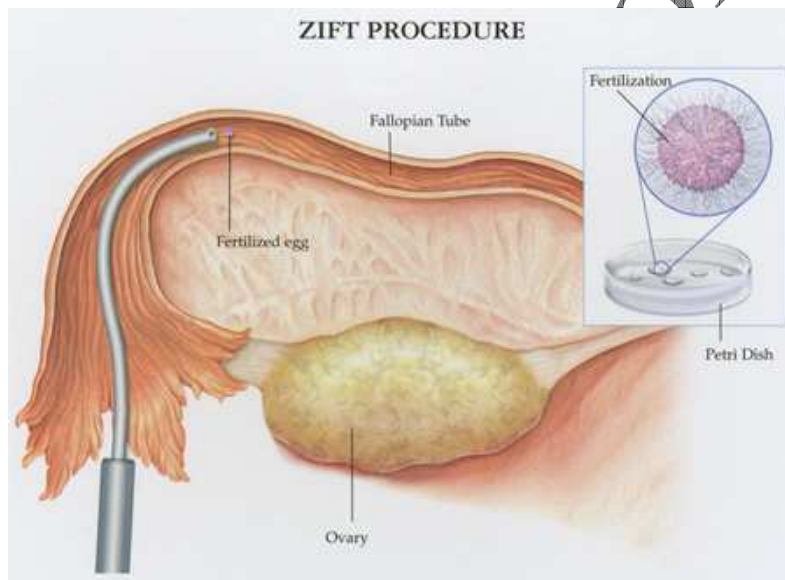
In the cases where such corrections are not possible, the couple could be assisted to have children through special techniques known as Assisted Reproductive Technology (ART).

The following are some important techniques employed in ART.

1) IVF: In Vitro Fertilization is a process in which fertilization of ovum by sperm done outside the woman's body. In this method, popularly known as 'Test Tube Baby Procedure', ova from wife or female donor and sperms from husband / male donor are collected, mixed and induced to form zygote under simulated conditions in the laboratory. If the mother's uterus is not medically fit to receive the embryo produced in-vitro, it can be implanted in the uterus of another woman (surrogate mother).



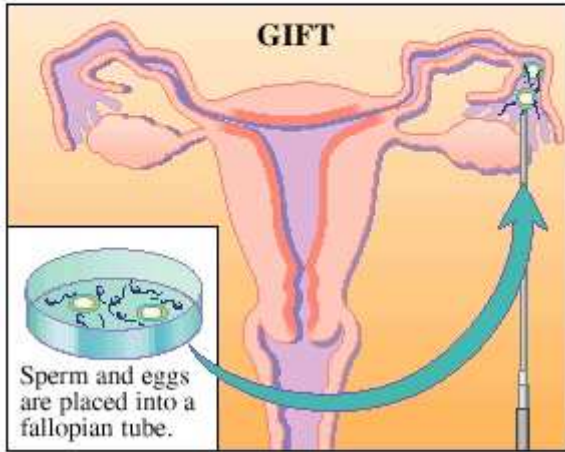
2) **ZIFT:** Zygote Intra Fallopian Transfer is another technique used to overcome infertility. The ovum is extracted and fertilized in-vitro and the zygote is transferred to the woman's fallopian tube to complete its further course of development.



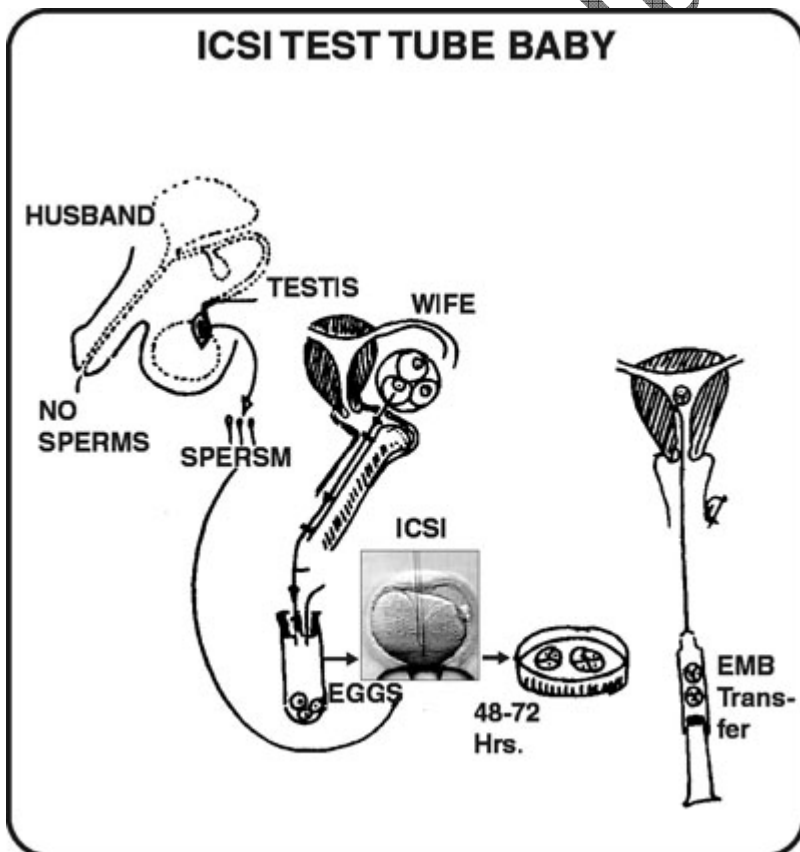
3) **GIFT:** Gamete Intra Fallopian Transfer is a procedure done for women who cannot produce ova either due to defect or diseases in ovaries, but still can provide suitable environment for fertilization and further development of the embryo in their uterus. In these cases, ovum is collected from donor is transferred to the fallopian tube of recipient woman for fertilization.

GIFT

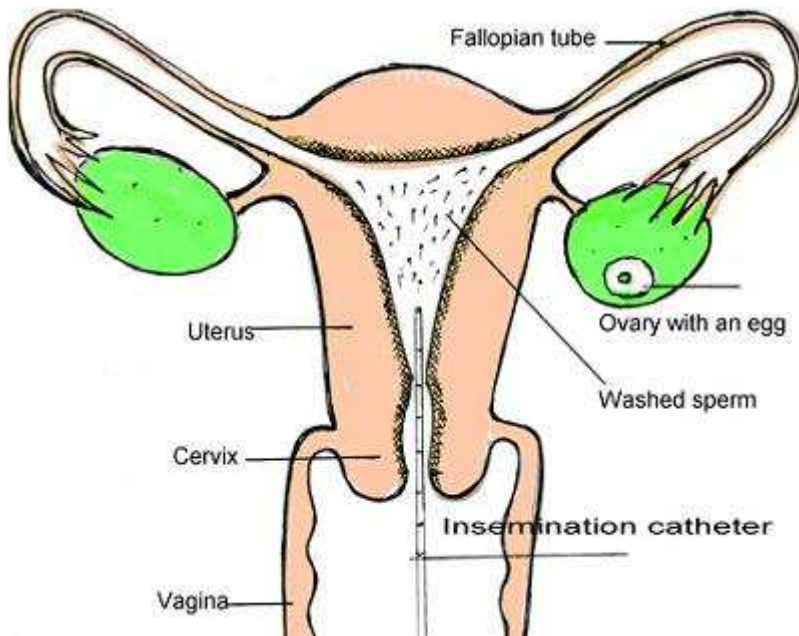
With GIFT, sperm and eggs are placed in a fallopian tube to allow fertilization in the natural site. The woman must have at least one normal, open fallopian tube.



4) **ICSI:** Intra cytoplasmic Sperm Injection is another specialized procedure in which a sperm is directly injected into ovum with the help of microscopic needle to form an embryo in vitro. Later the embryo is transferred to the uterus or fallopian tube for further development. This method is employed assist the couple where there are problems with the sperms such as decrease in sperm count.



5) **AI:** Artificial Insemination is done in a case where male is unable to inseminate the female or due to very low sperm count in the ejaculate. In this technique, semen is collected from the husband or healthy donor and is introduced into the uterus (Intra Uterine Insemination – IUI) for achieving fertilization.



5. **Is sex education necessary in schools? Why?**

A. Government and non – governmental agencies have taken various steps to educate people on reproduction – related issues using audio – visual and print media. Introduction of sex education in schools will provide right information about the reproductive organs, adolescence and related changes, safe and hygienic sexual practices, sexually transmitted diseases such as HIV etc, would help people, especially those in adolescent age group lead a reproductively healthy life.