

## UNIT – VI : REPRODUCTION

Term-I

# REPRODUCTIVE HEALTH

### Syllabus

- Need for reproductive health and prevention of sexually transmitted diseases (STDs); birth control—need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies—IVF, ZIFT, GIFT, AI (brief overview).



### STAND ALONE MCQs

(1 Mark each)

Q. 1. A national level approach to build up a reproductively healthy society was taken up in our country in

- (A) 1950s. (B) 1960s.  
(C) 1980s. (D) 1990s.

**R**

Ans. Option (A) is correct.

**Explanation :** A national level approach to build up a reproductively healthy society was taken up in India in 1950s.

Q. 2. Emergency contraceptives are effective if used within

- (A) 72 hrs of coitus.  
(B) 72 hrs of ovulation.  
(C) 72 hrs of menstruation.  
(D) 72 hrs of implantation.

**U**

Ans. Option (A) is correct.

**Explanation :** Emergency contraceptives are effective if they are used within 72 hours of coitus. They can prevent unwanted pregnancies after unprotected sex, failed use of contraceptive devices or due to rape, etc. Two types of emergency contraceptives include emergency pills or IUDs.

Q. 3. Intensely lactating mothers do not generally conceive due to the

- (A) suppression of gonadotropins.  
(B) hyper-secretion of gonadotrophins.  
(C) suppression of gametic transport.  
(D) suppression of fertilisation.

**U**

Ans. Option (A) is correct.

**Explanation :** Breast-feeding is one of the temporary and natural contraceptive methods which reduce the secretion of oestrogen hormone and thereby suppress ovulation (release of egg) and cause amenorrhoea. The contraceptive effect of the lactational amenorrhoea method is a result of increased levels of prolactin. In this condition, production and secretion of gonadotrophin releasing hormones are inhibited and resulted in low secretion of oestrogen. As ovulation cannot occur without a surge in oestrogen levels, and if a woman does not ovulate, pregnancy is prevented.

Q. 4. Condoms are one of the most popular contraceptives because of the following reasons.

- (A) These are effective barriers for insemination.  
(B) They do not interfere with coital act.  
(C) These help in reducing the risk of STDs.  
(D) All of the above

**U**

Ans. Option (D) is correct.

**Explanation :** Condoms can both prevent pregnancy by stopping sperm from meeting an egg. They also protect against sexually-transmitted infections (STIs). Condoms act as a barrier method of contraception. They are made up of very thin latex (rubber) and are designed to prevent pregnancy by stopping sperm from meeting an egg. They do not interfere with coital act.

**Q. 5.** The correct surgical procedure as a contraceptive method is

- (A) ovariectomy. (B) hysterectomy.  
(C) vasectomy. (D) castration. R

**Ans. Option (C) is correct.**

**Explanation :** Vasectomy is the correct surgical procedure as a contraceptive method in male. During this procedure, vas deferens is cut down to prevent sperm from entering into the urethra and thereby preventing fertilisation. In female, this procedure is called tubectomy in which Fallopian tubes are held and blocked or severed and sealed, either of which prevents eggs from reaching the uterus for implantation. Removal of ovary, uterus and testes are called as ovariectomy, hysterectomy and castration respectively. Vasectomy is the correct surgical procedure as a contraceptive method in male. During this procedure, vas deferens is cut down to prevent sperm from entering into the urethra and thereby preventing fertilisation. In female, this procedure is called tubectomy in which Fallopian tubes are held and blocked or severed and sealed, either of which prevents eggs from reaching the uterus for implantation. Removal of ovary, uterus and testes are called as ovariectomy, hysterectomy and castration respectively.

**Q.6.** Increased IMR and decreased MMR in a population will

- (A) cause rapid increase in growth rate.  
(B) result in decline in growth rate.

(C) not cause significant change in growth rate.

(D) result in an explosive population/exp. U

**Ans. Option (B) is correct.**

**Explanation :** Both IMR (infant mortality rate) and MMR (maternal mortality rate) are responsible for affecting the growth rate inversely. It means decline in IMR as well as MMR will result in high population growth and vice-versa. Hence, if there is an increased IMR and decreased MMR in a population mothers are there to give births to infants whereas the survival rate of infants becomes low. Therefore, in a particular population, increased IMR and decreased MMR will hinder their growth rate.

**Q. 7.** In case of a couple where the male is having a very low sperm count which technique will be suitable for fertilization ?

- (A) Intrauterine transfer  
(B) Gamete intracytoplasmic fallopian transfer  
(C) Artificial Insemination  
(D) Intracytoplasmic sperm injection A

**Ans. Option (C) is correct.**

**Explanation :** Artificial insemination (AI) is a technique in which the semen collected from the husband or a healthy donor is artificially introduced either into the vagina or the uterus.

**Q. 8.** The function of copper ions in copper releasing IUD's :

- (A) They suppress sperm motility and fertilizing capacity of sperms.  
(B) They inhibit gametogenesis  
(C) They make uterus unsuitable for implantation  
(D) They inhibit ovulation

**Ans. Option (A) is correct.**

**Explanation :**  $\text{Cu}^{++}$  in Cu releasing IUDs suppresses sperm motility and fertilizing capacity of sperm. A



## ASSERTION AND REASON BASED MCQs (1 Mark each)

**Directions :** In the following questions a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as :

- (A) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
(B) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).  
(C) Assertion (A) is true but reason (R) is false.  
(D) Assertion (A) is false but reason (R) is true.

**Q. 1. Assertion (A) :** Saheli is considered as an improved form of contraceptive for human females.

**Reason (R) :** It is a non-steroidal preparation and is once a week pill.

**Ans. Option (A) is correct.**

**Explanation :** 'Saheli' is considered as an improved of contraceptive for a human female because :

- (i) It is a non-steroidal preparation.  
(ii) It has lesser or no side effects.  
(iii) It has a high contraceptive value.  
(iv) It is once a week pill.

**Q. 2. Assertion (A) :** Lactational amenorrhoea (absence of menstruation) is a temporary contraceptive method.

**Reason (R) :** It is based on the fact that ovulation and therefore the cycle do not occur during the period of intense lactation following parturition.

**Ans. Option (A) is correct.**

**Explanation :** 'Lactational amenorrhoea' means lack of menses resulting from breast feeding. During this period high level of prolactin and a reduction of gonadotropin-releasing hormone from the hypothalamus suppress ovulation.

**Q. 3. Assertion (A) :** Intra cytoplasmic sperm injection (ICSI) technique is used to develop embryo in vitro.

**Reason (R) :** In ICSI technique, the sperm is directly injected into the ovum.

**Ans. Option (A) is correct.**

**Explanation :** Both assertion (A) and Reason (R) are true. In infertility cases artificial insemination (AI) techniques are used to cure the patient.

**Q. 4. Assertion (A) :** Abortions could happen spontaneously too.

**Reason(R) :** Oral pills are very popular

contraceptives amongst the educated urban women.

**Ans. Option (B) is correct.**

**Explanation :** When the fertilization become successful than the woman become pregnant but it become terminated in some case intentionally if she is unmarried or not didn't planned for babies in some case, abortion happen accidentally or negligence in case of pregnant mother.

**Q. 5. Assertion (A) :** Diaphragms are contraceptive devices used by the male.

**Reason (R) :** These devices are made of rubber that is used to cover the cervical region.

**Ans. Option (D) is correct.**

**Explanation :** Diaphragms are contraceptive devices used by the females to avoid pregnancies. These devices are made of rubber that is introduced into the female reproductive tract to cover the cervix during coitus. They act as physical barriers for sperm entry.



## CASE-BASED MCQs

**Attempt any four sub-parts from each question. Each sub-part carries 1 mark.**

**I. Read the following text and answer the following questions on the basis of the same :**

The term sexually transmitted disease (STD) is applied to the group of diseases that spread by sexual contact. Some infections like hepatitis-B and HIV can spread by sharing injection needles, surgical instruments etc. Except for hepatitis-B, HIV infections, genital herpes, most of the STDs are completely curable if detected early and treated properly. Though all persons are vulnerable to these infections, their incidences are high in the age group of 15-24 years.

**Q. 1. Which among the following is a venereal disease, caused by a virus, which also gets transmitted by blood contact ?**

- (A) Gonorrhoea      (B) Syphilis  
(C) Trichomoniasis      (D) Hepatitis-B.

**Ans. Option (D) is correct.**

**Explanation :** Hepatitis B is a serious infection of the liver caused by a virus. Symptoms may include tiredness, loss of appetite, stomach discomfort and yellow skin. The virus is found in blood, semen, vaginal fluids and saliva. Hepatitis B is the only sexually transmitted disease that has a safe and effective vaccine to protect against infection.

**Q. 2. Site of infection in a female suffering from Chlamydia ?**

- (A) Urethra      (B) Ureters  
(C) Cervix      (D) Peritoneum.

**Ans. Option (C) is correct.**

**Explanation :** The most common manifestation of chlamydia infection is infection of the cervix with inflammation (cervicitis) in women.

**Q. 3. AIDS is caused by HIV. HIV is transmitted through :**

- (A) Handshake      (B) Blood contact  
(C) Sexual contact      (D) Both (B) and (C).

**Ans. Option (D) is correct.**

**Explanation :** HIV is transmitted through the exchange of certain types of bodily fluids including: blood, semen, breast milk, and vaginal fluids.

**Q. 4. Which among the following STDs is caused by a protozoan ?**

- (A) Syphilis      (B) Gonorrhoea  
(C) Chlamydia      (D) Trichomoniasis.

**Ans. Option (D) is correct.**

**Explanation :** Trichomoniasis is a very common sexually transmitted disease (STD). It is caused by infection with a protozoan parasite called *Trichomonas vaginalis*.

**Q. 5. Syphilis is an infectious disease caused by *Treponema pallidum* with 3 stages :**

- (a) Infections painless ulcers on the genitals      (I) First  
(b) Blindness, heart trouble, aortic impairment      (II) Second  
(c) Skin lesions, hair loss, swollen joints      (III) Third  
(A) a-I, b-II, c-III      (B) a-I, b-III, c-II  
(C) a-III, b-I, c-II      (D) a-II, b-III, c-I

**Ans. Option (C) is correct.**

**Explanation :** A person with first stage of syphilis generally has a sore or sores at the original site of infection. These sores usually occur on or around the genitals. These sores are usually (but not always) firm, round, and painless. Symptoms of secondary syphilis include skin rash, swollen lymph nodes, and fever. Tertiary syphilis is associated with severe medical problems. It can affect the heart, brain, and other organs of the body.

**II. Read the following text and answer the following questions on the basis of the same:**

There are different methods for Birth control. They are contraceptives (natural or traditional), IUD. Oral contraceptive injectables, implants and surgical methods. Surgical methods are permanent methods of family planning. The methods are operative procedures. MTP (Medical termination of Pregnancy) is voluntary or intentional abortion, performed to end pregnancy before the completion of full term. MTP is mainly meant for removing unsustainable pregnancies.

**Q. 1.** MTPs are considered safe up to \_\_\_\_\_ weeks of pregnancy.

- (A) 12                      (B) 20  
(C) 25                      (D) 18.

**Ans. Option (A) is correct.**

**Explanation :** Medical termination of pregnancy (MTP) or abortion is the termination of pregnancy before the foetus becomes viable. MTP is comparatively safe upto 12 weeks (the first trimester) of pregnancy. It becomes riskier after the first trimester period of pregnancy as the foetus becomes intimately associated with the maternal tissues.

**Q. 2.** Which of the following is hormone releasing IUD?

- (A) Cu-T                      (B) LNG-20  
(C) Multiload 375              (D) Implant.

**Ans. Option (B) is correct.**

**Explanation :** IUDs are metal or plastic objects which are inserted by doctors in the uterus through the vagina. LNG-20 is one of the hormone-releasing IUDs.

**Q. 3.** A sterilisation technique in females which prevent conception is :

- (A) Vasectomy              (B) Condom  
(C) Copper-T              (D) Tubectomy.

**Ans. Option (D) is correct.**

**Explanation :** Tubectomy, also known as tubal sterilization, is a permanent method of contraception in women. It is a surgical process that blocks the fallopian tubes, thereby preventing the egg released by the ovary from reaching the uterus.

**Q. 4.** Which among the following chemicals is used under chemical methods for contraception ?

- (A) Lactic acid              (B) Citric acid  
(C) Boric acid              (D) All of these.

**Ans. Option (D) is correct.**

**Explanation :** Most chemical contraceptives contain a variety of substances like spermicides (sperm-killing substances) and/or lactic and citric acid which in combination act as spermicide and thus contraceptives.

**Directions :** In the following questions a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as :

- (A) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).  
(B) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).  
(C) Assertion (A) is true but reason (R) is false.  
(D) Assertion (A) is false but reason (R) is true.

**Q. 5. Assertion (A) :** Surgical method of contraception prevent gamete formation.

**Reason (R) :** Castration cannot be considered as a contraception option.

**Ans. Option (D) is correct.**

**Explanation :** Surgical method blocks gamete transport and thereby prevent conception.

**III. Read the following passage and answer any four questions given below :**

Lactational amenorrhea, is also called as postpartum infertility. It occurs when a women is not menstruating and fully breast feeding. It is a temporary family planning method. It is a contraceptive method where the mother is informed and supported in how to use breast feeding for contraception. As breast feeding delays the return of a mother's ovulation (when the woman's ovary releases an egg) and may make her infertile for six months or more.

**Q. 1.** A procedure misused for female foeticide is :

- (A) Amniocentesis  
(B) Parturition  
(C) Lactational amenorrhea  
(D) Artificial insemination

**Ans. Option (A) is correct.**

**Explanation :** Amniocentesis is the technique of sex determination of embryo in pregnancy using amniotic fluid from mother's womb.

**Q. 2.** Lactational amenorrhea is due to action of which hormone :

- (A) Prolactin induced inhibition of GnRH  
(B) Prolactin induced inhibition of FSH  
(C) Oxytocin induced inhibition of GnRH  
(D) Oxytocin induced inhibition of FSH

**Ans. Option (A) is correct.**

**Explanation :** Prolactin induced inhibition of GnRH

**Q. 3. What is the meaning of lactational amenorrhea?**

- (A) Absence of menstruation
- (B) Delay in ovulation during lactational period.
- (C) Chances of contraception are almost nil upto six months following parturition.
- (D) All of these.

**Ans. Option (D) is correct.**

**Explanation :** All of these points follows the condition of lactational amenorrhea.

**Q. 4. The only birth control that is 100% effective :**

- (A) Abstinence
- (B) Natural family planing
- (C) Birth Control pills
- (D) Emergency contraceptive

**Ans. Option (A) is correct.**

**Explanation :** Abstinence is the prevention of birth control by eliminating all the chances of fertilization of egg with sperm.