

Reproductive Health

Topic 1 : Reproductive Health-Problems and Strategies

Previous Years' Examination Questions

1 Mark Questions

- Mention one positive and one negative application of amniocentesis. [Delhi 2010]
- Why is tubectomy considered a contraceptive method? [Foreign 2010]
- How does Cu-T act as an effective contraceptive for human females? [Delhi 2009]
- Why do some women use 'Saheli' 'Pills'? [All India 2009C]
- Mention any two events that are inhibited by the intake of oral contraceptive Pills to prevent pregnancy in humans. [All India 2009]
- Give one reason for a statutory ban on amniocentesis. [All India 2008C]
- What is lactational amenorrhoea? [All India 2008C]
- How do copper and hormone releasing IUDs act as contraceptives? Explain. [All India 2010]
- What is amniocentesis? Why has the government imposed a statutory ban in spite of its importance in medical field? [Foreign 2010]
- Why is 'Saheli' a well accepted contraceptive pill? [Foreign 2010]
- How does Cu-T act as an effective contraceptive for human females? [Delhi 2009]
- Name the hormonal composition of the oral contraceptive used by human females. Explain how does it act as contraceptive. [Delhi 2009]
- Why do some women use 'Saheli' 'Pills'? [All India 2009]
- Name any two copper-releasing Intra-Uterine Devices (IUDs). List two reasons that make them effective contraceptives. [All India 2009C]

2 Marks Questions

- Why is Cu-T considered a good contraceptive device to space children? [Delhi 2011]
- Name an oral pill used as a contraceptive by human females. Explain how does it prevent pregnancy? [Delhi 2011]
- Describe the lactational amenorrhoea method of birth control. [All India 2011]
- A mother of one year old daughter wanted to space her second child. Her doctor suggested Cu-T. Explain its contraceptive actions. [Delhi 2008]
- (a) Expand IUD.
(b) Why is hormone releasing IUD considered a good contraceptive to space children? [All India 2008]

20. How do surgical procedures prevent conception in human? Mention the way it is achieved in human males.

[Foreign 2008]

21. Why is 'Saheli' considered to be an improved form of oral contraceptive for human females?

[Foreign 2008]

22. How do 'Pills' act as contraceptives in human females?

[Foreign 2008]

3 Marks Question

23. How do the following contraceptives act to prevent unwanted pregnancy in human females?

(a) Intra Uterine Devices (IUDs)

(b) 'Saheli'.

[All India 2008C]

5 Marks Questions

24. A pregnant human female was advised to undergo MTP. It was diagnosed by her doctor that the foetus she is carrying has developed from a zygote formed by an XX-egg fertilized by Y-carrying sperm. Why was she advised to undergo MTP?

[All India 2011]

Explanations

1. Amniocentesis :

(i) **Positive application** It can be used to diagnose any genetic disorder in foetus.

(ii) **Negative application** It can be used as female foeticide.

2. In tubectomy, a small part of fallopian tubes or oviducts is tied up to block the transport of ova. So, it is considered as contraceptive method.

3. Copper-T (Cu-T) is an intra uterine device (IUD) that serves as a contraceptive in the given ways :

(i) increases phagocytosis of sperms within the uterus.

(ii) copper ions released suppress the motility of sperms and their fertilizing ability.

4. Reasons to use 'Saheli' 'Pill' by women :

(i) contains a non-steroidal component.

(ii) once-a-week pill.

(iii) high contraceptive value with few side effects.

5. Oral contraceptives prevent pregnancy in humans by :

(i) Inhibiting secretion of FSH and LH from anterior pituitary leading to inhibition of ovulation from the ovary and lastly implantation.

(ii) Inhibiting the entry of sperms in the uterus.

6. Statutory ban on amniocentesis is due to following reason.

Its primary purpose is to detect any genetic disorder in foetus. But, presently it is being misused to detect the sex of pre born child and the female child is aborted which is illegal.

7. **Lactational amenorrhoea** It refers to the stoppage of menstruation during the period of lactation following parturition. Because ovulation does not occur during intense lactation, the chances of conception are nil.

8. Cu-T is an IUD which functions by releasing Cu ions to sperm motility and the fertilizing capacity of sperms. It also increases phagocytosis of sperms within the uterus.

9. Contraceptive oral Pill-'Saheli'.

'Saheli' inhibits ovulation and implantation. It alters the quality of cervical mucus and prevents. The entry of sperms into cervix.

10. Lactation amenorrhoea refers to the absence of menstruation during the period of intense lactation following parturition. It can be birth control method because :

(i) ovulation and other events of menstrual cycle are stopped this time.

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- (ii) as long as the mother breast feeds her child, chances of conception are nil.
But, this method is generally reliable up to six months only after delivery.
- 11.** Copper and hormone releasing IUDs function as :
- copper releasing IUDs (Cu-T, Cu-7) release Cu ions which suppress sperm motility and the fertilizing capacity of sperms.
 - these increase phagocytosis of sperms within the uterus.
 - hormone release IUDs (progestasert, LNG-20)
 - make the cervix unreceptive to sperms.
 - make the uterus unsuitable for implantation.
 - increase phagocytosis of sperms within the uterus.
- 12. Amniocentesis** It is a prenatal diagnostic test based on the chromosomal pattern of the cells in the amniotic fluid. That surrounds the developing foetus in the womb.
Misuse of amniocentesis It is used to diagnose the sex of the foetus and leads to female foeticide.
- 13.** 'Saheli' a well accepted contraceptive because :
- it is a non-steroidal pill.
 - used once in a week.
 - high chances as contraceptive.
 - less side effects than other oral pills.
- 14.** Refer to Ans. 8 of Topic 1.
- 15.** Hormonal composition of oral contraceptive ;
These are either progestogens or progesterone oestrogen combinations. They function as contraceptive by
- inhibiting ovulation.
 - inhibiting implantation.
 - altering the quality of cervical mucus to prevent or stop the entry of sperms.
- 16.** Refer to Ans. 13.
- 17.** Refer to Ans. 11.
- 18.** Refer to Ans. 8.
- 19.** (a) IUDs – Intra Uterine Devices
(b) IUDs are good contraceptives because they
- make uterus unsuitable for implantation.
 - make cervix unreceptive to the sperms.
 - increase phagocytosis of sperms within the uterus.
- 20.** Surgical procedures prevent conception by blocking gamete transport.
In human males, surgical procedure is called vasectomy. In this surgery, a small part of the vas deferens is removed or tied up through a small incision on the scrotum.
- 21.** Refer to Ans. 13.
- 22.** Hormonal pills act as contraceptive in following ways :
- they prevent ovulation.
 - they inhibit implantation.
 - they alter the quality of cervical mucus to prevent the entry of sperms.
- 23.** (a) **Intra Uterine Devices (IUDs)** These increase phagocytosis of sperms with in the uterus and the Cu ions released, suppress sperm motility and the fertilizing capacity of sperms. They make the uterus unsuitable for implantation and the cervix hostile to the sperms.
(b) **Saheli** It is a non-steroidal preparation, 'once a week pill' and have very few side effects.
- 24.** In this case, zygote will be XXY and develop into a male with Klinefelter's syndrome. These individuals show feminine characters, gynaecomastia and are sterile. Due to these disorders, the woman was prescribed MTP.

Previous Years' Examinations Questions

1 Mark Question

1. Name the STDs which can be transmitted through contaminated blood.

[All India 2009C]

2 Marks Question

2. Explain the Zygote-Intra Fallopian Transfer Technique (ZIFT). How is intrauterine transfer technique (IUT) different from it?

[All India 2010]

3. Explain any two methods of assisted reproductive technology (ART) that has helped childless couples to bear children.

[All India 2008C]

3 Marks Questions

4. (a) Give any two reasons for infertility among young couple.

- (b) Test tube baby programme is a boon to such couples. Explain the steps followed in the procedures.

[All India 2010C]

5. How are assisted reproductive technologies helpful to humans? How are ZIFT and GIFT different from intra uterine transfers? Explain.

[Foreign 2009]

Explanations

1. AIDS — Acquired Immuno Deficiency Syndrome

VD — Venereal Disease.

2. (i) ZIFT (Zygote Intra Fallopian Transfer Technique) In this technique zygote or early embryo with up to 8 blastomeres is transferred into the fallopian tube.

- (ii) IUT Embryo with more than 8 blastomeres is transferred into the uterus.

3. ARTs (Assisted Reproductive Technologies) include the following techniques :

- (i) **Test tube baby** The technique of *in vitro* fertilization and development followed by the embryo transfer in the uterus of the normal female to start the development which finally leads to normal birth called test tube baby.

- (ii) ZIFT It involves the transfer of either zygote or embryo at 8 blastomere stage in the fallopian tube of the female.

4. (a) The reasons of infertility in young people are physical, congenital disease, use of drugs, immunological reactions or even psychological.

(b) In test tube programme :

(i) Ova from the wife or a donor female and the sperms from the husband or a donor allowed to fuse under simulated conditions in the laboratory. It is called *in vitro* fertilization.

(ii) Embryo is transferred into the uterus or fallopian tube for further development. the process of embryo transfer is done in following ways :

- **ZIFT** Zygote or embryo up to 8 blastomeres is transferred into fallopian tube.
- **IUT** Embryo with more than 8 blastomeres is transferred into uterus.

5. ARTs (Assisted Reproductive Technologies) enable the infertile couple to have children in following ways. :

(i) **ZIFT** (Zygote Intra Fallopian Transfer) is related to embryo transfer in the test tube programme. In this technique, the zygote or embryo up to 8 blastomeres is transferred into the fallopian tube.

(ii) **GIFT** (Gamete Intra Fallopian Transfer) is the technique in which ovum collected from a donor female into the fallopian tube of another female, who cannot produce an ovum, but can provide suitable conditions for fertilization and pregnancy.

(iii) **IUT** (Intra Uterine Transfer) is the technique in which semen of the husband or a healthy donor is done into the uterus of a female.