

Question 1.  
Our government has intentionally imposed strict conditions for MTP in our country. Justify giving a reason. (Delhi 2017)  
Answer:  
MTP or induced abortion is the termination of pregnancy due to certain medical reasons. Government of India legalised MTP in 1971 with strict conditions to avoid its misuse, i.e. to check indiscriminate and illegal female foeticides.

Question 2.  
Name an IUD that you would recommend to promote the cervix hostility to sperms. (Delhi 2014C)  
Answer:  
The hormone releasing IUDs, e.g. progestasert and LNG-20 are recommended to promote the cervix hostility to sperms.

Question 3.  
State one reason, why breastfeeding the baby acts as a natural contraceptive for the mother. (Delhi 2014C)  
Answer:  
Lactation or Breastfeeding the baby delays the onset or return of menstruation and ovulation cycle due to interference of hormone prolactin. Therefore, the chances of conception are nil during this period, i.e. up to six months. Hence, breastfeeding the baby may act as a natural contraceptive (lactational amenorrhea) for mother. (1)

Question 4.  
Mention one positive and one negative application of amniocentesis. (Delhi 2010)  
Answer:  
Applications of amniocentesis are

* Positive,application It can be used to diagnose any chromosomal abnormality or genetic disorder in foetus.
* Negative application It can be used to determine the sex of foetus and lead to female foeticide.

Question 5.  
Why is tubectomy considered a contraceptive method? (Foreign 2010)  
Answer:  
In tubectomy, a small part of Fallopian tube or oviduct is cut and tied up to block the passage of ova from ovary to the site of fertilisation in Fallopian tube. It prevents fertilisation. So, it is considered as a contraceptive method.

Question 6.  
Mention the problems that are taken care of by Reproduction and Child Healthcare Programme. (All India 2016)  
Answer:  
Reproduction and Child Healthcare (RCH) programmes cover wide range of reproduction related areas. They include

* Creating awareness among people about various reproduction related aspects.
* Support for building up a reproductively healthy society by providing increased medical facilities, better postnatal care, better detection and cure of diseases like STDs, etc.

Question 7.  
What is amniocentesis? How is it misused? (Delhi 2014C)  
Or  
Why there is a statutory ban on amniocentesis? Why is this technique so named? (Delhi 2012C)  
Or  
What is amniocentesis? Why has the government imposed a statutory ban inspite of its importance in medical field? (Foreign 2010)  
Answer:  
Amniocentesis is a prenatal diagnostic test. It is named so, because it is based on the chromosomal pattern of the cells in the amniotic fluid that surrounds the developing foetus in the womb.  
It is misused to detect the sex of pre-born child that leads to female foeticide. Hence, there is statutory ban on amniocentesis.

Question 8.  
What do oral pills contain and how do they act as effective contraceptives? (Delhi 2014C)  
Answer:  
Oral contraceptives or pills contain either progestogens or progesterone-oestrogen combinations. They function as contraceptives by

* inhibiting ovulation.
* inhibiting implantation.
* altering the quality of cervical mucus to prevent the motility of sperms in female reproductive tract.

Question 9.  
Why is Cu-T considered a good contraceptive device to space children? (Delhi 2011)  
Answer:  
Copper-T (Cu-T) is an Intra Uterine Device (IUD) that is inserted by experts and it serves as an effective contraceptive in the following ways

* Increases phagocytosis of sperms within the uterus.
* Copper ions released by Cu-T suppress the motility of sperms and their fertilising ability.

Question 10.  
Name an oral pill used as a contraceptive by human females. Explain, how does it prevent pregnancy? (Delhi 2011)  
Or  
Why is Saheli a well-accepted contraceptive pill? (Foreign 2010)  
Answer:  
‘Saheli’ is a non-steroidal contraceptive pill used by females to space children.  
Saheli inhibits ovulation and implantation. It alters the quality of cervical mucus to prevent the entry of sperms into cervix.

Question 11.  
Describe the lactational amenorrhea method of birth control. (All India 2011)  
Answer:  
Lactation amenorrhea refers to the absence of menstruation during the period of intense lactation following parturition. It is a birth control method because

* ovulation and other events of menstrual cycle are stopped at this time.
* as long as the mother breastfeeds her child, chances of conception are nil because of the suppressed gonadotropin activity. However, this method is generally reliable upto only six months after delivery.

Question 12.  
At the time of Independence, the population of India was 350 million, which exploded to over 1 billion by May 2000.  
List any two reasons for this rise in population and any two steps taken by the government to check this population explosion. (Foreign 2011)  
Answer:  
Reasons for rise in population include

* All-round development in various fields and increased health facilities along with better living conditions.
* Reduced maternal and infant mortality rate.

Two major steps taken by the government to check this population growth are

* People are educated and support the idea of small family by using various contraceptive methods.
* There is statutory raising of marriageable age of females to 18 years and of males to 21 years.

Question 13.  
How do copper and hormone releasing IUDs act as contraceptives? Explain. (All India 2010)  
Answer:  
Copper and hormone releasing IUDs act as contraceptives because:

* Copper IUDs (Cu-T, Cu-7) release Cu ions, which suppress sperm motility and the fertilising capacity of sperms.
* Hormone releasing IUDs (progestasert, LNG-20)

(a) inhibit ovulation.  
(b) make the cervix unreceptive to sperms.  
(c) make the uterus unsuitable for implantation.

(iii) They both increase the phagocytosis of sperms within the uterus.

Question 14.  
(i) List any four characteristics of an ideal contraceptive.  
(ii) Name two intrauterine contraceptive devices that affect the motility of sperms. (All India 2016)  
Answer:  
(i) An ideal contraceptive must have the following four characteristics

* It must be safe and user friendly.
* It must be easily available.
* It must be reversible with little or no side effects.
* It must not interfere with the sexual drive, desire or sexual act of the user.

(ii) Cu-T and Cu-7 are two examples of IUDs that affect the motility of sperms.

Question 15.  
Name two hormones that are constituents of contraceptive pills. Why do they have high and effective contraceptive value? Name a commonly prescribed non-steroidal oral pill. (All India 2014)  
Answer:  
The two hormones that are the constituents of oral pills are

* progesterone
* oestrogen

They inhibit ovulation and fertilisation and also modify the quality of cervical mucus to prevent or retard the entry of sperms. Hence, they have high and effective contraceptive value. Saheli is the most commonly prescribed new oral contraceptive pill for females. It contains a non-steroidal preparation called centchroman. It is once a week pill with few side effects and high contraceptive value. It was developed by CDRI (Centra! Drug Research Institute), Lucknow.

Question 16.  
If implementation of better techniques and new strategies are required to provide more efficient care and assistance to people, then why is there a statutory ban on amniocentesis? Write the use of this technique and give reason to justify the ban. (All India 2014)  
Answer:  
Though implementation of better techniques and new strategies is required to provide more efficient care and assistance to people still, there is a statutory ban on amniocentesis. Amniocentesis helps to determine any chromosomal abnormalities or genetic disorders, sex of foetus and foetal infections, etc., by using minute amount of amniotic fluid surrounding the foetus.

This prenatal diagnostic test is particularly useful for those women who are at increased risk or have genetic disorders or chromosomal problems. However, this is also misused to determine the sex of foetus which had ultimately lead to increased female foeticides. Therefore, government has imposed a statutory ban to prevent its further misuse and to balance the unequal sex-ratio prevailing in human population. (3)

Question 17.  
A woman has certain queries as listed below, before starting with contraceptive pills. Answer them.  
(i) What do contraceptive pills contain and how do they act as contraceptives?  
(ii) What schedule should be followed for taking these pills? (Delhi 2014)  
Answer:  
(i) Refer to Answer No. 8. (2)  
(ii) The oral contraceptive pills are to be taken daily for 21 days, preferably within the first five days of menstrual cycle. After the onset of menstruation cycle, i.e. 5-7 days, the process is to be repeated in the same pattern (again for 21 days). This schedule is to be followed till the woman wants to avoid conception. (1)

Question 18.  
(i) Name any two copper releasing IUDs.  
(ii) Explain, how do they act as effective contraceptives in human females. (All India 2014)  
Answer:  
(i) The copper releasing IUDs are Cu-T, Cu-7 and multiload.-375.  
(ii) Refer to Answer No. 9.

Question 19.  
Name and explain the surgical method advised to human males and females as a mean of birth control. Mention its one advantage and one disadvantage. (Foreign 2014)  
Answer:  
The surgical or sterilisation methods advised to human males and females as effective means of birth control are

* Vasectomy (In males) A sterilisation method in which a small portion of vas deferens is removed or tied up through a cut or incision on scrotum, thus blocking the transport of sperms from the testes to the copulatory organ.
* Tubectomy (In females) A sterilisation method in which small part of Fallopian tube is removed or tied up through incision in abdomen or through vagina. It blocks the passage of ova from ovary to the site of fertilisation.

The advantage of these two sterilisation methods in both human males and females is that it is a very effective method for preventing conception as it blocks the transport of gametes. The disadvantage of this method is that this surgical procedure cannot be reversed, so it is helpful for only those who already have children and do not want to extend their family further.

Question 20.  
How do ‘implants’ act as an effective method of contraception in human females? Mention its one advantage over contraceptive pills. (Delhi 2012)  
Answer:  
Subcutaneous ‘implants’ contain synthetic progesterone and are placed under the skin. They are an effective contraceptive method as they check ovulation and thicken cervical mucus to prevent sperm transport.

‘Subcutaneous implants’ are more advantageous than contraceptive pills as they are long lasting and once implanted, they are effective for up to 5 years.

Question 21.  
Your school has been selected by the Department of Education to organise and host an interschool seminar on ‘Reproductive Health Problems and Practices’. However, many parents are reluctant to permit their wards to attend it. Their argument is that the topic is ‘too embarrassing’.  
Put forth four arguments with apporpriate reasons and explanation to justify the topic to be very essential and timely. (All India 2015)  
Answer:  
Parents should encourage their children to attend such seminar as they will get right information regarding myths and misconceptions about sex related aspects. Following are the four points to justify this topic to be essential

* Awareness of problems due to uncontrolled population growth, social evils like sex abuse and sex related crimes, etc., need to be created so that children should think and take up necessary steps to prevent them and thereby build up a reproductively healthy society.
* Large group of school students comprises of adolescents who have attained puberty. Therefore, these seminars are necessary to provide medical help and care for reproduction related problems like menstrual problems, infertility, pregnancy, delivery, contraception, abortions, etc.
* Knowledge about Sexually Transmitted Diseases (STDs) is essential as children should be aware that unprotected sex with multiple partners results in the transmission of sex related problems.
* Increasing population is a major problem of India which is directly related with reproductive health. Children should be aware of family planning programmes such as Reproductive and Child Healthcare (RCH) programmes.

Question 22.  
Name any two assisted reproductive technologies that help infertile couples to have children. (Delhi 2012C)  
Answer:  
The assisted reproductive technology methods that can help infertile couple to have children are

* Zygote Intra Fallopian Transfer (ZIFT) and
* Artificial Insemination (AI) Technique.

Question 23.  
Expand GIFT and ICSI. (All India 2012C)  
Answer:  
GIFT – Gamete Intra Fallopian Transfer.  
ICSI – Intra Cytoplasmic Sperm Injection.

Question 24.  
After a brief medical examination a healthy couple came to know that both of them are unable to produce functional gametes and should look for an ‘ART’ (Assisted Reproductive Technique). Name the ‘ART’ and the procedure involved that you can suggest to them to help them bear a child. (Delhi 2015)  
Answer:  
The ART that would help the couple to bear a child is IVF (In Vitro Fertilisation) or Test tube baby programme. In this process, ova from wife/donor female and sperms from the husband/donor male are collected and fused to form zygote in the laboratory under same conditions as in the body. This is in vitro fertilisation (fertilisation outside the body).

Question 25.  
An infertile couple is advised to adopt test tube baby programme. Describe two principal procedures adopted for such technologies. (Delhi 2015)  
Or  
Explain the Zygote Intra Fallopian  
Transfer Technique (ZIFT). How is Intra Uterine Transfer (IUT) Technique different from it? (All India 2010)  
Answer:  
ZIFT (Zygote Intra Fallopian Transfer) is the technique in which zygote or early embryo with up to 8 blastomeres is transferred into the Fallopian tube of female.  
On the other hand in IUT, embryo with more than 8 blastomeres is transferred into the uterus.  
These are the two principal procedures adopted for test tube baby programme.