

REPRODUCTIVE HEALTH

STUDY-NOTES

Reproductive Health refers to the condition of male and female reproductive systems during all life stages with normal functions.

According to the World Health Organisation (WHO), reproductive health means a total well-being in all aspects of reproduction, i.e., physical, emotional, behavioural and social.

REPRODUCTIVE HEALTH : PROBLEMS AND STRATEGIES

Family planning: The measures were initiated in 1951 in India and the goal was to attain total reproductive health.

Reproductive and Child Health Care (RCH) programmes' that aims:

- Creating awareness about reproduction
- Awareness among the people due to problems related to population explosion
- Introduction of sex education in schools to provide right information
- Awareness of problems due to sex abuse and sex related crimes
- Implementation of various action plans in the form of infrastructure and material support to attain reproductive health.
- Educate people about birth control, care of the pregnant mothers, importance of breast feeding, post natal care of mother and child.

Amniocentesis : The method in which the amniotic fluid of the developing foetus is taken to analyse the foetal infections as well as for sex determination. This test is also useful in detecting certain genetic disorders such as, down syndrome, haemophilia, sickle-cell anemia, etc. It is banned in India.

POPULATION EXPLOSION AND BIRTH CONTROL

Population Explosion is the rapid growth of population of a particular species, specifically of the humans in the world since the end of World War II.

This will lead to increased stress on all resources.

Causes

- Rapidly declining death rate
- Rapidly declining maternal mortality rate (MMR)
- Rapidly declining infant mortality rate (IMR)
- Increased life expectancy
- Increase in number of people in reproductive age

Methods to Control Population Explosion

- Promote smaller families
- Promote use of contraceptive methods
- Raise the legal age for marriage (18 years for females and 21 years for males)
- Incentives given to couples with smaller families.

Contraceptive Methods

Ideal contraceptive method should have the following characteristics: Effective and easily available, user friendly, no side effects, reversible, should not impact normal sexual act

Various Contraceptive methods

Natural method

- Periodic abstinence: Abstaining from coitus during the fertile period decreases the chance of pregnancy.
- Lactational amenorrhea: Period of absence of menstruation during the lactation period, when the chance of conception is less.
- Coitus interruptus: Withdrawal of penis from vagina to prevent the release of semen and insemination

Barrier Method

- Condoms-Thin rubber sheath to cover the male genital organ. Female condoms are also used to cover vagina and cervix.
- Diaphragms, cervical cap, and vaults are inserted to female to cover cervix of prevent entry of sperms. They are reusable.

Intra-Uterine Devices

- Non medicated – Lippes loop
- Copper releasing – CuT, Cu7, Multiload 375
- Hormone releasing – LNG -20, Progestasert

Oral Contraceptives

- Oral administration of progestogens or progesterone-oestrogen combinations in the form of pills, are called oral contraceptives. These are used by females for a period of 21 days starting within the first five days of the menstrual cycle.
- After a gap of 7 days (during which menstruation occurs) the cycle is repeated until the female wishes to conceive.
- They inhibit ovulation, implantation as well as prevent entry of sperms.
- **Example:** Saheli

Surgical/Sterilisation Methods

- **Vasectomy:** Sterilisation method used in males in which a small part of the Vas deferens is removed or tied up.
- **Tubectomy:** Sterilisation method used in females in which a part of the fallopian tube is removed or tied up.

MTP (MEDICAL TERMINATION OF PREGNANCY)

- To avoid the unwanted pregnancies due to unprotected intercourse or failure of contraceptive methods used during coitus.
- Essential in case when the continuation of pregnancy could be proven dangerous to the mother.
- MTP is a safe procedure during the first trimester (upto 12 weeks) of pregnancy.
- Misuse of amniocentesis is done for foetal sex determination and resulted in foeticide.

SEXUALLY TRANSMITTED DISEASES (STD)

These are infections that pass from one person to another through sexual contact. Eg - Gonorrhoea , Syphilis, Genital herpes, Genital warts, HIV etc.

- Except for hepatitis-B, genital herpes and HIV infections, other diseases are completely curable.

Transmission mode

- By sharing of injection needle
- By transfusion of the infected blood
- From infected mother to foetus

Symptoms

- Itching, discharge of fluid, mild pain, swelling.
- Complications in pelvic region like Pelvic inflammatory disease (PID), Abortions, Ectopic pregnancies, Infertility, etc.

Prevention

- Avoid sex with unknown partners/multiple partners.
- Always try to use condoms during coitus.
- In case of doubt, one should go to a qualified doctor for early detection and get complete treatment if diagnosed with infection.

INFERTILITY

It is the inability to conceive or produce children even after 2 years of unprotected sex. The major reason can be congenital disease, drugs, physical diseases etc.

Infertility can be treated using the various Assisted Reproductive Technologies (ART).

Assisted Reproductive Technologies (ART)

- **In vitro Fertilisation (IVF):** This involves fertilisation of gametes outside the body in stimulated conditions in the laboratory. The fertilised zygote is then induced to divide to form the embryo. The embryo is then transferred into the uterus of the female. The transfer can be ZIFT and IUT.
 - (i) **Zygote Intra Fallopian Transfer (ZIFT):** The zygote or early embryo (up to 8 blastomeres) can be transferred into the fallopian tube of the female.
 - (ii) **Intra-Uterine Transfer (IUT):** Embryos with more than 8 blastomeres can be transferred directly into the uterus.
- **Gamete Intra Fallopian Transfer (GIFT):** The ovum from the donor is collected and transferred into another female who cannot produce one but can provide conditions for fertilisation and further development.
- **Intra cytoplasmic sperm injection (ICSI)** is a specialised procedure that forms an embryo in the laboratory by directly injecting a sperm into the ovum.
- **Artificial insemination (AI) technique:** In this technique, the semen collected either from the husband or a healthy donor is artificially introduced either into the vagina or into the uterus (IUI – intra-uterine insemination) of the female. This technique is applicable when spermcount of male partner is low or inability to inseminate.

All these methods require certified experts handling the procedures with high precision. They also need expensive instrumentation.

Legal adoption is another good method for couples looking for parenthood.

QUESTION BANK

MULTIPLE CHOICE QUESTIONS

1. What is true for IUDs?

- I. They are self-inserted.
- II. They are inserted by expert nurses.
- III. They may be non-medicated IUDs, copper releasing IUDs or hormone releasing IUDs.
- IV. They are the one of the most widely accepted contraceptives in India.

- (a) All (b) II, III, IV (c) I, II, III (d) I, II, III, V

2. What is the method called where the male withdraws his penis just before ejaculation?

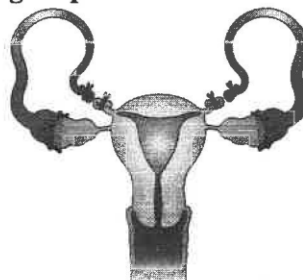
- (a) Coitus interruptus (b) Lactational amenorrhoea
(c) Periodic abstinence (d) Both (a) and (c)

3. MTP is practised mainly to

- (a) Get rid of unwanted female child legally
(b) Get rid of unwanted pregnancies due to failure of contraception or rapes
(c) Both (a) and (b)
(d) Decrease population size

4. Embryo with more than 16 blastomeres formed due to in-vitro fertilisation is transferred into
 (a) uterus (b) Fallopian tube (c) fimbriae (d) cervix
5. In-vitro fertilisation is the procedure that involves transfer of _____ into the fallopian tube.
 (a) zygote (b) embryo of thirty two cell stage
 (c) embryo upto eight cell stage (d) either zygote or embryo up to eight cell stage
6. IUDs (intra uterine devices) are placed in uterus and releases copper ion to
 (a) make uterus unsuitable for implantation (b) increase phagocytosis of sperm
 (c) suppress motility of sperms (d) prevent ovulation
7. The procedure that includes the direct injecting sperm into ovum in Assisted Reproductive Technology is known as
 (a) ZIFT (b) GIFT (c) ICSI (d) IVF
8. Increase in IMR and decrease in MMR in a population will result in
 (a) rapid increase in growth rate (b) in decline of growth rate
 (c) no significant change in growth rate (d) population explosion
9. Surgical methods are more reliable methods of contraception with least side effects. Yet, this is the last option for the couples because
 (i) lack of sufficient facilities
 (ii) misconception that it reduces the sexual urge
 (iii) it is a surgical procedure
 (iv) almost irreversible
 Choose the correct option.
 (a) (i) and (iii) (b) (ii) and (iii)
 (c) (ii) and (iv) (d) (i), (ii), (iii) and (iv)
10. Which of the following STDs are caused by bacteria?
 (a) AIDS and Genital Herpes (b) Syphilis and Gonorrhoea
 (c) Trichomoniasis and Scabies (d) All of these
11. 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
12. Which of the following is/are barrier method of contraception?
 (a) Rhythm method/Periodic abstinence (b) Lactational amenorrhea
 (c) Withdrawal method (d) None of these
13. In context of amniocentesis, which of the following statements is incorrect?
 (a) It can be used for detection of Down's syndrome.
 (b) It can be used for detection of cleft palate.
 (c) It is usually done when a woman is between 14-16 weeks pregnant.
 (d) It is used for prenatal sex determination.
14. Which of the following cannot be detected in a developing foetus by amniocentesis?
 (a) Down's syndrome (b) Jaundice
 (c) Klinefelter's syndrome (d) Sex of the foetus
15. The permissible use of the technique amniocentesis is for
 (a) detecting sex of the unborn foetus
 (b) artificial insemination
 (c) transfer of embryo into the uterus of a surrogate mother
 (d) detecting any genetic abnormality

16. Foetal sex can be determined by examining cells from the amniotic fluid by looking for
 (a) chiasmata (b) kinetochores (c) Barr bodies (d) autosomes
17. Which of the following contraceptive methods involve a role of hormone?
 (a) Pills, Emergency contraceptives, Barrier methods
 (b) Lactational amenorrhea, Pills, Emergency contraceptives
 (c) Barrier method, Lactational amenorrhea, Pills
 (d) CuT, Pills, Emergency contraceptive
18. Select the hormone-releasing Intra-Uterine Devices.
 (a) Lippes Loop, Multiload 375 (b) Vaults, LNG-20
 (c) Multiload 375, Progestasert (d) Progestasert, LNG-20
19. Which of the following is a correct statement?
 (a) IUDs once inserted need not be replaced. (b) IUDs are generally inserted by the user herself.
 (c) IUDs increase phagocytosis of sperms in the uterus. (d) IUDs suppress gametogenesis.
20. The contraceptive 'Saheli'
 (a) blocks estrogen receptors in the uterus, preventing eggs from getting implanted.
 (b) increases the concentration of estrogen and prevents ovulation in females.
 (c) is an IUD.
 (d) is a post-coital contraceptive.
21. The function of copper ions in copper releasing IUDs is
 (a) they inhibit gametogenesis
 (b) they make uterus unsuitable for implantation
 (c) they inhibit ovulation
 (d) they suppress sperm motility and fertilising capacity of sperms
22. Which of the following is hormone-releasing IUD?
 (a) LNG-20 (b) Multiload 375 (c) Lippes Loop (d) Cu7
23. Which of the following is incorrect regarding vasectomy?
 (a) No sperm occurs in seminal fluid (b) No sperm occurs in epididymis
 (c) Vasa deferentia is cut and tied (d) Irreversible sterility
24. Tubectomy is a method of sterilisation in which
 (a) small part of the fallopian tube is removed or tied up
 (b) ovaries are removed surgically
 (c) small part of cervix is removed or tied up
 (d) uterus is removed surgically
25. Which of the following is a non-medicated Intra Uterine Device (IUD)?
 (a) Multiload 375 (b) LNG - 20 (c) Cervical cap (d) Lippes loop
26. What is the figure given below showing in particular?



- (a) Ovarian cancer (b) Uterine cancer (c) Tubectomy (d) Vasectomy

27. Which one of the following is the most widely accepted method of contraception in India at present?
 (a) Cervical caps (b) Tubectomy
 (c) Diaphragms (d) IUDs (Intra uterine devices)
28. The correct surgical procedure as a contraceptive method is
 (a) ovariectomy (b) hysterectomy (c) vasectomy (d) castration
29. Lactational amenorrhoea means
 (a) absence of menstruation during pregnancy (b) absence of menstruation during lactation
 (c) excessive bleeding during menstruation (d) no production and secretion of milk
30. The most important component of the oral contraceptive pills is
 (a) thyroxine (b) luteinising hormone (c) progesterone (d) growth hormone
31. The test tube baby means
 (a) fertilisation and development both in uterus
 (b) fertilisation in vitro and then transplantation in uterus
 (c) a baby grown in a test tube
 (d) fertilised and developed embryo in test tube
32. The technique called Gamete Intra Fallopian Transfer (GIFT) is recommended for those females
 (a) who cannot produce an ovum
 (b) who cannot retain the foetus inside uterus
 (c) whose cervical canal is too narrow to allow passage for the sperms
 (d) who cannot provide suitable environment for fertilisation
33. Artificial Insemination means
 (a) artificial introduction of sperms of a healthy donor into the vagina
 (b) introduction of sperms of a healthy donor directly into the ovary
 (c) transfer of sperms of a healthy donor to a test tube containing ova
 (d) transfer of sperms of husband to a test tube containing ova
34. Which of the following is not a sexually transmitted disease?
 (a) Trichomoniasis (b) Encephalitis
 (c) Syphilis (d) Acquired Immuno Deficiency Syndrome (AIDS)
35. A childless couple can be assisted to have a child through a technique called GIFT. The full form of this technique is
 (a) Gamete Internal Fertilisation and Transfer (b) Germ cell Internal Fallopian Transfer
 (c) Gamete Inseminated Fallopian Transfer (d) Gamete Intra Fallopian Transfer
36. In case of a couple where the male is having a very low sperm count, which technique will be suitable for fertilisation?
 (a) GIFT (b) ZIFT
 (c) Intracytoplasmic sperm injection (d) Intrauterine transfer
37. Consider the statements given below regarding contraception and answer as directed thereafter.
1. Medical termination of pregnancy (MTP) during first trimester is generally safe.
 2. Generally, chances of conception are nil until mother breast-feeds the infant upto two years.
 3. Intrauterine devices like copper-T are effective contraceptives.
 4. Contraception pills may be taken upto one week after coitus to prevent conception.

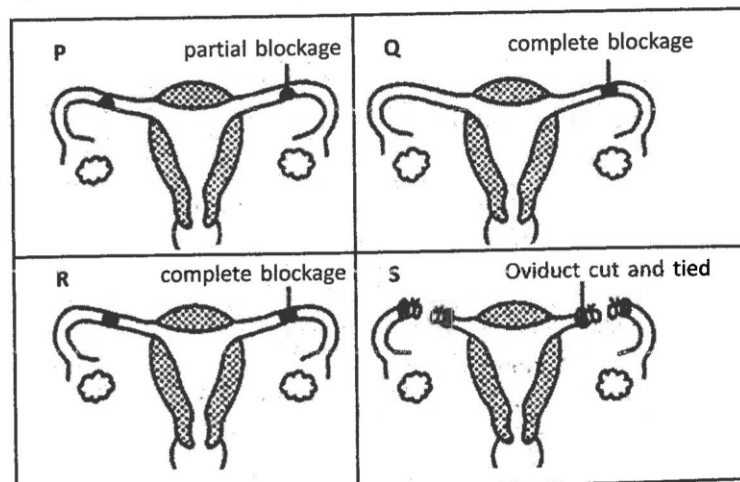
Which two of the above statements are correct?

- (a) 1, 3 (b) 1, 2 (c) 2, 3 (d) 3, 4

38. One of the legal methods of birth control is
- (a) by having coitus at the time of day break
 - (b) by a premature ejaculation during coitus
 - (c) abortion by taking an appropriate medicine
 - (d) by abstaining from coitus from day 10 to 17 of the menstrual cycle
39. In which of the following techniques, the embryos are transferred to assist those females who cannot conceive?
- (a) ZIFT and IUT
 - (b) GIFT and ZIFT
 - (c) ICSI and ZIFT
 - (d) GIFT and ICSI
40. Nirodh is a popular brand of
- (a) Contraceptive pill
 - (b) Condom
 - (c) IUD
 - (d) Diaphragm
41. What is true of natural methods of contraception?
- (a) They increase phagocytosis of sperms.
 - (b) They employ barriers to prevent fertilisation.
 - (c) They are natural ways of avoiding chances of fertilisation.
 - (d) They are surgical methods and are terminal methods.
42. What does the slogan "Hum Do Hamare Do" aim at?
- (a) Raising of the marriageable age
 - (b) Family Planning
 - (c) Immunisation
 - (d) Economic growth
43. Match the following :

I. Pill	A. Prevents implantation
II. Condom	B. Prevents ovulation
III. Vasectomy	C. Prevents sperms from reaching cervix
IV. CuT	D. Semen contains no sperms

- (a) I-B, II-C, III-D, IV-A
 - (b) I-A, II-B, III-D, IV-A
 - (c) I-D, II-C, III-B, IV-A
 - (d) I-C, II-D, III-A, IV-B
44. The accompanying diagram shows the uterine tubes of four women (P, Q, R and S).



- In which two women is fertilisation impossible at present?
- (a) P and Q
 - (b) Q and R
 - (c) R and S
 - (d) S and P

45. Select the option which correctly fills up the blanks in the following statements.

- A. Baby produced by conceiving in a culture dish and nursing in the uterus is called a _____.
- B. Family planning programmes were initiated in _____.
- C. Permanent methods of birth control are _____ in male and _____ in females.
- D. Embryo transplants are more useful in _____ than in _____.

Options:

- (a) A – test tube baby; B -1951; C – Vasectomy, tubectomy; D – Animals, humans
- (b) A – test tube baby; B -1951; C – Tubectomy, Vasectomy; D – Animals, humans
- (c) A – test tube baby; B -1951; C – Vasectomy, tubectomy; D – Humans, animals
- (d) A – test tube baby; B -1951; C – Tubectomy, Vasectomy; D – Humans, animals

46. It is a disease which mainly affects the mucous membrane of the urogenital tract. In males, burning sensation on passing urine, after a yellow discharge occurs, is accompanied by fever, headache and feeling of illness. Its name is

- (a) syphilis
- (b) gonorrhoea
- (c) AIDS
- (d) none of these

47. Read the following 4-statements and mark the correct option.

- A. MTP was legalised in 1971.
 - B. Inability to conceive or produce children even after 2 years of unprotected sexual cohabitation is called infertility.
 - C. Surgical method of contraception prevents gamete formation.
 - D. MTPs are relatively safe up to 12 weeks of pregnancy.
- (a) A, B and D (b) B, C and D (c) C and D (d) A and C

48. Which of the following statements is correct?

- (a) Surgical methods of contraception prevent gamete formation.
- (b) All sexually transmitted diseases are completely curable.
- (c) Oral pills are very popular contraceptives among the rural women.
- (d) In E.T. techniques, embryos are always transferred into the uterus.

INPUT-TEXT BASED QUESTIONS

Read the following paragraphs and answer the following questions.

I. Our population which was approximately 350 million at the time of our independence reached close to the billion mark by 2000 and crossed 1.2 billion in May 2011. A rapid decline in death rate, maternal mortality rate (MMR) and infant mortality rate (IMR) as well as an increase in number of people in reproductive age are probable reasons for this. According to the 2011 census report, the population growth rate was less than 2 per cent, i.e., 20/1000/year, a rate at which our population could increase rapidly. Such an alarming growth rate could lead to an absolute scarcity of even the basic requirements, i.e., food, shelter and clothing, in spite of significant progress made in those areas. Therefore, the government was forced to take up serious measures to check this population growth rate.

1. The slogan showing a happy couple is
 - (a) we and our two
 - (b) we two our two
 - (c) one child healthy child
 - (d) all of these
2. To check this population growth rate, the Government is forced to take up various decisions. These are given as follows:
 - (i) Family planning awareness
 - (ii) Raising of marriageable age of the female to 18 years and that of males to 21 years
 - (iii) Child adoption method
 - (iv) Use of various contraceptive methods

Which of the following is/are most important step/steps?

- (a) (i) only
- (b) (ii) and (iv)
- (c) (iv) only
- (d) (i) and (iii)

3. An ideal contraceptive should be
 - (a) User friendly, easily available, effective and irreversible
 - (b) User friendly, easily available, effective and reversible
 - (c) Natural, easily available, effective and reversible
 - (d) Natural, easily available, effective and irreversible
4. Which of the following statements is/are true about population stabilisation and birth control?
 - (i) Progestogens alone or in combination with estrogen can also be used by females as injections.
 - (ii) Barrier methods work on the principle of avoiding chances of ovum and sperms meeting.
 - (iii) Diaphragms, cervical caps and vaults are reusable.
 - (iv) Lactational amenorrhea method is effective only up to a maximum period of two years following parturition.
 - (a) (i) only
 - (b) (ii) and (iv)
 - (c) (i), (ii), (iii) and (iv)
 - (d) (i) and (iii)

5. As per the report, our population reached close to the billion mark by 2000 and crossed 1.2 billion in May 2011.

Which of the following are correct reasons?

- (i) Increased Infant Mortality Rate
 - (ii) Decreased Death Rate
 - (iii) Decreased Maternal Mortality Rate
 - (iv) Increased in number of people in reproducibile age
- (a) (i), (ii) and (iii) only
 - (b) (ii), (iii) and (iv)
 - (c) (i), (iii) and (iv)
 - (d) (i), (ii), (iii) and (iv)

II. A large number of couples all over the world including India are infertile, i.e., they are unable to produce children in spite of unprotected sexual co-habitation. The reasons for this could be many—physical, congenital, diseases, drugs, immunological or even psychological. In India, often the female is blamed for the couple being childless, but more often than not, the problem lies in the male partner.

1. There are many reasons of infertility. These are given as follows:

- (i) Congenital
- (ii) Physical
- (iii) Drugs
- (iv) Use of contraceptive

Which of the following is/are true reasons?

- (a) (i) only
 - (b) (ii) and (iv)
 - (c) (iv) only
 - (d) (i), (ii) and (iii)
2. Relating to infertility, what is full form of ART?
 - (a) Assisted Reproductive Testing
 - (b) Assisted Reproductive Technologies
 - (c) Assisted Reproductive Transfer
 - (d) Advanced Reproductive Technologies
 3. In in-vitro fertilisation, various processes occur. Which of the following is the correct sequence?
 - (a) Fertilisation, embryo transfer, ova collection, embryo development
 - (b) Embryo transfer, fertilisation, ova collection, Embryo development
 - (c) Ova collection, fertilisation, embryo transfer, embryo development
 - (d) Embryo development ova collection, fertilisation, embryo transfer
 4. What is the event during in-vivo fertilisation?
 - (a) Fusion of gametes occurs in a test tube and transfer to a female.
 - (b) Fusion of gametes occurs in one female and to transfer to other female.
 - (c) Fusion of gametes occurs in one female and further development occurs.
 - (d) Fusion of gametes occurs in one uterus of one female for development.
 5. If the embryo is more than 8 blastomeres in test tube, it is injected to which part for further development?
 - (a) Vagina of the body
 - (b) Uterus of the body
 - (c) Fallopian tube of the body
 - (d) Directly ovary of the body

ANSWERS

- | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (b) | 2. (a) | 3. (b) | 4. (a) | 5. (c) | 6. (c) | 7. (c) | 8. (c) | 9. (d) | 10. (b) |
| 11. (a) | 12. (d) | 13. (b) | 14. (b) | 15. (d) | 16. (c) | 17. (b) | 18. (d) | 19. (c) | 20. (a) |
| 21. (d) | 22. (a) | 23. (b) | 24. (a) | 25. (d) | 26. (c) | 27. (d) | 28. (c) | 29. (b) | 30. (c) |
| 31. (b) | 32. (a) | 33. (a) | 34. (b) | 35. (d) | 36. (c) | 37. (a) | 38. (d) | 39. (a) | 40. (b) |
| 41. (c) | 42. (b) | 43. (a) | 44. (c) | 45. (a) | 46. (b) | 47. (a) | 48. (c) | | |

EXPLANATION

5. When a baby is produced by conceiving in a culture dish and nursing in the uterus it is called a test tube baby. This method involves in vitro fertilisation (IVF), i.e., fertilisation of male and female gamete outside the body in almost similar conditions as that in the body followed by embryo transfer (ET).
6. Intra Uterine Devices (IUDs) such as Copper T-220, are placed in the cervix which is made unfit for sperms. The copper ions released from such devices suppresses the sperm motility and thus, fertilisation doesn't occur.
8. If IMR has been increased then it will result in a decline in growth rate.
But decreased MMR will cause a rapid increase in growth rate. Therefore, in the above situation, it will not cause any significant change in growth rate.
11. EC pills are about 89% effective if you take them within 72 hours (three days) of unprotected sex.
13. Amniocentesis is the method that includes extraction of amniotic fluid by insertion of the needle through the abdomen into the uterus and amniotic sac during 14-16 week old pregnancy.
Cleft palate is caused by both genetic and environmental factors and cannot always be detected using amniocentesis.
17. In lactational amenorrhoea, due to high prolactin level, gonadotropin level decreases.
19. A qualified medical professional/practitioner is needed to insert IUD. IUD has no effect on gametogenesis because ovulation takes place in the ovary while IUD is placed at the junction of fallopian tubes and uterus.
23. Vasa deferens transports sperms from epididymis to ejaculatory duct. Vasectomy is the surgical method in which vasa deferentia in human males are cut and sealed. After this, the seminal fluid devoid of sperms. Sperms are present in epididymis but not in the ejaculate. It is an irreversible method of surgical contraception.
29. Lactational Amenorrhea method- based on the fact that ovulation and therefore the menstrual cycle does not occur during the period of intense lactation following parturition.
35. GIFT- Gamete intra fallopian transfer method is used in females who cannot produce ova but can provide a suitable environment for fertilisation and further development of embryo in the oviducts. In such cases, ovum from the donor female is surgically removed and is then introduced into the fallopian tube of such females.
36. In case of a very low sperm count, the sperms cannot travel the female genital tract to get fertilised due to its low count. The artificial insemination technique is used to introduce semen artificially inside female so that the sperm introduced into a female's cervix and the uterine cavity for the purpose of achieving a pregnancy through in vivo fertilisation by means other than sexual intercourse.
46. Gonorrhoea is caused by a bacterium, *Neisseria gonorrhoeae*. It spreads through sexual contact, common toilets and underclothes.

Symptoms in women can include:

- Painful or burning sensation when urinating;
- Increased vaginal discharge; and
- Vaginal bleeding between periods.

Symptoms in men can include:

- Burning sensation when peeing;
- A white, yellow, or green discharge from the penis;
- Painful or swollen testicles (although this is less common).

Input-Text Based Answers

- | | | | | | |
|-----|--------|--------|--------|--------|--------|
| I. | 1. (b) | 2. (c) | 3. (b) | 4. (d) | 5. (b) |
| II. | 1. (d) | 2. (b) | 3. (c) | 4. (b) | 5. (b) |