

# **PACE - IIT & MEDICAL**

## Reproductive Health

### Solutions

1. **(a)**  
Natality rate is number of births per thousand people in the population.
2. **(c)**  
Decrease in infant mortality has contributed most in the rapid rise of human population in the present century.
3. **(a)**  
The rate at which the new born individuals are joining the population through reproduction is known as natality rate.
4. **(d)**  
The significance of the study of population is to know the consequences of uncontrolled population, the benefits of planned family and the population growth, distribution and density.
5. **(d)**  
In demography, we study decrease or increase in population, ratio of different age group of male and female and distribution of population in different countries.
6. **(d)**  
Population growth of a country depends upon birth rate, death rate and emigration.
7. **(a)**  
Slow growth was due to high birth and high death rate which was at the time of stage of agriculture and lower economic status.
8. **(d)**  
Psychological factors are not a part of population.
9. **(d)**  
A heterogenous population is one containing subpopulation of different types.
10. **(a)**  
Crude number of birth by population per unit time is called birth rate.
11. **(b,d)**  
Birth rate is directly proportional to illiteracy as well as age of marriage.

12. (b)  
In India, human population is heavily weighed towards the younger age groups as a result of short life span of many individuals and of high birth rate.
13. (b)  
In India, if the marriage age is changed to 21 years then population growth rate will decrease.
14. (c)  
The declining phase of a population occurs when mortality is greater than natality.
15. (a)  
The different age group in a population is classified by reproduction rate.
16. (d)  
Infertility cases like inability of the male partner to inseminate the female or very low sperm count in the ejaculate could be corrected by artificial insemination.
17. (d)  
The bio-index number means Natality / Mortality.
18. (b)  
Population density means the number of human in a unit area at a specific time.
19. (c)  
The best solution to population problem in India is to reduce the birth rate.
20. (b)  
16.2% of world population lives in India.
21. (b)  
Per year growth in India's population according to 1991 census is 2.23%.
22. (c)  
At present total population of world is about 6.2 billions.
23. (b)  
Highest and lowest population in India is in U.P and Sikkim respectively.
24. (b)  
According to population every sixth person of the world is Indian.
25. (d)  
Presently, the world population doubles after every 33 years with the growth rate of 1.7%.
26. (c)  
MTP means Medical termination of pregnancy.

27. (c)  
Contraceptives prevent ovulation, fertilization and implantation.
28. (b,d)  
Copper– T stops fertilization as well as implantation.
29. (b)  
Action of vaginal diaphragm is to prevent the sperm to come in contact with ova.
30. (a)  
Surgical removal or cutting and ligation of the ends of oviduct is known as Tubectomy.
31. (c)  
Surgical removal of testis is known as castration or orchidatctomy.
32. (b)  
Removal of a segment surgically and ligation of cut ends of vas deferens is known as vasectomy.
33. (d)  
Test tube baby means a baby born when the ovum is fertilized externally and thereafter implanted in the uterus.
34. (b)  
The latest technique to produce the child is GIFT. The full form is gametic intrafallopian transfer.
35. (d)  
The mechanical measures of population control includes – condoms, diaphragm, cervical caps, IUD's etc, which prevent union of sperm and ova.
36. (d)  
The chemical methods of contraception includes jellies, creams, foams, sponges etc which contains spermicidal chemicals.
37. (d)  
Through aminocentesis foetal cells can be tested for detecting various diseases of foetus by Karyotype (display of the chromosome pairs of a cell arranged by size and shape).
38. (d)  
The success of birth control programs in controlling population growth is dependent on acceptability of use of various contraceptives, tubectomy, vasectomy etc, by the people.
39. (b)  
Saheli is a weekly oral contraceptive pill.
40. (b)  
Daily oral contraceptive pill is Mala N and Mala D which mainly prevent ovulation.

41. (b)  
Test tube babies are produced by external fertilization and development in vitro culture till 32-celled stage before putting the embryo back into mother's uterus.
42. (c)  
By the technique of amniocentesis chromosomal abnormalities in the foetus is tested.
43. (a)  
Intrauterine devices (IUD's) is a method of birth control. It includes lippes loop, copper T, multiload 375 etc.
44. (d)  
In amniocentesis, the testing fluid is taken from amniotic fluid surrounding foetus.
45. (d)  
Amniocentesis involves the analysis of amniotic fluid.
46. (c)  
Saheli is not a daily pill. It is a weekly pill.
47. (a)  
A contraceptive pill contains progesterone and oestrogen to check ovulation.
48. (a)  
Progesterone pills helps in preventing pregnancy by not allowing ovulation and making cervical mucus thick which affects sperm motility.
49. (d)  
**The method of sterilization is tubectomy in females.**
50. (c)  
Surgical removal of uterus is called hysterectomy.
51. (c)  
Contraceptive devices that are inserted by doctors or trained nurses are lippes loop, copper T, copper 7, multiload 375, LNG-20 etc. Diaphragm and vaults are inserted in cervix.
52. (a)  
July 11 is observed as world population day.
53. (a)  
India belongs to category of high birth rate and low mortality rate. (Please Check).
54. (c)  
Legally accepted term of abortion is MTP – Medical Termination of Pregnancy.
55. (a)  
The most important component of the oral contraceptive pills is progesterone.

56. (a)  
Genital herpes cannot be treated by using antibiotics because it is a viral disease.
57. (c)  
The reason not responsible for explosive growth is decline in number of people in reproductive age group.
58. (a)  
Sterilisation method (Vasectomy and tubectomy) is a terminal method of contraception, and it is poorly reversible.
59. (d)  
Contraceptive method with maximum chances of failure is Rhythm method includes periodic abstinence method.
60. In vasectomy, a small part of the vas deferens is removed or tied up through a small incision on the scrotum.
61. (c)  
The birth control device not used by women is nirodh it is a brand name of male condom.
62. (d)  
In intra cytoplasmic sperm injection (ICSI), a sperm is directly injected into the ovum placed in nutrient broth. (artificial medium).
63. (c)  
Promoting inter racial marriages will not result in the control of population growth.
64. (a)  
Pill that has to be taken daily for a period of 21 days starting preferably within the first five days of menstrual cycle is Mala-D. These pills check ovulation, cause thickening of cervical mucus and thinning of endometrium.
65. (b)  
First stage of demographic transition represents equal birth rate and death rate.
66. (b)  
Government of India legalized MTP in 1971 with some strict conditions to avoid its misuse.
67. (d)  
According to world health organization reproductive health, means a total well being in all aspect of reproduction i.e., physical, emotional, behavioural and social.
68. (a)  
In Coitus interruptus, the male partner withdraws his penis from the vagina just before ejaculation so as to avoid insemination it a type of natural method of contraception.

69. (a)  
Syphilis is usually completely curable if detected early and treated properly it is a type of bacterial disease.
70. (b)  
According to 2001 census report, the population growth rate was still around 1.7% i.e., 17/1000 per year, a rate at which our population could double in 33 years.
71. (d)  
Family planning programs popularly known as reproductive and child health care programs doesn't consider primarily and secondarily infertile couples separately.
72. (b)  
IUD's are most widely accepted contraceptive method in India.
73. MTP is legalized in our country but with some strict conditions to avoid its misuse. Its MTP pre-mature foetus is removed.
74. (b)  
According to the 2011 census report, the population growth rate was till around 17/1000 per year and could double in 33 years.
75. (d)  
Use of condoms has increased in recent years due to advantages like it is disposable, provides protection against STDs, can be self-inserted and give privacy to the users.
76. (b)  
MCH (maternal and child health) provide pre-natal and post-natal services at the main centre and the sub centers with immunization programmes.
77. (c)  
The reason to legalise conditional MTPs by the government of India is to check illegal female foeticides which are reported to high in India.
78. (a)  
Cu-T is reversible, effective and helps to create gap between children.
79. (c)  
There are few drawbacks of IUDs like perforation of uterus, excess menstrual bleeding, pain, ectopic pregnancy etc.
80. (d)  
Contraceptive / oral pills are very effective with lesser side effects and are well accepted by the females. They prevent contraception by inhibiting ovulation, implantation and altering quality of cervical mucus to prevent / retard entry of sperms.
81. (d)  
About 45-50 million MTPs are performed in a year all over world.

82. (c)  
If STD is detected one should get isolated for society instead must consult a qualified doctor.
83. (a)  
Condom is grouped under barrier method and they also provide additional benefit in protecting the user from contracting STDs and AIDS.
84. (d)  
During lactation period i.e., when the mother completely breast feeds the baby, the chances of conception becomes almost nil because of excess of prolactin which inhibits gonadotropins mainly LH and there is no ovulation.
85. (b)  
ICSI (Intra cytoplasmic sperm injection) is a procedure in which a sperm is directly injected into the ovum.

#### Level – II

1. (a)  
Genital warts are caused by sub types of human papilloma virus (HPV).
2. (c)  
Copper ions in copper releasing IUDs increase phagocytosis of sperms within the uterus, suppress sperm motility and the fertilizing capacity of sperms.
3. (d)  
Embryos upto 8 blastomeres are transferred into the fallopian tube and more than 8-blastomere transferred to uterus.
4. (a)  
Gametic intrafallopian transfer is applicable to a female who cannot produce an ovum and in this method an ovum is transferred from a donor into the fallopian tube of the recipient female.
5. (d)  
LNG-20 is a hormone releasing IUD.
6. (d)  
HIV and Treponema can cross the placenta.
7. (b)  
MTP (Medical Termination of Pregnancy) is considered safe during first trimester of pregnancy. (12 week of pregnancy).
8. (c)  
Aminocentesis is not for examination of the sex of the foetus leading to increase in female foeticide. This is illegal.

9. Multiload-375 is a copper releasing IUD. Lippes loop is a non-medicated IUD, where as c,d are hormone releasing.
10. (a)  
In the production of test tube babies fertilization is external and foetus formation is internal.
11. (c)  
IUDS are a method of birth control.
12. (c)  
Estrogen only is not used for synthesis of contraceptive pills.
13. (c)  
Contraceptive pills are highly effective because they inhibit ovulation, implantation and they also alter the quality of cervical mucus. Follicular atresia means degeneration of follicle.
14. (b)  
GIFT is a type of ART mainly helpful to females who cannot produce ovum but can provide suitable environment for fertilization and further development.
15. (a)  
IUD's doesn't block the entry of sperms through cervix, because it is implanted in uterus.
16. (d)  
Progestasert is a hormone releasing IUD.
17. (c)  
In ZIFT the zygote or early embryos upto 8 blastomeres are transferred into fallopian tube.
18. (a)  
Physical contact can be prevented by barrier method only.
19. (b)  
Sponge contains non-oxynol – 9 as spermicide, its brand name is today.
20. (b)  
Administration of progestogens or progesterone estrogen combinations within 72 hrs of coitus is effective for emergency contraception, which ensure failure of implantation.
21. (b)  
Use of condoms has increased in recent years as it gives privacy to the user and also protects from STDs.
22. (c)  
An injection of depo-medroxy progesterone acetate will not inhibit ovulation, if is form in the form of injectables.



23. (c)  
Deficiency in secretory changes in endometrium is not a cause of male infertility, it is a part of female uterus.
24. (b)  
A birth control implant having six small, plastic cylinder that contains progesterin and effectiveness is of 5 years and success rate 88.7% is Norplant.
25. (c)  
Causative agent of genital warts is HPV (human papilloma virus)
26. (d)  
Hepatitis – B is caused by Hepatitis – B virus (HBV).
27. (b)  
A specialized procedure to form an embryo in the laboratory in which a sperm is directly injected into the ovum is ICSI – (Intracytoplasmic sperm injection).
28. (b)  
A female who can't produce ova herself can opt for GIFT (gamete intra fallopian transfer) as a reproductive technique.
29. (b)  
A hormonal contraceptive for the females developed by scientists in Lucknow is Saheli, Central drug research institute (CDRI).
30. (b)  
A French drug used in non-surgical abortion commonly called mifepristone is also known as RU-486. It is a progesterone antagonist.
31. (b)  
Cu–T is a contraceptive device which is inserted by doctors or expert nurses in the uterus through the vagina.
32. (a)  
The incidence of STDs is reported to be high among the age group of 15-24 years.
33. (d)  
Artificial insemination techniques is a type of assisted reproductive technology. It is done in case of inability of male partner to inseminate female and low sperm count in the ejaculate.
34. (c)  
IUDs do not inhibit ovulation, if mainly check fertilization and implantation.
35. (d)  
Saheli is a non-steroidal contraceptive pill and is taken once a week.
36. (c)

Infertility is not always due to defects in the female partner. Defects can be there in the male partner also like erectile problem, low sperm count etc.

37. (d)  
RU-486 is used in non-surgical method in non-surgical. It works as anti-progestin. It blocks the action of estrogen so causes menstruation. It also prevents implantation of fertilized egg and it is sloughed off along with uterine lining.
38. (d)  
Genital warts is completely curable if detected early and treated properly.
39. (b)  
In ICSI (intra cytoplasmic sperm injection) the male gamete is directly injected into female gamete.
40. (c)  
STDs like genital herpes, hepatitis– B and AIDS are not completely curable.
41. (c)  
Saheli is an ideal contraceptive pill and it inhibits implantation – Norplant is effective for about 5 years.
42. (b)  
After in vitro fertilization, the best site for transfer of zygote to female reproductive tract for further development is fallopian tube, followed by natural implantation and pregnancy.
43. (d)  
Use of spermicides creams, jellies and foams along with barriers increases contraceptive efficiency.
44. (d)  
Nirodh (condoms) prevents contraception as well as STDs.
45. (c)  
Family planning programmes were initiated in 1951 and were periodically assessed over past decades. Improved programmes are currently in operation under popular name is reproductive and child health care programmes.
46. (d)  
The most effective hormonal birth control method in females with least failure rate is IUDs.
47. (c)  
Widespread use of oral pills is not the most effective method to control population in India, and it is a female contraceptive.
48. Trichomoniasis is caused by a protozoan *Trichomonas vaginalis*. a, c, d are bacterial disease.

49. (c)  
*Chlamydia trachomatis* is an obligate intracellular parasite and causes trachoma and STD.
50. (c)  
The use of copper in, copper releasing IUD is that it suppress sperm motility and fertilization capacity of sperms.
51. (b)  
LNG-20 is a hormone releasing IUD.
52. (d)  
IUD is a contraceptive device.
53. (a)  
For a 45 year old female who doesn't want to extend her family the best contraceptive is Tubectomy, because it is poorly reversible.
54. (d)  
Femidom is a poly urethane pouch with a ring at either end and is used to cover the external genitalia as well as lines the vagina it is also known as female condom.
55. (c)  
If a female wants to avoid pregnancy after unprotected sex during 13<sup>th</sup> day of menstrual cycle she should take Saheli and get implanted LNG-20 (hormonal IUD), because it will either prevent fertilization or implantation.

### ASSERTION AND REASON – SOLUTIONS

1. (c)  
IUD's doesn't prevent passage of sperms from vagina into uterus instead increases phagocytosis of sperms within uterus, different types of IUD's (hormonal copper releasing) are there having different functions.
2. (b)  
Hormone like testosterone and estrogen released by glands.
3. (a)  
Inhibition of progesterone action stimulate uterine contraction.
4. (c) Trichomoniasis is caused by a protozoan parasite *Trichomonas vaginalis*.
5. (d) Sex education is necessary in schools. It will help students to understand myths and misconceptions regarding this.
6. (a)  
Ovum availability in fallopian tube is not certain.
7. (a)

8. (b)
9. (c)  
Chemical contraceptive doesn't give defense against STDs because it doesn't prevent contact between the body fluids of both the partners.
10. (d)  
All barrier method do not prevent HIV. E.g., diaphragms, vaults, cervical caps etc do not prevent contact of body fluids.
11. (b)  
Because of pre-ejaculation discharge, this method is at high risk.
12. (a)  
High prolactin level is blood declines blood LH.
13. (a)  
Non-medicated IUDs changes the physical structure of endometrium.
14. (c) Different types of IUD's are there having different functions such non-medicated, hormonal, copper releasing etc.
15. (c) These pills makes the cervical mucus thick which affects sperm motility.
16. (a)  
Sterilisation include vasectomy and tubectomy.
17. (b)  
This technique is good if family planning is complete.
18. (b)
19. (a)  
MTP is not a contraceptive method.
20. (c) Copper ions released from copper T, suppress sperm motility and fertilizing capacity of sperms.
21. (a)
22. (b)  
By the expertise of IVF, desired based foetus can be produced.

### PREVIOUS YEARS

1. (c)  
Oral pills used by female, mainly check ovulation.

2. (b)  
In this IUF technique is followed by ZIFT or UT.
3. (a)  
High progesterone level inhibit LH surge.
4. (c)  
CUT suppress sperm motility.
5. (a)
6. (c)  
Gestation period mean the foetal development in female body.
7. (a)
8. (j)  
Birth control measure prevent zygote formation.
9. (a)
10. (b)  
Cut prevent fertilization, and implantation.
11. (c)
12. (d)
13. (a)
14. (d)
15. (c)  
Diaphragm is fitted in the cervix of female to prevent sperm entry
16. (a)
17. (d)  
High level of estrogen and progesterone changes the endometrial thickness.
18. (a)  
Copper T mainly prevent fertilization.
19. (b)
20. (d)
21. (b)  
It is a type of STD caused by Hemophilic bacteria.

22. (a)  
Lactational amenorrhoea is effective for six month only after parturition.
23. (b)  
Pre-natal sex determination is not a use of amniocentasis.
24. (b)  
Cryptorchidism may cause male infertility.
25. (b)
26. (c)  
All IUD's promote phagocytosis, but CUT mainly prevent sperm motility.
27. (c)
28. (a)
29. (c)  
Oral contraceptive pills mainly contains estrogen progesterone combination, inhibit ovulation.
30. (d)  
IUD's in India is widely used, with high efficiency.
31. (b)  
After attachment of placenta with foetus, MTP is risky for mother.
32. (d)  
Because of non-steroidal nature it is for females.
33. (d)
34. (c)  
In 28 days of menstrual cycle ovulation occur during these days.

