

IMPORTANT PRACTICE QUESTION SERIES FOR NEET EXAM - 1

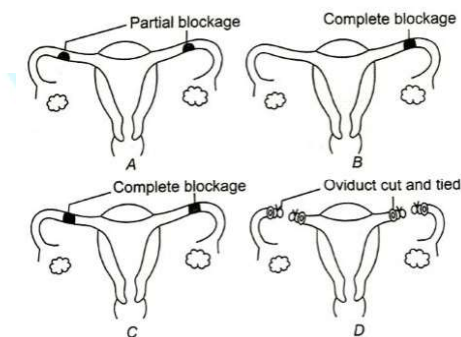
1. Population explosion has occurred in the last:
 - a) 500 years b) 300 years c) 100 years d) 50 years
2. When the 3rd booster and the 4th booster dose of tetanus is given to a child?
 - a) 10 years and 15-16 years b) 2 years and 5 years
 - c) 4 years and 10 years d) 6 years and 15 years
3. Administration of progesterone, progesterone oestrogen combination and IUDs are effective in
 - a) 72 hr b) 48 hr c) 24 hr d) 96 hr
4. Cu^{2+} ions released from copper releasing Intra Uterine Devices (IUDs)
 - a) Prevent ovulation
 - b) Makes uterus unsuitable for implantation
 - c) Increases phagocytosis of the sperms
 - d) Suppresses sperm motility
5. Which of the following disease is curable?
 - I. Hepatitis-B
 - II. HIV
 - III. Genital herpes
 - a) I and II b) II and III c) I and III d) All of these
6. Oral contraceptives inhibits ...A... and implantation as the well as quality of cervical ...B.... to prevent the entry of sperms.
Choose the correct option for A and B to complete the given statement of NCERT textbook
 - a) A-ovulation; B-mucous
 - b) A-oogenesis; B-structure
 - c) A-oogenesis, B-nucleus
 - d) A-spermatogenesis, B-mucous
7. Coitus interruption is the withdrawl method of natural contraception.
This sentence is
 - a) True b) False
 - c) Sometimes (a) and sometimes (b) d) Neither (a) nor (b)
8. NACO stands for
 - a) National Acid Control Organisation b) National Asisted Control Organisation
 - c) National AIDS Control Organisation d) National AIM for Control Organisation
9. In the production of test tube babies :
 - a) Fertilization is external and foetus formation is internal
 - b) Fertilization is internal and foetus formation is external
 - c) Fertilization and foetus formation is external
 - d) Fertilization and foetus formation is internal
10. Which of the following is the most sparsely populated state of India?
 - a) Manipur b) Arunachal Pradesh c) Rajasthan d) Meghalaya
11. Indian population forms what percentage of world population?
 - a) About 16% b) About 7% c) About 20% d) About 21%
12. Every person is Indian in world
 - a) Fifth b) Sixth c) Ninth d) First
13. On which day, world population touched 5th billion?
 - a) May 11, 1985 b) July 11, 1986 c) May 11, 1987 d) July 11, 1987
14. Diaphragms are contraceptive devices used by the females. Choose the correct option from the

statements given below:

- i. They are introduced into the uterus
 - ii. They are placed to cover the cervical region
 - iii. They act as physical barriers for sperm entry
 - iv. They act as spermicidal agents
- a) i and ii b) i and iii c) ii and iii d) iii and iv
15. From the sexually transmitted diseases mentioned below identify the one which does not specifically affect the sex organs:
a) Syphilis b) AIDS c) Gonorrhea d) Genital warts
16. Family planning program was initiated in
a) 1941 b) 1951 c) 1961 d) 1981
17. Withdrawl method of natural contraception
a) Withdrawl of penis before ejaculation b) Withdrawl of penis after ejaculation
c) Avoid sex in ovulation d) Prefer sex in ovulation
18. MTP is being ...A... to abort even normal fetuses. Specially when sex of the foetus is ...B... .
Choose the correct option for A and B to complete the given NCERT statement
a) A-used; B-male b) A-misused; B-female
c) A-used; B-abnormal d) A-female; B-misused
19. Example of copper releasing IUD is
a) Cu-T b) Cu-7 c) Multiload-375 d) All of these
20. Which is related to males?
a) Oral pill b) Tubectomy c) Vasectomy d) None of these
21. Medical termination of Pregnancy (MTP) is considered safe up to how many weeks of pregnancy?
a) Eight weeks b) Twelve weeks c) Eighteen weeks d) Six weeks
22. Identify the false statement regarding the techniques of contraception
I. There are many side effects of tubectomy and vasectomy
II. Purpose of tubectomy is to prevent egg formation
III. The most important component of the oral contraceptive pill is progesterone
IV. Contraceptive oral pills help in birth control by preventing ovulation
a) I, II and III b) I and II c) III, IV and II d) IV and II
23. What measures should be taken to avoid the transmission of STD?
I. Avoid sex with unknown
II. Avoid sex with multiple partner
III. Do protected sex
IV. Avoid sharing needle
a) I, II and IV b) I, II and III c) I, II and IV d) All of these
24. When MTP was legalized in India?
a) 1951 b) 1971 c) 1981 d) 1924
25. Injections and implants (the progesterone or progesterone oestrogen combination) are used by the females under the
a) Skin of the inner arm above elbow b) Vagina
c) Stomach's upper skin d) Cervix
26. Higher population in cities is mainly due to:
a) More opportunities for education b) Availability of clean drinking water
c) Better sanitation d) Higher income resources.
27. Population explosion is
a) Increased frequency of diseases in population
b) Rapid increase in population number
c) Rapid decrease in population number
d) None of the above

28. The most important component of contraceptive pills is:
- a) Progesterone b) Growth hormone
c) Thyroxine d) Luteinising hormone
29. Find out correct choice for IUD
- I. Increases phagocytes of sperms
II. Releases Cu²⁺ ions that suppresses the sperms motility and fertilizing capacity of sperms
III. Make the uterus unsuitable for implantations
- a) I, II and III b) I and II c) Only I d) None of the above
30. Which is the figure given below showing in particular?
-
- a) Uterine cancer b) Tubectomy c) Vasectomy d) Ovarian cancer
31. In India, first census was conducted in:
- a) 1851 b) 1872 c) 1921 d) 1951
32. Infertile couples can produce a baby with the help of
- a) ART b) AIT c) GIFT d) All of the above
33. What is the function of copper T?
- a) Prevents mutation b) Prevents fertilization
c) Prevents zygote formation d) (B) and (C)
34. What was the world human population in 2000?
- a) 6 billion b) 5 billion c) 3 billion d) 2 billion
35. When the ovulation is expected in a normal menstrual cycle?
- a) 10-17 day of menstrual phase b) 12-14 day of menstrual phase
c) 10-20 day of menstrual phase d) 6-7 day of menstrual phase
36. The best way to decrease population of a country is:
- a) To educate people b) To have better houses
c) To kill people on large scale d) To practise and implement family planning
37. Oral polio vaccine and hepatitis first dose is given to a child at
- a) 6 weeks after birth b) 10 weeks after birth c) 20 weeks after birth d) 24 weeks after birth
38. Age for marriage in India is
- MaleFemale**
- a) 21 years 18 years b) 25 years 17 years
c) 20 years 20 years d) 28 years 22 years
39. Which of the following techniques are used in IVF?
- I. ZIFT II. IUT III. ICSI IV. AI V. IUI
- a) I and III b) I and II c) II and III d) All of these
40. High increase in human population is due to:
- a) Increase in average life span b) Better medical facilities
c) Decrease in death rate d) All of these
41. According to 2001 census, Indian population was:
- a) 684 millions b) 844 millions c) 1027 millions d) 1128 millions
42. Chancroid is a sexually transmitted disease caused by:
- a) *Treponema* b) *Haemophilus* c) *Nlisseiria* d) *Chlamydia*
43. STDs are also called
- a) VD b) RTI c) Both (a) and (b) d) None of these
44. Which of the following given statements are not correct?
- I. MTP was legalized in 1971
II. Inability to conceive or produce children even after two years of unprotected sexual cohabitation is called infertility

- III. Surgical method of contraception prevents gamete formation
 IV. MTPs are relatively safe up to 20 weeks of pregnancy
- a) I and III b) III and IV c) III and II d) I and II
45. Population explosion occurs due to
 a) Decline maternal mortality rate
 b) Decline rate of infant mortality
 c) Better medical service
 d) All of the above
46. Zero growth means:
 a) Natality is zero b) Natality balances mortality
 c) Natality is less than mortality d) Natality is more than mortality
47. Population of India was approximately million at the time of independence
 a) 350 million b) 400 million c) 500 million d) 600 million
48. MTP helps in
 a) Unwanted pregnancy b) Unsafe sex
 c) Failure of contraceptive d) All of the above
49. Which of the following causes abortion in ladies?
 a) Viruses b) Bacteria c) Mycoplasma d) None of these
50. Periodic abstinence is avoiding sex during
 a) Luteal phase b) Ovulatory phase c) Menstrual phase d) None of these
51. A method of birth control is:
 a) GIFT b) ZIFT c) IVF-ET d) IUDs
52. July 11 is observed as:
 a) World population day b) No tobacco day
 c) World environment day d) World health day
53. Early symptoms of most STDs is
 I. Itching
 II. Fluid discharge
 III. Slight pain
 IV. Swelling
 Choose the correct option
 a) I, II and IV b) I, III and II c) I, IV and III d) I, II, III and IV
54. During which phase of the pregnancy MTP is safe?
 a) 1st trimester b) 2nd trimester c) 3rd trimester d) 4th trimester
55. Human population growth is:
 a) Lag b) Stationary c) Exponential d) None of these
56. In which condition of the uterus, fertilisation is impossible?

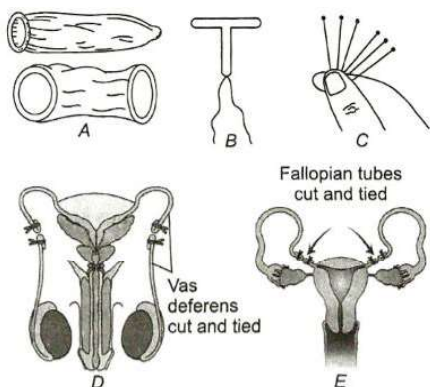


- a) A and B b) B and C c) C and D d) A and D
57. According to the ...A... census report, the population growth rate was still around ...B..., a rate at which our population could double in ...a... years.
 Choose the correct option for A, B and C to complete the given NCERT statement

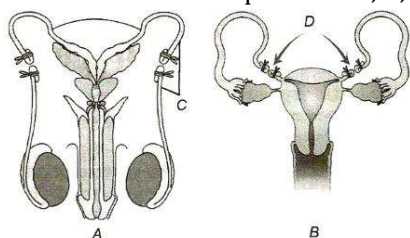
- a) A-2003; B-1.8%; C-20 years
b) A-2001; B-1.5%; C-33 years
c) A-2004; B-2%; C-34 years
d) A-2010; B-3%; C-22 years
58. In male sterilization ...A... is cut and tied. This process is calledB....
Fill correct option for A and B
a) A-vas deferens; B-tubectomy
b) A-vas deferens; B-vasectomy
c) A-vas efferentia; B-tubectomy
d) A-vas efferentia; B-vasectomy
59. Day of periodic abstinence is
a) 10-11 days of menstrual phase
b) 10-17 days of menstrual phase
c) 17-20 days of menstrual phase
d) 20-28 days of menstrual phase
60. One of the legal methods of birth control is:
a) By abstaining from coitus from day 10 to 17 of the menstrual cycle
b) By having coitus at the time of day break
c) By a premature ejaculation during coitus
d) Absorption by taking an approximate medicine
61. Natural methods of contraception are the natural ways to
a) Increase spermicidal activity
b) Prevent fertilisation
c) Decrease mortality
d) Increase mortality
62. Progestasert and LNG-20 are the examples of
a) Non-mediated IUDs
b) Copper releasing IUDs
c) Hormonal releasing IUDs
d) All of the above
63. Identify the correct statements
i. Birth control pills are likely to cause cardiovascular problem
ii. A woman who substitutes or takes the place of the real mother to nurse to embryo is called surrogate mother
iii. Numerous children have been produced by *invitro* fertilisation but with some abnormalities
iv. Woman plays a key role in the continuity of the family and human species
v. Foetal sex determination test should not be banned
a) I and II
b) II and IV
c) III and V
d) I, II and IV
64. Pills have to be taken daily for period of ...A... days. Starting preferably within first five days of menstrual cycle?
After a gap of ...B... days, it has to be repeated in the same pattern
Complete the given NCERT statement by filling up the blanks A and B
a) A-27; B-1
b) A-21; B-7
c) A-22; B-5
d) A-24; B-4
65. Amniocentesis is a process to
a) Determine any disease of heart
b) Determine any hereditary disease of the embryo
c) Know about the diseases of the brain
d) Grow the cells on the culture medium
66. Secondary infertility is
a) Patient who can't do coitus (sex)
b) Sterility
c) Impotency
d) It indicate previous pregnancy but failure to conceive subsequently
67. What is false for GIFT?
a) It is Gamete Intra Fallopian Transfer
b) Ovum is transferred into the oviduct
c) Zygote is transferred into Fallopian tube
d) Used when the receptive is sterile (don't produce ova)

68. Misuse of amniocentesis results in
 a) Male foeticide b) Female foeticide c) Both (a) and (b) d) None of these
69. World AIDS day and world earth day are celebrated on
 AIDS Day World Earth Day
 a) 22 April 1 December b) 2 December 24 April
 c) 1 December 22 April d) 2 December 24 April
70. Copper releasing IUDs are used for suppressing the
 a) Activity of ova b) Activity of the uterus
 c) Motility of the sperms d) Motility of ova
71. 'Hum Do Hamare Do' slogan for encourages
 a) Family planning b) Immunisation c) Electric growth d) Patriotism
72. The birth control device not used by women is:
 a) Diaphragm b) Oral pill c) Condom d) Copper T
73. Incidents of STD are very high among persons, in the age group of
 a) 15 to 35 years b) 15 to 30 years c) 15 to 24 years d) 15 to 45 years
74. Infant mortality in India is:
 a) 14/1000 b) 45/1000 c) 62/1000 d) 72/1000
75. Full form of CDRI is
 a) Central Development Research Institute b) Child Development Research Institute
 c) Central Drug Research Institute d) Common Development Research Institute
76. The formula for exponential population growth is:
 a) $dt/dN = rN$ b) $dN/rN = dt$ c) $rN/dN = dt$ d) $dN/dt = rN$
77. MTP stands for
 a) Medical Termination of Pregnancy b) Mental Trauma Phase
 c) Menstrual Pain d) None of the above
78. IVF in which the early zygote with up to ...A... blastomere is transferred to the Fallopian tube is called ...B....
 a) A-8; B-ZIFT b) A-16; B-ZIFT c) A-32; B-ZIFT d) A-64; B-ZIF
79. False statement about ZIFT is
 a) Zygote in the Fallopian transfer b) Type of IVF
 c) More than 8 blastomeres are used d) Zygote or embryo are used
80. In contraception, sperm motility decreases due to
 a) Cu ion b) Fe ion c) Zn ion d) Se ion
81. July 11 is :
 a) World Environment day b) World Population day
 c) World AIDS day d) World Education day
82. What was the world human population in 2011?
 a) 6 billion b) 7 billion c) 3 billion d) 5 billion
83. "Saheli" contraceptive oral pill was developed at:
 a) Department of Biotechnology, New Delhi b) CDRI, Lucknow
 c) NEERI, Nagpur d) Department of Molecular Biology, Hyderabad
84. STDs caused by viruses are
 I. AIDS
 II. Hepatitis-B
 III. Genital herpes
 a) I, II and III b) I and III c) II and III d) I and II
85. Artificial insemination mean:
 a) Transfer of sperms of husband to a test tube containing ova
 b) Artificial introduction of sperms of a healthy donor into the vagina
 c) Introduction of sperms of a healthy donor directly into the ovary

- d) Transfer of sperms of a healthy donor to a test tube containing ova
86. Emergency contraceptives are effective if used within:
- 72 hrs of coitus
 - 72 hrs of ovulation
 - 72 hrs of menstruation
 - 72 hrs of implantation
87. The number of organisms in population are added by:
- Immigration
 - Birth
 - Emigration
 - Both (A) and (B)
88. Certain characteristic demographic features of developing countries are:
- High fertility, high density, rapidly rising mortality rate and a very young age distribution
 - High infant mortality rate, low fertility, uneven population growth and a very young age distribution
 - High mortality, high density, uneven population growth and a very old age distribution
 - High fertility, low rapidly falling mortality rate, rapid population growth and a very young age distribution
89. India's population in June 2011 was
- 121 carore
 - 115 carore
 - 110 carore
 - None of these
90. The Test-tube Baby Programme employs which one of the following techniques?
- Intra uterine insemination (IUI)
 - Gamete intra fallopian transfer (GIFT)
 - Zygote intra fallopian transfer (ZIFT)
 - Intra cytoplasmic sperm injection (ICSI)
91. Primary infertile patient is the person who;
- Never conceived
 - Could conceive
 - Can't produce ova
 - None of the above
92. IVF in which zygote with ...A... then 8 blastomere is transferred into female body it is called ...B...
- A-more; B-IUT
 - A-less; B-IUT
 - A-less; B-ZIFT
 - A-less; B-ICSI
93. Indicators of the improved reproductive health of the society are
- Better detection and cure of STD
 - Improved medical facilities
 - Decreased maternal and infant mortality rates
 - All of the above
94. MMR (Measles, Mumps, Rubella) vaccine is given at
- 15-25 months
 - 15-18 months
 - 2 years
 - 5 years
95. Amniocentesis is the detection of
- Chromosomal pattern by taking amniotic fluid
 - Chorionic fluid from developing embryo
 - Chromosomal pattern after child birth
 - Chromosomal pattern before fertilisation
96. Ovulation do not occur in lactational period because of
- Inhibin
 - Prolactin
 - Prostaglandin
 - Oxytocin
97. Hepatitis-B and HIV spreads through
- Sharing needles
 - Transfusion of blood
 - Infected mother to child
 - All of the above
98. Match the following figures with their respective identify
- Tubectomy
 - Vasectomy
 - Implants
 - Condoms
 - Copper-T



- a) A-IV; B-V; C-III; D-II; E-I
 b) A-IV; B-IV; C-II; D-I; E-V
 c) A-I; B-II; C-III; D-IV; E-V
 d) A-III; B-IV; C-V; D-I; E-II
99. Oral contraceptives are prescribed in females to check:
- a) Ovulation
 b) Fertilization
 c) Implantation
 d) Entry of sperms in vagina
100. Choose the correct option for A, B, C and D



- a) A-Tubectomy, B-Vasectomy, C-Fallopian tube cut and tied, D-Vas-deferens cut and tied
 b) A-Tubectomy, B-Vasectomy, C-Cervix, D-Vas-deferens cut and tied
 c) A-Vasectomy, B-Tubectomy, C-Vas deferens cut and tied, D-Fallopian tube cut and tied
 d) A-Tubectomy, B-Vasectomy, C-Vas deferens cut and tied, D-Fallopian tube cut and tied

1)	c	2)	a	3)	a	4)	d
5)	d	6)	a	7)	a	8)	c
9)	a	10)	b	11)	a	12)	b
13)	d	14)	c	15)	b	16)	b
17)	a	18)	b	19)	d	20)	c
21)	b	22)	b	23)	c	24)	b
25)	a	26)	d	27)	b	28)	a
29)	a	30)	b	31)	b	32)	d
33)	d	34)	a	35)	b	36)	d
37)	a	38)	a	39)	d	40)	d
41)	c	42)	d	43)	c	44)	b
45)	d	46)	b	47)	a	48)	d
49)	c	50)	b	51)	d	52)	a
53)	d	54)	a	55)	c	56)	c
57)	b	58)	b	59)	b	60)	d
61)	b	62)	c	63)	d	64)	b
65)	b	66)	d	67)	c	68)	b
69)	c	70)	c	71)	a	72)	c
73)	c	74)	d	75)	c	76)	d
77)	d	78)	a	79)	c	80)	a
81)	b	82)	b	83)	b	84)	a
85)	b	86)	a	87)	d	88)	d
89)	a	90)	c	91)	a	92)	a
93)	d	94)	b	95)	a	96)	b
97)	d	98)	a	99)	a	100)	c

2

(a)

Tetanus is caused by *Clostridium tetani*. It is an anaerobic bacteria. It invades the nervous tissue.

National Immunization Schedules

Age	Vaccine	Optional Vaccines
Birth	BCG (<i>Bacillus calmette Guerin</i>)	6 weeks Haemophilus
6 weeks	Oral Polio Vaccine 1st Dose Hepatitis-B Vaccine 1st Dose DPT 1st Dose Oral Polio Vaccine 2nd Dose Hepatitis-B Vaccine 2nd Dose	10 weeks influenza Type B 14 weeks 2 years hepatitis-A vaccine Two doses 6 months A part
10 weeks	DPT 2nd Dose Oral Polio Vaccine 3rd Dose	2 years typhoid vaccine other 1 year chickenpox
14 weeks	DPT 3rd Dose Oral Polio	

	Vaccine 4th Dose	
6-9 months	Oral Polio Vaccine 5th Dose Hepatitis-B Vaccine 3rd Dose	
9 months	Measles Vaccine	
15-18 months	MMR (Measles, Mumps, Rubella) DPT 1st Booster Dose Oral Polio Vaccine 6th Dose	
5 years	DPT 2nd Booster Dose Oral Polio Vaccine 7th Dose	
10 years	TT (Tetanus) 3rd Booster Dose Hepatitis-B Vaccine Booster Dose	
15-16 years	TT (Tetanus) 4th Booster Dose	

3

(a)

Oral contraceptive pills increases the risk of intravascular clotting. Therefore, they are not recommended for women with a history of disorders of blood clotting. Administration of oral contraceptives and IUD are effective in 72 hours

4

(d)

Suppresses sperm motility.

Intra Uterine Devices (IUDs) for contraception

(i) These devices are inserted by the doctors into the uterus through vagina.

(ii) *There are three types of IUDs*

Non-medicated IUDs They increase the phagocytosis of the sperm within the uterus, *e. g.*, Lippes loop

Copper Releasing IUDs Along with phagocytosis of the sperms, the copper ions released, suppresses the sperm motility and the fertilizing capacity of the sperm. *e. g.*, Cu-T, Cu-7, multiload-375

Hormone Releasing IUDs They make the uterus unsuitable for implantation and the cervix hostile to the sperms, *e. g.*, progestasert, LNG-20

5

(d)

Except HIV infection. Hepatitis-B and genital herpes all other STDs are completely curable if detected early and treated properly

6

(a)

A-Ovulation; B-Mucous

7

(a)

This method is only moderately effective because the time of ejaculation is very pleasant, specially for males. Some sperms may pass into the vagina before ejaculation.

Natural method of contraceptive are the natural ways to prevent fertilisation. These methods are

(i) **Periodic Abstinence**

Couple avoid coitus or intercourse from day 10 to 17 of the menstrual cycle when ovulation is expected to occur

(ii) **Coitus interruption or withdrawal method**

Withdrawl of penis from the vagina just before ejaculation so as to avoid insemination
(iii) **Lactational Amenorrhoea** (Absence of menstruation) This method is based on the fact that ovulation and therefore the cycle don't occur during the period of intense following parturition. Therefore, as long as the mother breast feeds the child, chances of conception are almost nil

8

(c)

NACO (National AIDS Control Organisation) was established in 1992 in India

12

(b)

The countries with largest population are six.

Country – Human population

China – 1341000000

India – 1210000000

USA – 311075000

Indonasia – 237556363

Brazil – 190732694

16

(b)

India is amongst the first countries in the world to initiate action plans and programmes at a national level to attain total reproductive health as a social goal. These programme called 'family planning' were initiated in 1951 and were periodically assessed over the past decades.

Improved programmes covering wider reproduction related areas are currently in operation under the popular name 'Reproductive and Child Healthcare (RCH) programmes' creating awareness among people about various reproduction related aspects and providing facilities and support for building up a reproductively healthy society are the major tasks under these programmes

17

(a)

Withdrawl of penis before ejaculation. Also

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18

(b)

Significance of MTP

(i) It helps in getting rid of unwanted pregnancies and such pregnancies, which may be harmful or even fatal either to the mother or to the foetus or both

(ii) MTP plays a significant role in decreasing the human population

Drawback of MTP

(i) It is being misused to abort even the normal female foetuses

(ii) Majority of MTPs are performed illegally by unqualified quacks which may be fatal

(iii) It has raised many emotional, ethical, religious and social issues

19

(d)

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Non-medicated IUDs They increase the phagocytosis of the sperm within the uterus, *e. g.*, Lippes loop

Copper Releasing IUDs Along with phagocytosis of the sperms, the copper ions released, suppresses the sperm motility and the fertilizing capacity of the sperm. *e. g.*, Cu-T, Cu-7, multiload-375

Hormone Releasing IUDs They make the uterus unsuitable for implantation and the cervix hostile to the sperms, *e. g.*, progestasert, LNG-20

22 **(b)**

There are little or no side effects of tubectomy and vasectomy.

The purpose of tubectomy and vasectomy is to block the passage of ova and sperm respectively

23 **(c)**

Simple precautions that can prevent STDs are

(i) Avoid sex with unknown multiple partners

(ii) Always use condoms during coitus

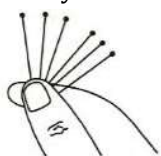
(iii) In case of Doubt go to the qualified doctors

24 **(b)**

MTP was legalized in India in 1971

25 **(a)**

Six matchstick-sized capsules containing steroids are inserted under the skin of the inner arm above the elbow. These steroid capsules slowly release the synthetic progesterone for about five years



Hormone implant capsules

27 **(b)**

Rapid increase in population.

Rapid growth is called **exponential growth**. In 1700 AD human population was about 0.6 billion. At the beginning of the twentieth century, it increased to 1.6 billion, and by the end of the century, the human population reached 6.1 billion. This rapid increase in population over a relatively short period is called **population explosion**.

In the 150 years from 1700 AD human population doubled from 0.6 billion to 1.2 billion. In contrast, it increased five times during the next 150 years. In 2011 it was 7 billion

29 **(a)**

IUD

(i) Increases phagocytosis of sperms

(ii) Releases ions that suppress the sperm motility and fertilizing capacity of sperms

(iii) Makes uterus unsuitable for implantation

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(ii) *There are three types of IUDs*

Non-medicated IUDs They increase the phagocytosis of the sperm within the uterus, *e. g.*, Lippes loop

Copper Releasing IUDs Along with phagocytosis of the sperms, the copper ions released, suppress the sperm motility and the fertilizing capacity of the sperm. *e. g.*, Cu-T, Cu-7,

multiload-375

Hormone Releasing IUDs They makes the uterus unsuitable for implantation and the cervix hostile to the sperms, *e. g.* progestasert, LNG-20

32 (d)

ART(Assisted Reproductive Technologies) are the applications of reproductive technologies to solve infertility problems. *There are*

- (i) Test tube baby/*In vitro* fertilisation (IVF)
- (ii) Artificial Insemination Technologies (AIT)
- (iii) Gamete Intra Fallopian Transfer (GIFT)
- (iv) Intra Cytoplasmic Sperm Injection (ICSI)

34 (a)

Tremendous increase in the size and growth of the population is called population explosion.

Human World Population

Year	Population
1700 AD	0.6 billion
1850	1 billion
1930	2 billion
1965	3.5 billion
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2011	7 billion

Population of India 1901-2011

Year	Population
1901	238, 396, 327
1911	252, 093, 390
1921	251, 321, 213
1931	278, 977, 238
1941	318, 660, 580
1951	361, 088, 090
1961	439, 234, 771
1971	548, 159, 652
1981	685, 148, 692
1991	843, 930, 861
2001	1,027, 015, 247
2011	1,210, 193, 422

35 (b)

Ovulation is expected to occur at the 12th -14th day of the menstrual cycle.

Probable ova releasing day is 12-14 day of menstrual phase, and sperm can live for 2-3 days in female reproductive system. So, 10-17 days are the most probable days for fertilisation.

Draw backs of periodic abstinence The effectiveness of this method is limited because only a few women have regular menstrual cycle and the actual time of ovulation can not be produced as the ovulation in humans occurs about 14 days before the onset of the next menstruation

37 (a)

Polio and hepatitis, both are dreadful diseases. They are caused by the virus. Polio and hepatitis, both diseases are non-communicable.

National Immunization Schedules

Age	Vaccine	Optional Vaccines
-----	---------	-------------------

Birth	BCG (<i>Bacillus calmette Guerin</i>)	6 weeks Haemophilus
6 weeks	Oral Polio Vaccine 1st Dose Hepatitis-B Vaccine 1st Dose DPT 1st Dose Oral Polio Vaccine 2nd Dose Hepatitis-B Vaccine 2nd Dose	10 weeks influenza Type B 14 weeks 2 years hepatitis-A vaccine Two doses 6 months A part
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10 years	TT (Tetanus) 3rd Booster Dose Hepatitis-B Vaccine Booster Dose	
15-16 years	TT (Tetanus) 4th Booster Dose	

38

(a)

With 1.7% of the growth rate. India's population could double in 33 years. Such an alarming growth rate could lead to an absolute scarcity of even the basic requirement. Therefore, the government was forced to take up serious measures to check the population growth.

The most important step to overcome this problem is to motivate smaller families by using various contraceptive methods. You might have seen advertisements in the media as well as posters/bills, etc., showing a happy couple with two children with a slogan *Hum Do Humare Do* (we two, our two).

Many couples, mostly the young, urban, working ones have even adopted 'one child norm'. Statutory raising of marriageable age of the female to 18 years and that of males to 21 years

and incentives given to couples with small families are two of the other measures taken to tackle this problem

39

(d)

In IVF (In vitro fertilisation) the technique used are

ZIFT – Zygote Intra Fallopian Transfer

IUT – Intra Uterine Transfer

GIFT –Gamete Intra Fallopian Transfer

ICSI – Intra Cytoplasmic Sperm Injection

AI- Artificial Insemination

IUI – Intra Uterine Insemination

43

(c)

Diseases or infections, which are transmitted through sexual intercourse with infected persons are collectively called Sexually Transmitted Diseases (STDs) or Venerable Diseases (VD) or Reproductive Tract Infections (RTI)

44

(b)

Medical Termination of Pregnancy It is the intentional or voluntary termination of pregnancy before the full term. It is also called induced abortion.

About 45 to 50 million MTP are performed all over the world which accounts for 1/5 th of the total number of conceiving pregnancy. MTP was legalized by Government of India in 1971.

MTP is to get rid of unwanted pregnancy due to the failure of contraceptive, or rapes, and when continued pregnancy leads to harmful or fatal consequences for mother or foetus or both. MTP is considered safe during the first trimester of pregnancy

45

(d)

Reason for high population growth are

(i) Decline death rate

(ii) Decline Maternal Mortality Rate (MMR)

(iii) Decline infant mortality rate

These all factors are influenced by better medical services. According to 2001 census report, the population growth rate was about 1.7%. India's population got doubled in 33 years

47

(a)

350 billion.

Tremendous increase in the size and growth of the population is called population explosion.

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48 **(d)**

MTP is used to get rid of unwanted pregnancy due to

- (i) Genetic abnormality
- (ii) Failure of contraceptive method
- (iii) rapes

50 **(b)**

Avoid sex in ovulatory phase.

Probable ova releasing day is 12-14 day of menstrual phase, and sperm can live for 2-3 days in female reproductive system. So, 10-17 days are the most probable days for fertilisation.

Draw backs of periodic abstinence The effectiveness of this method is limited because only a few women have regular menstrual cycle and the actual time of ovulation can not be produced as the ovulation in humans occurs about 14 days before the onset of the next menstruation

53 **(d)**

Swelling, itching, fluid discharge, slight pain

Common Symptoms Early symptoms of most of these diseases are itching, fluid discharge, swelling, slight pain, etc.

Consequences of Delayed Treatment If proper and timely treatment is not given. STDs may lead to complications such as Pelvic Inflammatory Diseases (PID), abortions, still birth, ectopic pregnancies, infertility or even cancer of the reproductive tract

54 **(a)**

MTP is safe until Ist trimester (12 weeks) of the pregnancy. It becomes more risky after the Ist trimester period of pregnancy as the foetus becomes intimately associated with the maternal tissue

56 **(c)**

Because as we can see in diagram III and IV there is complete blockage, so there is no passage for sperm to go to ova for fertilisation

57 **(b)**

A-2001, B-1.5%, C-33 years

58 **(b)**

A-Vas deferens, B-Vasectomy

59 **(b)**

Probable ova releasing day is 12-14 day of menstrual phase, and sperm can live for 2-3 days in female reproductive system. So, 10-17 days are the most probable days for fertilisation.

Draw backs of periodic abstinence The effectiveness of this method is limited because only a few women have regular menstrual cycle and the actual time of ovulation can not be produced as the ovulation in humans occurs about 14 days before the onset of the next menstruation

61 **(b)**

Natural method of contraceptive are the natural ways to prevent fertilisation. These methods are

- (i) **Periodic Abstinence**

Couple avoid coitus or intercourse from day 10 to 17 of the menstrual cycle when ovulation is expected to occur

(ii) **Coitus interruption or withdrawal method**

Withdrawal of penis from the vagina just before ejaculation so as to avoid insemination

(iii) **Lactational Amenorrhoea** (Absence of menstruation) This method is based on the fact that ovulation and therefore the cycle don't occur during the period of intense following parturition. Therefore, as long as the mother breast feeds the child, chances of conception are almost nil

62 (c)

Hormonal releasing IUDs.

Intra Uterine Devices (IUDs) for contraception

(i) These devices are inserted by the doctors into the uterus through vagina.

(ii) *There are three types of IUDs*

Non-medicated IUDs They increase the phagocytosis of the sperm within the uterus, *e. g.*, Lippes loop

Copper Releasing IUDs Along with phagocytosis of the sperms, the copper ions released, suppresses the sperm motility and the fertilizing capacity of the sperm. *e. g.*, Cu-T, Cu-7, multiload-375

Hormone Releasing IUDs They make the uterus unsuitable for implantation and the cervix hostile to the sperms, *e. g.*, progestasert, LNG-20

63 (d)

Oral contraceptive pills increase the risk of intra vascular clotting. Therefore, they are not recommended for women with a history of disorders of blood clotting, cerebral blood vessel damage, hypertension, liver malfunction, heart disease or cancer of the breast or reproductive system

64 (b)

Oral Contraceptive Pills (oral pills) They are used in the form of tablets therefore, they are called 'pills'. Pills have to be taken daily for 21 days starting within the first five days of menstrual cycle. After a gap of 7 days, it has to be repeated. They inhibit ovulation and implantation. Pills are very effective with lesser side effects

65 (b)

Determine any hereditary disease of the embryo.

Amniocentesis It is a technique of drawing amniotic fluid and testing it to find out the sex and disorders of the foetus. The amniotic fluid is usually taken at about the fourteenth or fifteenth week after conception.

Sonography (a technique involving high frequency sound waves to locate tissues of different densities within the body) is used to determine the location of the foetus and the placenta just prior to perform amniocentesis. Therefore, accidental damage to the foetus and placenta is prevented.

Amniotic fluid contains cells from the skin of the foetus and other sources. These cells can be used to determine the sex of the infant, to identify some abnormalities in the number of chromosomes and to detect certain biochemicals and enzymatic abnormalities.

If it is established that, if the child is likely to suffer from a serious congenital defect, the mother should get the foetus aborted. However, these days, this technique is also being misused. Since, the sex of the foetus can be determined by this technique, normal female foetus is aborted. Therefore, this technique has been banned

Population growth rate is the annual average growth rate. It can be negative.

Birth rate replacement level can never be negative

66 (d)

Secondary infertility indicates the previous pregnancy but failure to conceive subsequently

- 67 **(c)**
 Zygote is transferred to the Fallopian tube.
ZIFT (Zygote Intra Fallopian Transfer) In ZIFT, the embryo upto 8 celled stage is transferred to Fallopian tube. Rest of the development takes place as that of the natural zygote in the uterus
 (i) Collected gamete are made to form zygote in laboratory, *in vitro* fertilisation (IVF)
 (ii) Zygote or early embryo with up to 8 blastomeres is transferred into the oviduct (ZIFT)
 (iii) Zygote with more than 8 blastomeres is transferred into uterus (IUT)
 (iv) Fusion of gamete within the body of female (*In vivo* fertilisation)
 (v) Transfer of ovum from the donor to the oviduct of the recipient (GIFT)
 (vi) Sperms are injected into the ovum *in vitro* (ICSI)
- 68 **(b)**
Misuse of Amniocentesis It is being used to kill the normal female foetus. It is legally banned for the determination of sex to avoid female foeticide
- 69 **(c)**
 World AIDS day – 1st December
 World earth day – 22th April
 World population day – 11th July
- 70 **(c)**
 Suppressing the mortality of sperm.
 Intra Uterine Devices (IUDs) for contraception
 (i) These devices are inserted by the doctors into the uterus through vagina.
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Hormone Releasing IUDs They make the uterus unsuitable for implantation and the cervix hostile to the sperms, *e. g.*, progestasert, LNG-20
- 71 **(a)**
 'Hum do Humare Do' slogan encourages family planning.
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 The most important step to overcome this problem is to motivate smaller families by using various contraceptive methods. You might have seen advertisements in the media as well as posters/bills, etc., showing a happy couple with two children with a slogan *Hum Do Humare Do* (we two, our two).
 Many couples, mostly the young, urban, working ones have even adopted 'one child norm'. Statutory raising of marriageable age of the female to 18 years and that of males to 21 years and incentives given to couples with small families are two of the other measures taken to tackle this problem
- 73 **(c)**
 Incidents of STDs are very high in the population 15 to 24 years of age group
- 75 **(c)**
Research in Reproductive Health It should be encouraged and supported to find out the new methods in reproduction related areas. 'Saheli' a new oral contraceptive for the females was developed by scientists in Central Drug Research Institute (CDRI) in Lucknow
- 77 **(d)**

Induced abortion and intentional abortion, both the terms are used commonly for MTP (Medical Termination of Pregnancy)

78

(a)

ZIFT (Zygote Intra Fallopian Transfer) In ZIFT, the embryo upto 8 celled stage is transferred to Fallopian tube. Rest of the development takes place as that of the natural zygote in the uterus

79

(c)

In ZIFT, the zygote or embryo upto 8 cells/blastomeres are transferred to the Fallopian tube

80

(a)

Sperm motility decreases due to Cu ion.

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82

(b)

Rapid growth is called **exponential growth**. In 1700 AD human population was about 0.6 billion. At the beginning of the twentieth century, it increased to 1.6 billion, and by the end of the century, the human population reached 6.1 billion. This rapid increase in population over a relatively short period is called **population explosion**.

In the 150 years from 1700 AD human population doubled from 0.6 billion to 1.2 billion. In contrast, it increased five times during the next 150 years. In 2011 it was 7 billion

84

(a)

Viral STDs are

Diseases Pathogens

AIDS – HIV (Human Immuno deficiency Virus)

Hepatitis-B – HBV (Hepatitis-B Virus)

Genital herpes – Herpes simplex virus

Genital warts – HPV (Human Papilloma Virus)

First three are incurable

89

(a)

121 crore.

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2011	1,210,193,422

91

(a)

Types of infertilities

Primary infertility It denotes those patients who have never conceived pregnancy

Secondary infertility It indicates previous pregnancy but failure to conceive subsequently

92

(a)

The zygote or the early embryo is transferred into Fallopian tube (ZIFT-Zygote Intra Fallopian Transfer). If embryo contains is more than 8 blastomere (cells) and it is transferred into uterus than, it is called IUT (Intra Uterine Transfer)

93

(d)

Medical facilities. Better awareness about sex-related problems, prenatal care of the mother, medically assisted delivers, postnatal care of the mother and infant, decrease maternal and infant morality, small families, better detection and cure of Sexually Transmitted Diseases (STDs), increased medical facilities for sex-related problems, etc., indicates improved reproductive health of the society

94

(b)

15-18 months.

National Immunization Schedules

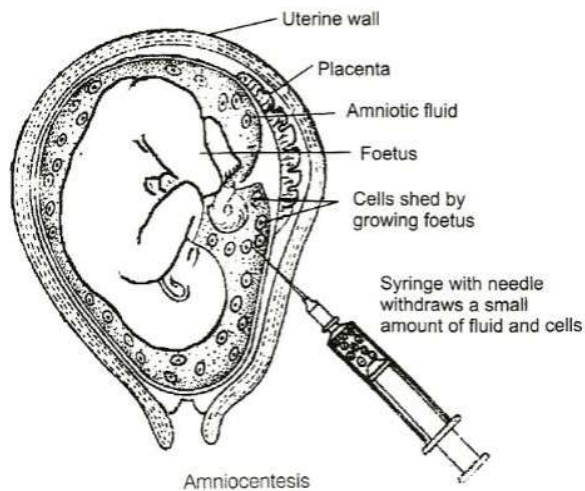
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14 weeks	DPT 3rd Dose Oral Polio Vaccine 4th Dose	

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15-16 years	TT (Tetanus) 4th Booster Dose	

95

(a)

Procedure Amniotic fluid contains cells from the skin



of the foetus and other sources. These cells can be used to determine the sex of the infant, to identify abnormalities in the number of chromosomes and to detect certain biochemicals and enzymatic abnormalities. If it is established that the child is likely to suffer from a serious incurable congenital defect, the mother should get the foetus aborted. Amniocentesis is the detection of the chromosomal pattern of developing foetus by taking the amniotic fluid

96

(b)

In lactating mother, there is the release and the production of milk secreting hormone. These hormones suppresses the release of Follicle Stimulating Hormone (FSH), so during intense lactation there is no ovulation hence, no pregnancy

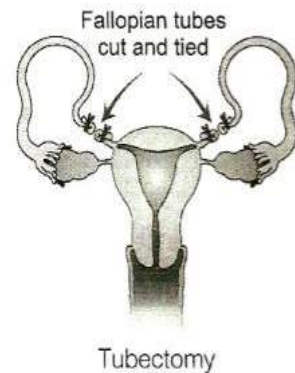
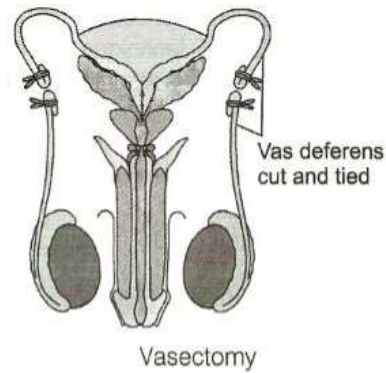
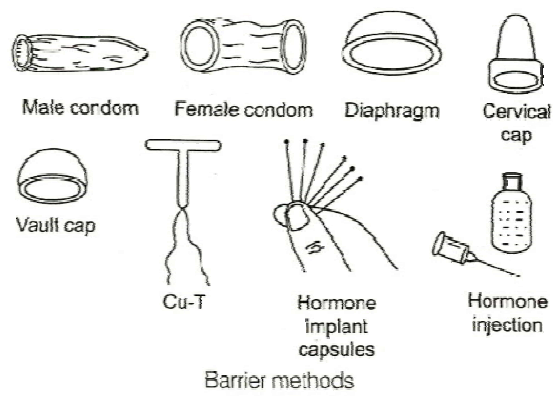
97

(d)

Mode of Infection (MOI) of AIDS and hepatitis are same and both are also incurable also

98

(a)



A-Condoms, B-Copper-T, C-Implants, D-Vasectomy, E-Tubectomy

100

(c)

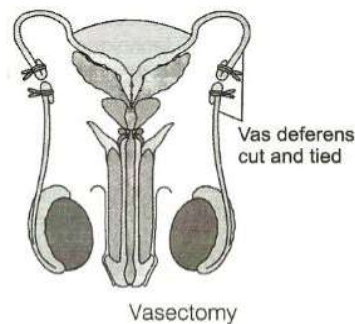
A-Vasectomy, B-Tubectomy, C-Vas deferens cut and tied, D-Fallopian tube cut and tied.

Surgical Method of Contraception (sterilization)

There are terminal and the permanent methods, which blocks the transport of gametes by preventing conception.

They are two types

Vasectomy In males a small portion of the vas deferens is removed or tied up through a small incision on the scrotum called vasectomy



Tubectomy In females a small part of the Fallopian tube is removed or tied up through a small incision in the abdomen called tubectomy

