



PRACHAND NEET



ONE SHOT



Zoology

Reproductive Health

3-4
Ques.

Dr. Akanksha Agarwal Ma'am

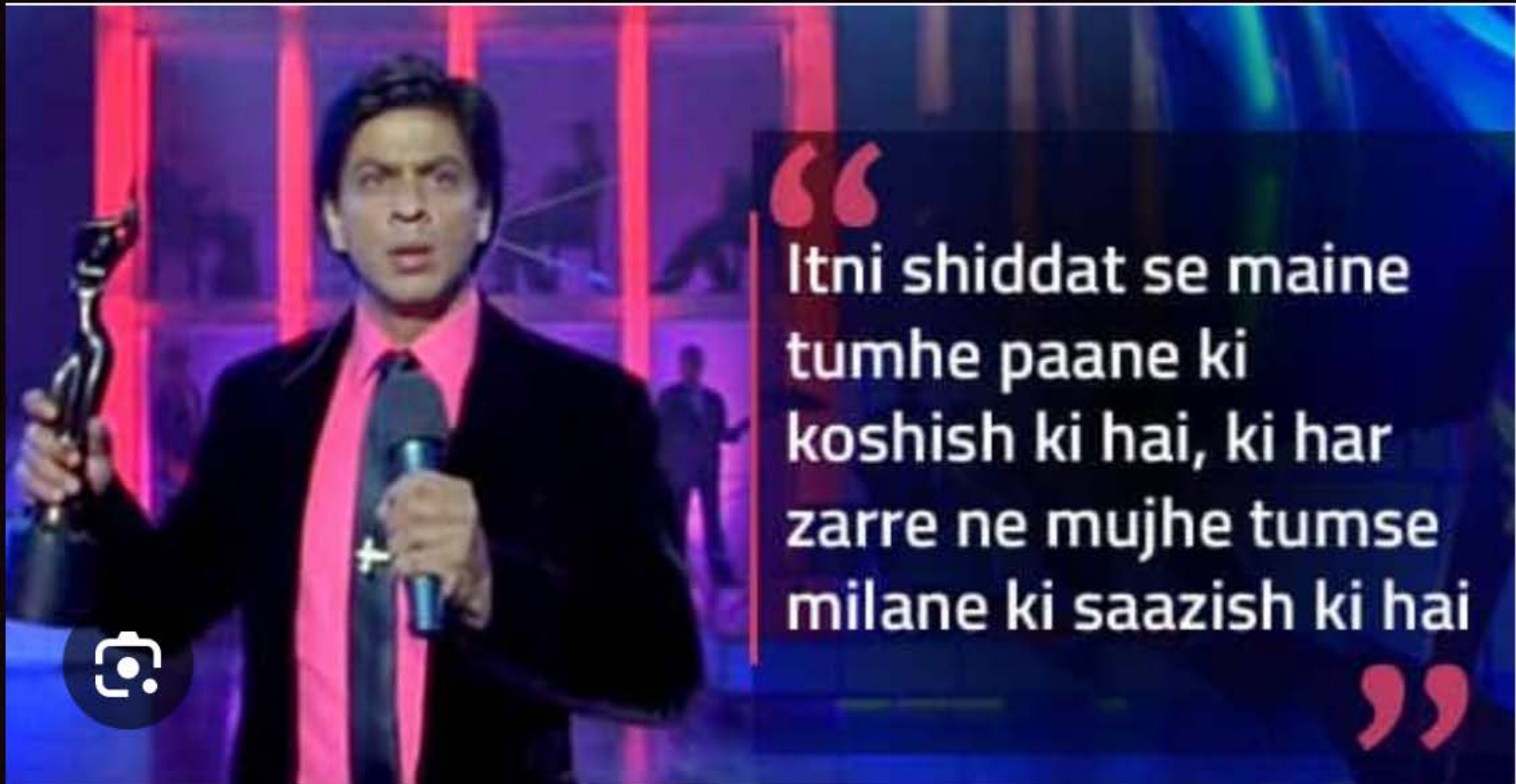


- * From Basics
- * Notes
- * Imp. Ques.
- * PYQs
- * AR
- * NCERT Read
- * Short Notes
- * NEET + 12th Boards



“

**Jab Tak tiger mara nahi,
tab Tak tiger Haara nahi.**



PRACHAND SERIES

TELEGRAM CHANNEL



@PW_YAKEENDROPPER



AKANKSHA MAAM

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* Reproductive Health

↳ Healthy reproductive Organs
with Normal functionality

• WHO :- Total well-being in all aspects of reproduction

1. Physical
2. Emotional
3. Behavioural
4. Social



* India :- In 1951 ; FAMILY PLANNING Program

↓
Periodically assessed over
past decades (every 10 yrs)

* An improved program "RCH" :- "Reproductive and
Child Healthcare
Program"

9. Research: SAHELI (CDRI, Lucknow)

10. Statutory Ban on Amniocentesis

8. Problems due to Population Explosion

- Poverty, Unemployment
- Sex abuse, Sex crime
- Social evils

* Main Role

1. Parents
2. Siblings
3. Friends

4. Teachers
5. Relatives

* Use of

1. Audio-Visuals
2. Print-media
3. Governmental and Non-Govt Org.

RCH

6. Safe Abortions

7. Menstrual problems

5. Menopausal problems

4. Infertility

1. SEX-EDUCATION in School & College

2. Information

- (N) Reproductive Organs
- Adolescent changes
- Safe & Hygienic Sex practices

• STDs / AIDS

3. Fertile & Marriagable Age group

• Contraception Birth Control

• Hospital deliveries

• Antenatal &

• Postnatal Care of Mother

• during preg

• After delivery

• Breast feeding

• Child Immunisation

• Equal oppor. to ♂ & ♀ child



H.W

Shah - Sex education , STI , Sex crime , Safe abortion

Rukh - Reproductive disorders , Reproductive cancer,
Research (Saheli by CDRI , Lucknow)

Is - Infertility , Immunisation

My - Maternal & child health , Menopause

Favourite - Family planning (Contraception)

Actor - Adolescent health , Amniocentesis





- B.R ↑ → Population ↑
- No. of births per 1000 individuals

① BIRTH RATE
NATALITY

- DR ↑ → Population ↓
- No. of deaths per 1000 individuals

② MORTALITY
DEATH RATE

Factors for
Population Growth

③ No. of people in Reproducible Age group

- ↑ → Population ↑
- ↓ → Population ↓

④ Maternal Mortality Rate (MMR)

- No. of deaths of new mothers
- MMR ↑ → Population ↓

⑤ Infant Mortality Rate (IMR)

- No. of deaths of newborns (< 1 yr age)
- As IMR ↑ → Population ↓

⑥ MIGRATION

① IMMIGRATION (Entry)
↑ → Population ↑

② EMMIGRATION (Exit)
↑ → Population ↓

* Population Explosion is due to :-

1. ↓ IMR
2. ↓ MMR
3. ↓ in Death Rate
4. ↑ in no. of Reproducible Age group

*.

	1900	2000	2011
World Population	2 billion (2000 million)	<u>6 billion</u>	<u>7.2 billion</u>
India's Population	<u>1947</u> 350 million	about 6000 <u>1 billion</u>	6000 <u>1.2 billion</u>

* Population Growth Rate

< 2%

= < 20 new people / 1000/year



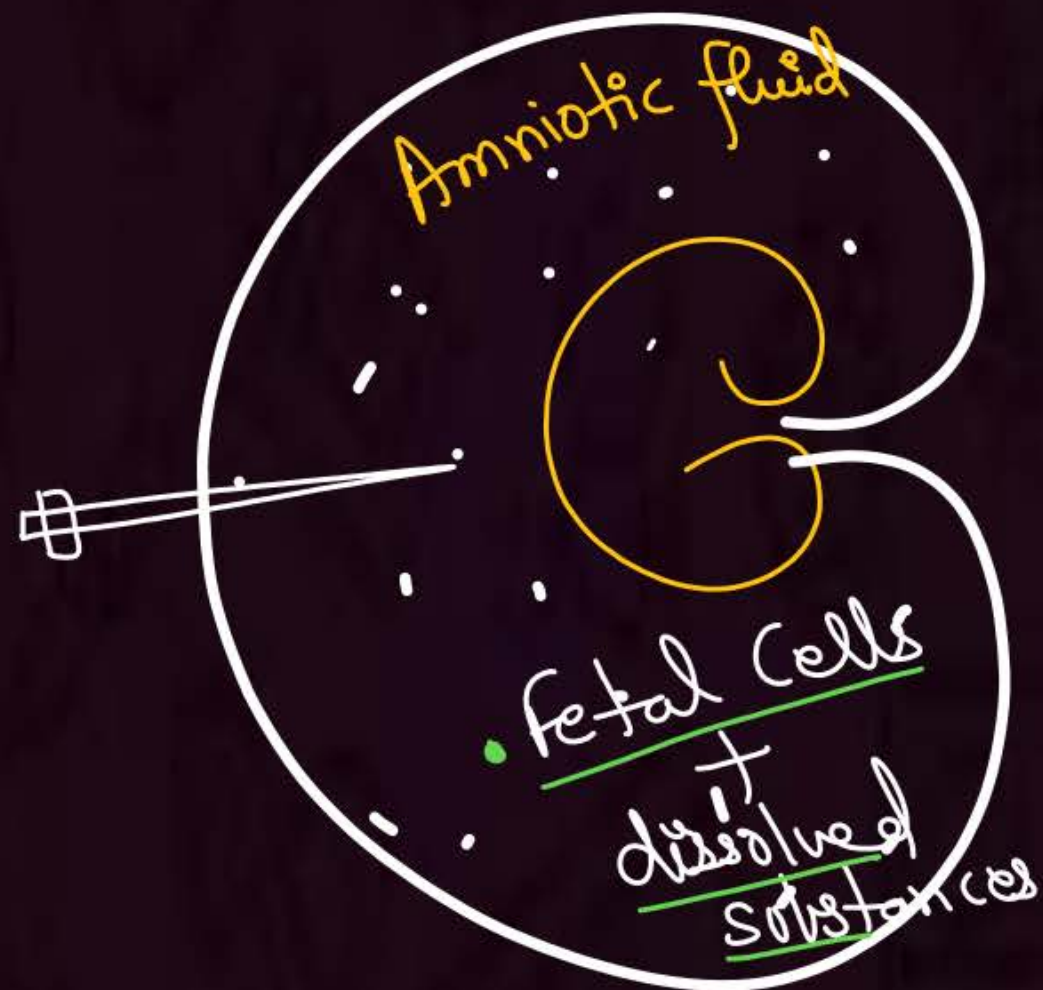
* Steps taken to Overcome Population Explosion:

Trick

1. Education → Education via Media Slogans
Aware like "Hum-do-hamare-do", "One-child norm"
2. Is → Incentives to encourage people with Small families
3. Must for → raising of Marriagable age
 - Boys - 21 yr
 - Girls - 18 yr
4. Future planning → Family planning (Contraception Usage)

PYA

* AMNIOCENTESIS



$\frac{XX}{XY}$ 21st Trisomy

- 14-18 weeks of Preg
- Amniotic fluid taken out & analysed for fetal cells & some dissolved subst
- Misused for Female Foeticide
hence Statutory Ban (Killing) to legally check if it's a female foetus
- Used to Detect Genetic disorders
eg: SDH → Haemophilia
↓
Down's Syndrome
↓
Sickle Cell Anemia

You have learnt about human reproductive system and its functions in Chapter 2. Now, let's discuss a closely related topic – reproductive health. *What do we understand by this term?* The term simply refers to healthy reproductive organs with normal functions. However, it has a broader perspective and includes the emotional and social aspects of reproduction also. 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. Therefore, a society with people having physically and functionally normal reproductive organs and normal emotional and behavioural interactions among them in all sex-related aspects might be called reproductively healthy. Why is it significant to maintain reproductive health and what are the methods taken up to achieve it? Let us examine them.

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

3.1 REPRODUCTIVE HEALTH – PROBLEMS AND STRATEGIES

India was 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 programmes 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 Health Care (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.

With the help of audio-visual and the print-media governmental and non-governmental agencies have taken various steps to create awareness among the people about reproduction-related aspects. Parents, other close relatives, teachers and friends, also have a major role in the dissemination of the above information. Introduction of sex education in schools should also be encouraged to provide right information to the young so as to discourage children from believing in myths and having misconceptions about sex-related aspects. Proper information about reproductive organs, adolescence and related changes, safe and

AR

hygienic sexual practices, sexually transmitted diseases (STD), AIDS, etc., would help people, especially those in the adolescent age group to lead a reproductively healthy life. Educating people, especially fertile couples and those in marriageable age group, about available birth control options, care of pregnant mothers, post-natal care of the mother and child, importance of breast feeding, equal opportunities for the male and the female child, etc., would address the importance of bringing up socially conscious healthy families of desired size. Awareness of problems due to uncontrolled population growth, social evils like sex-abuse and sex-related crimes, etc., need to be created to enable people to think and take up necessary steps to prevent them and thereby build up a socially responsible and healthy society.

Successful implementation of various action plans to attain reproductive health requires strong infrastructural facilities, professional expertise and material support. These are essential to provide medical assistance and care to people in reproduction-related problems like pregnancy, delivery, STDs, abortions, contraception, menstrual problems, infertility, etc. Implementation of better techniques and new strategies from time to time are also required to provide more efficient care and assistance to people. Statutory ban on **amniocentesis** for sex-determination to legally check increasing menace of female foeticides, massive child immunisation, etc., are some programmes that merit

mention in this connection. In amniocentesis some of the amniotic fluid of the developing foetus is taken to analyse the fetal cells and dissolved substances. This procedure is used to test for the presence of certain genetic disorders such as, down syndrome, haemophilia, sickle-cell anemia, etc., determine the survivability of the foetus.

Research on various reproduction-related areas are encouraged and supported by governmental and non-governmental agencies to find out new methods and/or to improve upon the existing ones. *Do you know that 'Saheli'—a new oral contraceptive for the females—was developed*

by scientists at Central Drug Research Institute (CDRI) in Lucknow, India? Better awareness about sex related matters, increased number of medically assisted deliveries and better post-natal care leading to decreased maternal and infant mortality rates, increased number of couples with small families, better detection and cure of STDs and overall increased medical facilities for all sex-related problems, etc. all indicate improved reproductive health of the society.

3.2 POPULATION STABILISATION AND BIRTH CONTROL

In the last century an all-round development in various fields significantly improved the quality of life of the people. However, increased health facilities along with better living conditions had an explosive impact on the growth of population. The world population which was around 2 billion (2000 million) in 1900 rocketed to about 6 billion by 2000 and



7.2 billion in 2011. A similar trend was observed in India too. 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. Through our Reproductive Child Health (RCH) programme, though we could bring down the population growth rate, it was only marginal. 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.

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V.V. gmgj *

CONTRACEPTION (गर्भ-निरोधन)

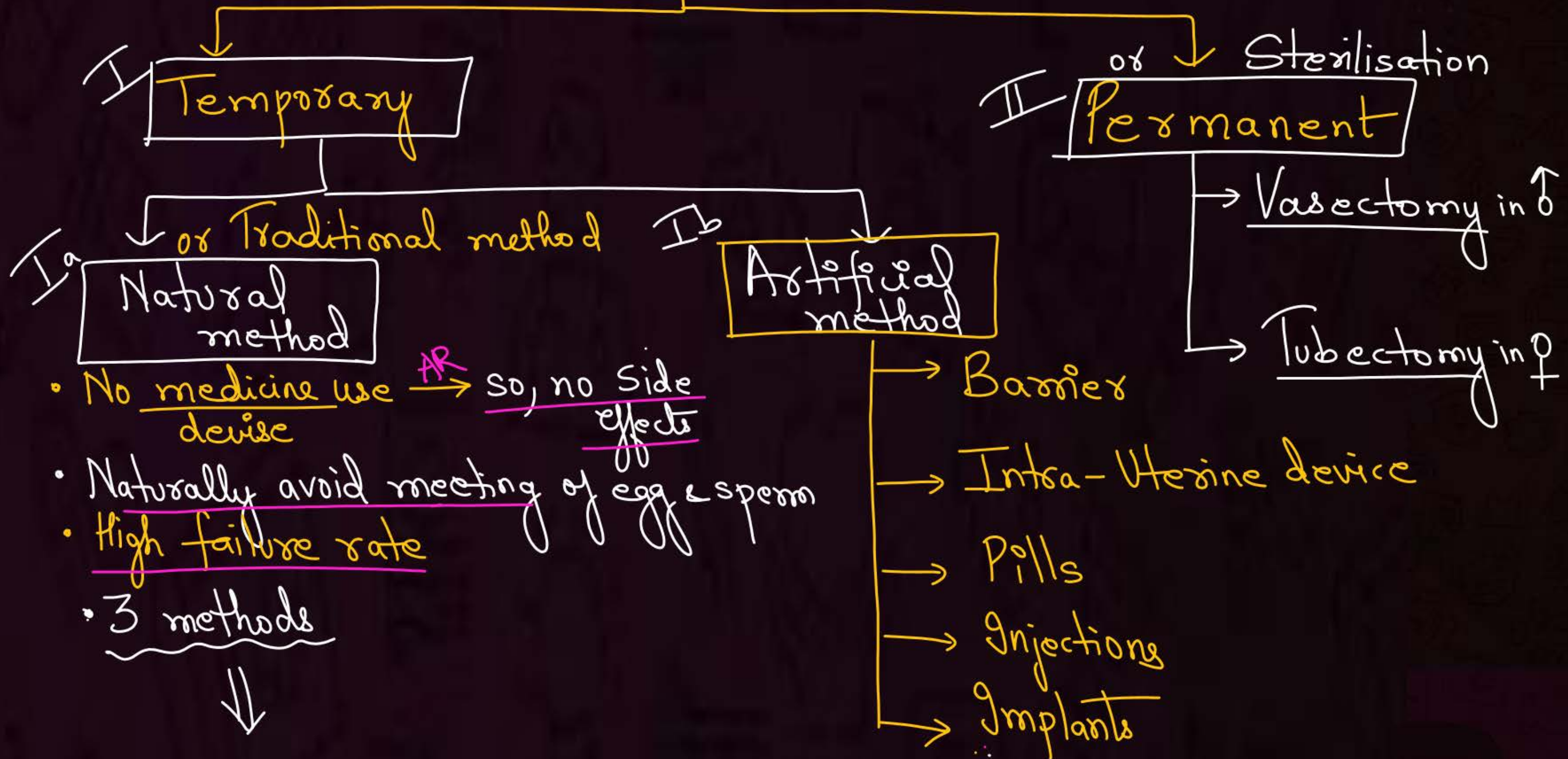
:- Any method used to prevent unwanted pregnancies



• Ideal Contraceptive

1. A → A Available easily
2. E → E Effective
3. I → no I Interference with sex act/desire
4. 0 → '0' (zero) Side effects
almost Nil
5. U → U User-friendly (easy to use)
6. R → R Reversible
7. C → C Cheap

Contraception



a) Periodic abstinence / Rythm / Calender / Safe period method :-

• Avoid Coitus during 10th — 17th day of M.C

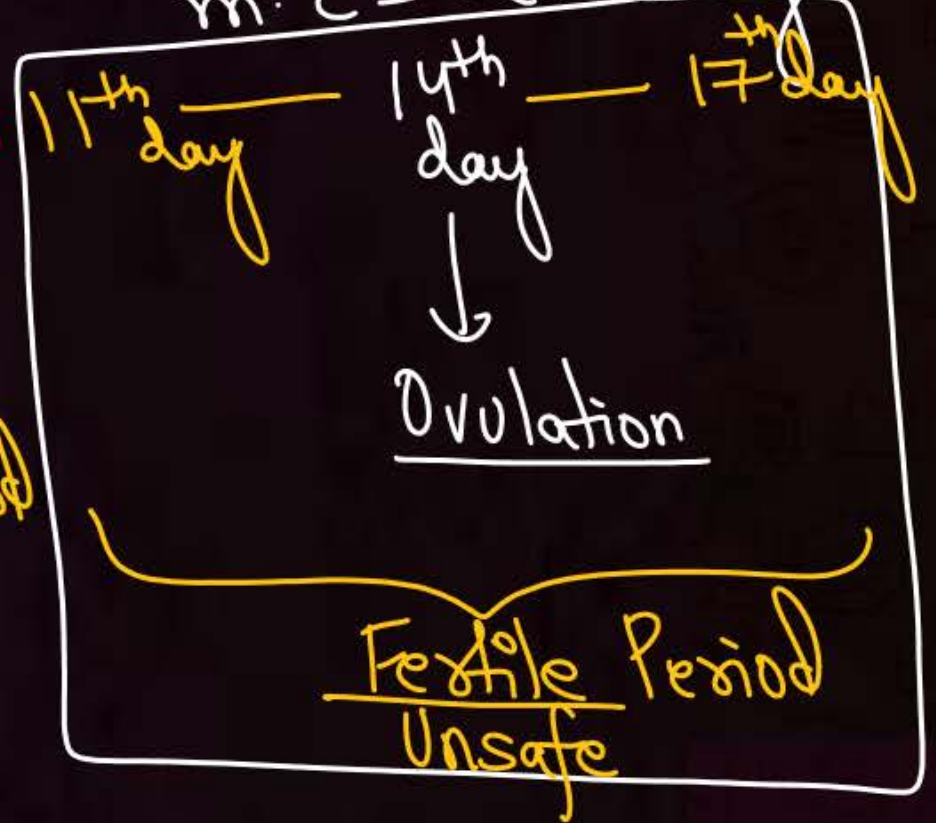
↓
when Ovulation expected

AR

↓
fertilisation chances
high

↓
called Unsafe fertile period

m.c = 28 days



b) Withdrawal / Coitus interruptus :-

- ♂ withdraws penis, just before ejaculation
from vagina



To avoid Insemination

c) Lactational Amenorrhoea :- Chances of Conception almost Nil
(Breast feeding) absent menstruation

* Lactating Mother

↓
Prolactin Releasing Hormone (Hypothalamus)

↓
↑ PROLACTIN (Ant. Pituitary)

↙
Secretes Milk
Lactogenic

↘
Suppress GnRH, FSH, LH Gonadotropins

↓
• No follicle develop & No Ovulation
• No menstruation Anovulation

i) Intense ^{*}lactation, following parturition

→ No ovulation / Anovulation

→ No menstruation

→ So, fertilisation can't occur

ii) Effective, Only upto ^{*}max. 6 months, after delivery

* Barrier Method :- A barrier device used to prevent

- Sperm & egg/ovum from physically meeting each other
- Ejaculated Semen do not enter in ♀ Rep. tract → So, no Conception

2 types



I
Physical barrier

II
Chemical barrier

- Spermicidal cream/jellies foams, used with physical barriers

Ia
CONDOMS ♂ & ♀

- Cover penis (♂) & Vagina/Cx (♀), Just before coitus
- Disposable
- Thin rubber/latex
- Protect against STIs

Ib
Cervical Caps/diaphragms/Vaults

- Only in ♀ ; Reusable Rubber
- Cover Cx → to block sperm entry
- No protect against STIs

To ↑ Contraceptive efficiency

* Intra-Uterine Contraceptive Device :- IUCD

- Inserted into Uterus, through Vagina
- Doctors & Expert Nurses required
- One of the most widely accepted method in India
- Ideal Contraception to delay preg. / Space children

V.V. gmp. 3 types of IUDs

I

Non-medicated
1st Generation

eg: Lippe's loop

- ↑ phagocytosis of Sperms in Uterus

II

Cu-releasing IUDs
2nd generation

eg: Cu-7, Cu-T, Multiload-375

- Cu ions suppresses motility & fertilising Capacity of Sperms



III

Hormone-releasing IUD
3rd generation

eg: 1. Levo Norgestrel-20 (LNG-20)

2. Progestasert

- a) Makes Cervix hostile to Sperm (Thick Cervical mucus)
- b) Makes Uterus unsuitable for implantation



Out of NCERT
Conceptual

Hormonal IUD (LNG-20, Progestasert)

* Only Progesterone

● Cx mucus thick → Retard Sperm Entry

Amennorrh
Lactation
↑ Prolactin

↓
Suppress GnRH, FSH, LH

↓
No follicle develop

→ Estrogen X

↓
☆ No Ovulation

● makes Uterus Unsuit. for Implant

↓
Endometrium thin

↓
Inhibit Implantation



* ORAL CONTRACEPTION → Tablets used, commonly
called Pills

OCP = Oral
Contraceptive Pill

* Inhibit Ovulation (main m/A)

I

Hormonal / Steroidal
Oral Contraception

II

Non-steroidal
Non-Hormonal
OCP

eg: SAHELI

Ia

Only Progesterone
Mini pill

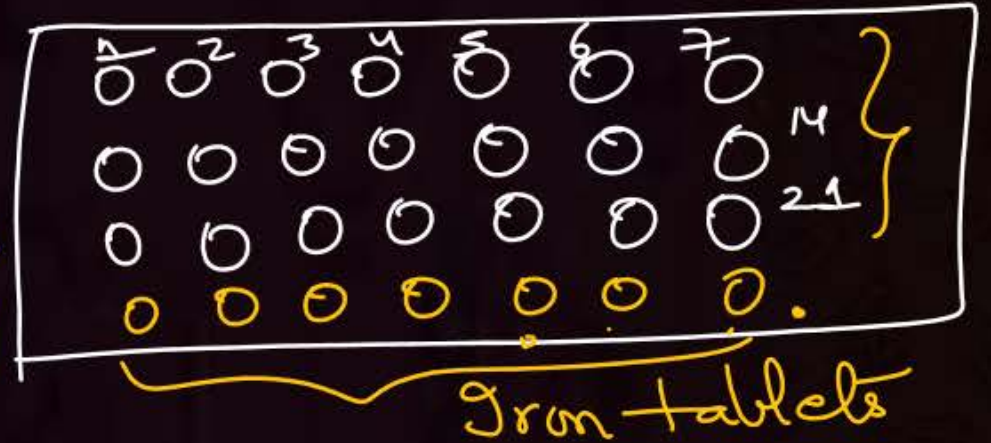
Ib

Estrogen +
Progesterone
Combined OCP

eg: Mala-D, Mala-N

→ Start Packet within First 5 days of mc.

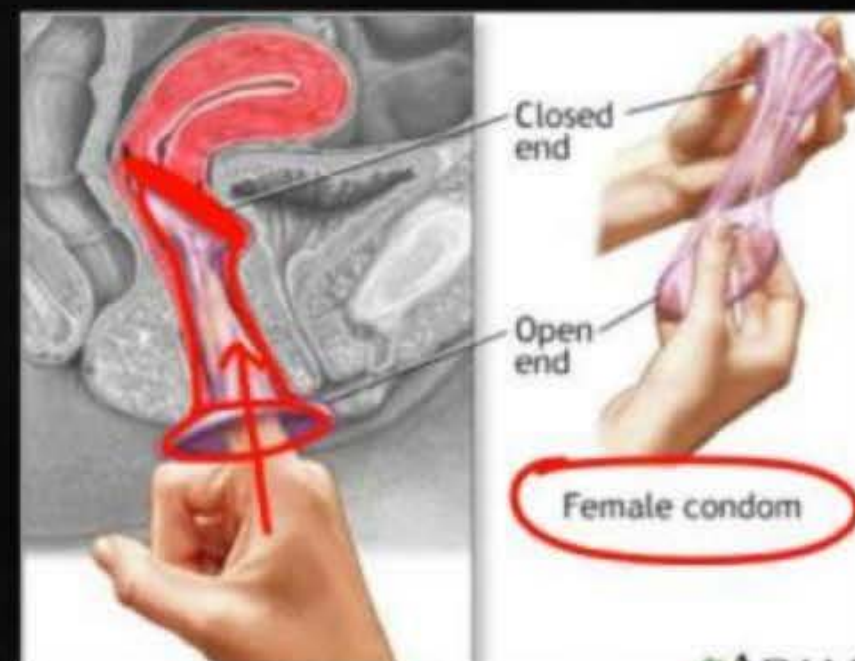
↓
Take One tab. daily for 21 days



↓
Gap of 7 days (during which Menstruation occurs)

↓
Start next packet, till they want Contraception

eg: Menst. start 1/1
 Packet " 5/1
 Packet stop 25/1
 Next menses 30/1 → Next packet 1/2 - 3/2





* E+P Combined or Only Progestogen pill

(like hormone-releasing IUD)

Suppress GnRH / FSH / LH

No follicle develop.
(No Estrogen secretion)

No Ovulation

a) alter Cervical mucus quality
(makes it thick)

retard / Prevent Sperm entry

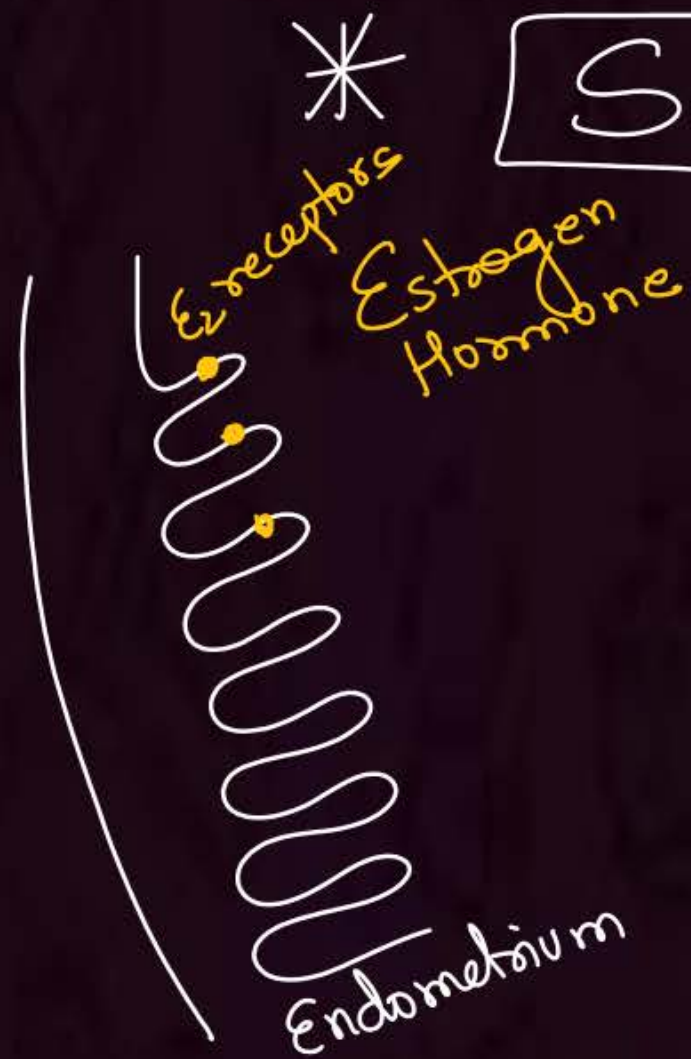
b) Makes Uterus unsuitable for Implantation

E+P → due to Estrogen for 21 days

Endometrium thick

Suddenly Pill (Estrogen) Stopped after 21 days

Endometrium breakdown
↓
Menstruation



:- developed by CDRI, Lucknow
(Central Drug Research Institute)

very few Side-effects

Highly effective

"Once-a-week" Pill

Out of NCERT
PYQ

Contains Centchroman/Oxmiloxifen

PYQ Blocks Estrogen receptors on Uterine Endometrium

No thickening
Proliferation of Endometrium

★ Inhibit Implantation

* Injectables and Implants :-

(2-3 months)

• effective for 5 yrs

• 6 Silicon tubes

• device inserted under
Skin (Sub-dermal)



• Only Progesterone
Estr + Prog. combination

• Mode of Action : Similar to
Pills (Steroidal)

• longer effective period

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 Hamare Do* (we two, our two). Many couples, mostly the young, urban, working ones have even adopted an '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. Let us describe some of the commonly used contraceptive methods, which help prevent unwanted pregnancies.

An ideal contraceptive should be user-friendly, easily available, effective and reversible with no or least side-effects. It also should in no way interfere with the sexual drive, desire and/or the sexual act of the user. A wide range of contraceptive methods are presently available which could be broadly grouped into the following categories, namely Natural/Traditional, Barrier, IUDs, Oral contraceptives, Injectables, Implants and Surgical methods.

FOR NOTES & DPP CHECK DESCRIPTION

Question

National level approach to build up a reproductively healthy society was taken up in our country in

- A** 1991
- B** 1969
- C** 1951
- D** 1989

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question



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 practice and implement family planning

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



India's population grew from 350 million to the billion in 2000. It is mainly due to

- (a) Rapid decline in MMR & IMR ✓
- (b) Increase in number of people in reproducible age ✓
- (c) Increase in number of people in post reproductive phase

- A** Only (c) ✗
- B** Both (a) & (c) ✗
- C** Both (a) & (b) ✓
- D** Only (a)

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



A wise way to encourage small families is by raising marriageable age of female to _____ years and that of male to _____ years to respectively

- A** ~~16 : 18~~
- B** ~~18 : 20~~
- C** 18 : 21
- D** ~~17 : 22~~

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Which of the following statement is incorrect?

False

- A** World population which was around 6 billion by 2000 and 7.2 billion in 2011 ✓
- B** Marriageable age of the female to ~~21~~ years and that of males to ~~18~~ years
- C** According to the 2011 census report, the population growth rate was less than 2 per cent i.e., 20/1000/year ✓
- D** Our population crossed 1.2 billion in May 2011 ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Which of the following correctly describes the measures that can be used to control over-population?

- A** Educating people about the advantages of a small family ✓
- B** Raising the age of marriage ✓
- C** Encouraging family planning programme ✓
- D** All of the above ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Following are signs which indicate improved reproductive health of the society

- (a) Better awareness about sex-related problem ✓
- (b) Better detection and cure of STDs ✓
- (c) Better postnatal care ✓
- (d) Increased number of couples with large ~~families~~ ^{small}

- A** (a) and (d) ✗
- B** (b), (c) and (d) ✗
- C** (a) and (b) ✗
- D** (a), (b) and (c) ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Natural methods work on the principle of avoiding chances of ovum and sperms meeting. **Periodic abstinence** is one such method in which the couples avoid or abstain from coitus from day 10 to 17 of the menstrual cycle when ovulation could be expected. As chances of fertilisation are very high during this period, it is called the fertile period. Therefore, by

abstaining from coitus during this period, conception could be prevented. **Withdrawal** or **coitus interruptus** is another method in which the male partner withdraws his penis from the vagina just before ejaculation so as to avoid insemination. **Lactational amenorrhea** (absence of menstruation) method is based on the fact that ovulation and therefore the cycle do not occur during the period of intense lactation following parturition. Therefore, as long as the mother breast-feeds the child fully, chances of conception are almost nil. However, this method has been reported to be effective only upto a maximum period of six months following parturition. As no medicines or devices are used in these methods, side effects are almost nil. Chances of failure, though, of this method are also high.



Figure 3.1(a) Condom for male

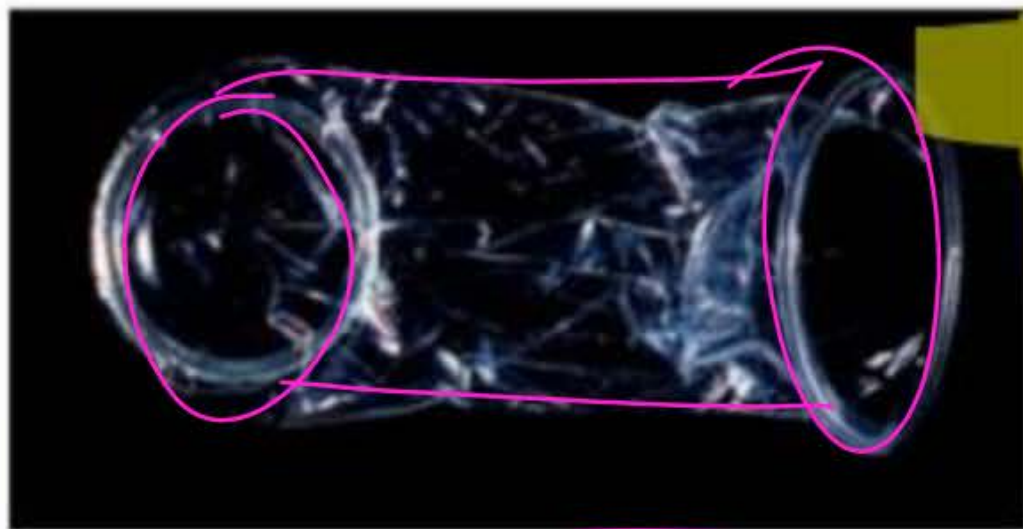


Figure 3.1(b) Condom for female

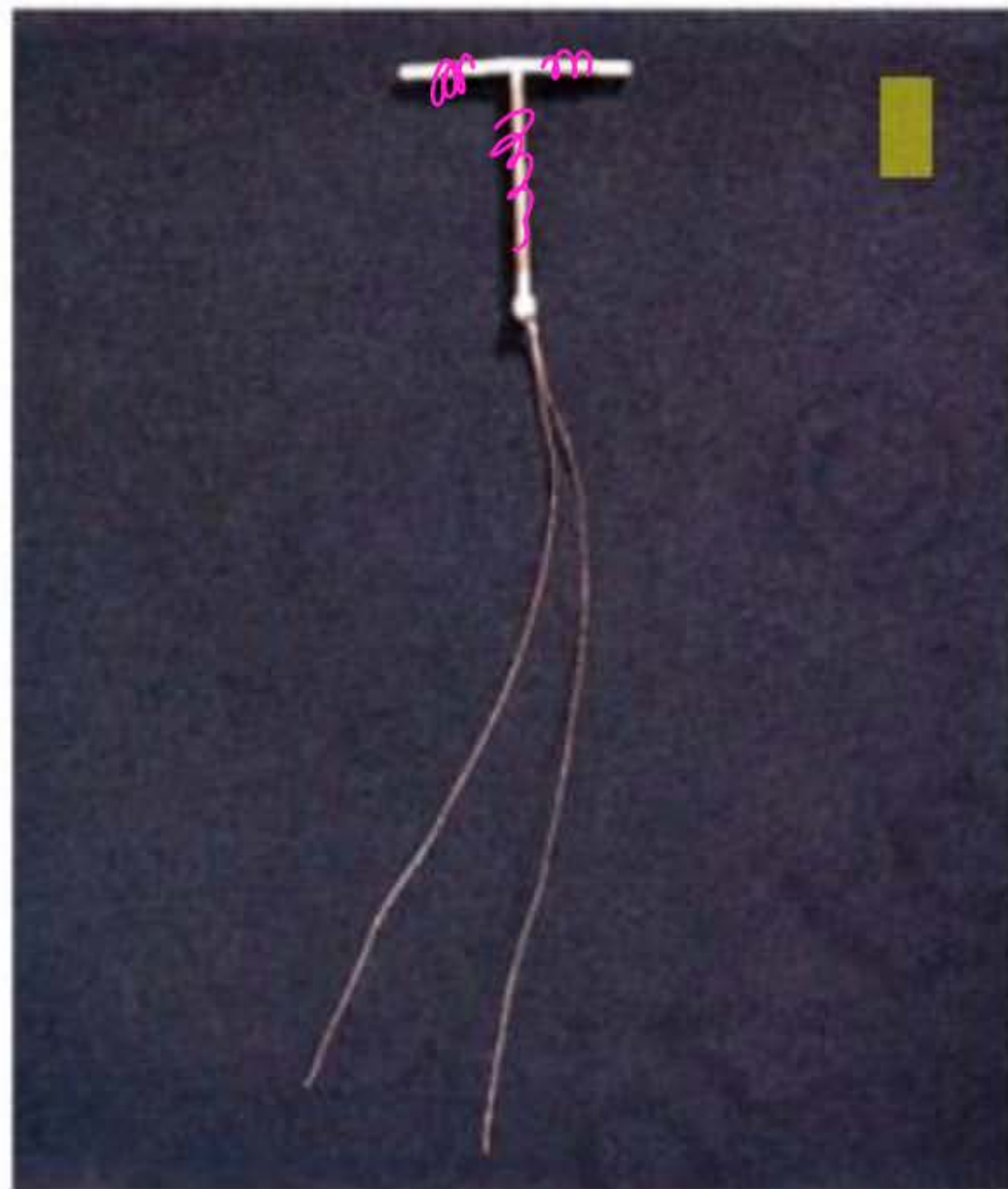


Figure 3.2. Copper T (CuT)

In **barrier** methods, ovum and sperms are prevented from physically meeting with the help of barriers. Such methods are available for both males and females. **Condoms** (Figure 3.1 a, b) are barriers made of thin rubber/latex sheath that are used to cover the penis in the male or vagina and cervix in the female, just before coitus so that the ejaculated semen would not enter into the female reproductive tract. This can prevent conception. 'Nirodh' is a popular brand of condom for the male. Use of condoms has increased in recent years due to its additional benefit of protecting the user from contracting STIs and AIDS. Both the male and the female condoms are disposable, can be self-inserted and thereby gives privacy to the user. **Diaphragms, cervical caps** and **vaults** are also barriers made of rubber that are inserted into the female reproductive tract to cover the cervix during coitus. They prevent conception by blocking the entry of sperms through the cervix. They are reusable. Spermicidal creams, jellies and foams are usually used alongwith these barriers to increase their contraceptive efficiency.

* Permanent / Surgical Contraception / Sterilisation

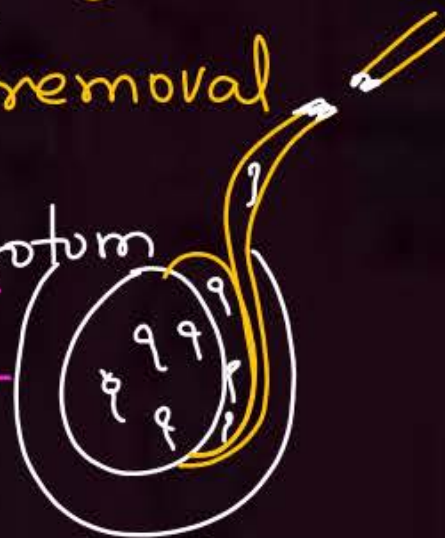
- Terminal method to prevent any more preg.
- Highly effective
- Poor reversibility
- Block Gamete transport





* VASECTOMY ♂

Vasa deferens Surgical removal

- Small Incision in Scrotum
- Vasa deferens tied & cut (Both sides) 
- Semen without Sperms
- Spermatogenesis ✓
- Sperms in Epididymis ✓
- Hormone functions Normal
Androgen
- Sperm transport blocked

* TUBECTOMY (♀)

- Small incision in lower abdomen
or through Vagina
- Small part of FT tied & cut (Both sides)



- Oogenesis Normal
- Menstrual Cycle Normal
- Hormonal function "
- Ovulation "
- Only Gamete transport blocked



* Emergency Contraception :- To prevent preg. due to
a) Rape b) Contraceptive failure c) Casual unprotected Coitus

* Only Progesterone pill } within * 72 hours of Unprotected Coitus
OR
E + P OCPs
OR
IUCD
eg: Unwanted-72 | I-Pill

Prevent / delay Ovulation Out of NCERT
↓
Prevent fertilisation & Conception



Immunity Booster
= Short Notes



* Ideal Contraceptive

[Prevent Unwanted Pregnancy]

- A - Available easily
- E - Effective
- I - no Interference with Sexual Act
- O - Nil/least Side effects
- U - User friendly
- R - Reversible
- C - Cheap

* SIDE-EFFECTS (CONTRACEPTION)

- Nausea
- Abdominal pain
- Breakthrough bleed
- Irregular menstruation
- Breast Cancer

TEMPORARY CONTRACEPTIVE METHODS

I NATURAL METHODS

- least Side-effect
- High failure Rate

Ia PERIODIC ABSTINANCE/RHYTHM/CALENDER

- Avoid Coitus Day 10-17 (Fertile period) of Menstrual Cycle, when Ovulation Expected.

WITHDRAWAL/COITUS INTERRUPTUS:

- Ib • Withdraw Penis from Vagina, just before Ejaculation
- to Avoid Insemination

LACTATIONAL AMENORRHOEA:

- Ic • Intense lactation, following parturition

↓
Prolactin hormone High levels

↓
Suppress Gonadotropins (FSH, LH)

↓
Anovulation and No Menstruation

- Breast-feeds child fully
- Effective upto max. 6 months, after parturition

II ARTIFICIAL METHODS

Barrier

Intra-Uterine Devices (IUD)

Oral Contraceptive Pills

Injectables

Implants



Immunity Booster
= Short Notes

II ARTIFICIAL TEMPORARY CONTRACEPTION



IIa

BARRIER METHOD

Self-inserted
User privacy

- Ova and Sperm prevented from physically meeting
- 1. Male CONDOMS
 - Thin rubber latex
 - Cover penis/Vagina Cervix, just before coitus
- NIRODH (♂ Condom)
 - Disposable
 - Protect from STIs, AIDS
- 2. Cervical Caps
 - Made of Rubber
 - Cover Cervix during coitus
- Vaults
- Diaphragms
 - Re-Usable, in Females
- 3. Spermicidal (Killing Sperm) Creams, jellies, foams used with above to Increase Contraceptive efficiency

IIb

IUDs

• Inserted in Uterus, through Vagina by
• Doctors & Nurses

NON-MEDICATED

- LIPPE'S LOOP
- Increase Phagocytosis of Sperm in uterus

COPPER-RELEASING

- CU-T, CU-7, MULTILOAD-375
- Suppress Sperm Motility and fertilising Capacity

HORMONE RELEASING

- PROGESTASERT
- LNG-20
- Cervix hostile to Sperm
- Makes Uterus Unsuitable for Implantation

NOTE

- IUDs Ideal Contraceptive to Delay pregnancy / Space children
- IUDs One of the most widely accepted Contraception in India

IIc

OCPs

IIa

INJECTABLES

IIe

IMPLANTS

- NOR-PLANT
- 6-silicon tubes
- Under-skin

- Mode of Action Similar to Pills
- Effective period longer



Immunity Booster
= Short Notes



ORAL CONTRACEPTIVE PILLS (TABLETS) (FEMALES)

STEROIDAL / HORMONAL PILLS

ONLY PROGESTOGEN
MINI-PILLS

PROGESTOGEN-ESTROGEN
COMBINATION

- Start within first 5 days of Menstrual Cycle

Taken daily for 21 days

Gap of 7 days (during which menstruation occurs)

Start next packet

- High Estrogen → Suppress FSH, LH
- Progesterone

Inhibit Ovulation

- Inhibit Implantation

- Alter quality of cervical mucus → Retard Sperm Entry

NON-STEROIDAL SAHELI

- developed by Central Drug Research Institute, Lucknow (CDRI)
- Non-hormonal
- Once-a-week pill
- High Contraceptive Value
- Very few Side-effects
- CENTCHROMANE / ORMILOXIFEN (ANTI-ESTROGEN)

Block Estrogen Receptors On Uterine Endometrium

Inhibit Implantation

Question



True for an ideal contraceptive

- (i) It should be user friendly ✓
- (ii) It should be easily available ✓
- (iii) It should be ineffective & reversible with least side effect ✓
- (iv) It should be effective & reversible with least side effect ✓
- (v) It should interfere with the sexual act of the user ✗

A (i), (ii) & (iv) ✓

B (i), (ii) & (iii) ✗

C (i), (ii), (iii), (iv) & (v) ✗

D (i), (ii), (iv) & (v) ✗

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Identify the true and false statements ✓

- (a) According to the 2011 census report, the population growth rate was still less than 2% per year ✓
- (b) Saheli is a non-steroidal contraceptive pill ✓
- (c) Family planning programme was initiated in 1971 ~~1951~~ after
- (d) Emergency IUDs should be implanted 72 hours before coitus ~~after~~

A ~~(a) and (b) are true; (c) and (d) are false~~

B (a) is true; ~~(b)~~, (c) and (d) are false

C (a) and (c) are true; ~~(b)~~ and (d) are false

D All statements are false

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question



Which of the following statement is not correct ^{false} about oral contraceptive pills?

- A** They have to be taken daily for a period of 21 days, starting preferably within the first five days of menstrual cycle ✓
- B** They contain small doses of progestogen-estrogen combination ✓
- C** They inhibit ovulation and implantation ✓
- D** ~~ovum and sperms are prevented from physically meeting with the help of barriers~~ ^{Barrier} ✗

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question

Which of the following is hormone releasing IUDs?

A ~~LNG-20~~

B Cu-7 X Cu

C Lippes loop X Non-med

D Multiload 375 \ Cu

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Another effective and popular method is the use of **Intra Uterine Devices (IUDs)**. These devices are inserted by doctors or expert nurses in the uterus through vagina. These Intra Uterine Devices are presently available as the non-medicated IUDs (e.g., Lippes loop), copper releasing IUDs (CuT, Cu7, Multiload 375) and the hormone releasing IUDs (Progestasert, LNG-20) (Figure 3.2). IUDs increase phagocytosis of sperms within the uterus and the Cu ions released suppress sperm motility and the fertilising capacity of sperms. The hormone releasing IUDs, in addition,

AR //

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

AR

make the uterus unsuitable for implantation and the cervix hostile to the sperms. IUDs are ideal contraceptives for the females who want to delay pregnancy and/or space children. It is one of most widely accepted methods of contraception in India.

Oral administration of small doses of either progestogens or progestogen-estrogen combinations is another contraceptive method used by the females. They are used in the form of tablets and hence are popularly called the **pills**. Pills have to be taken daily for a period of 21 days starting preferably within the first five days of menstrual cycle. After a gap of 7 days (during which menstruation

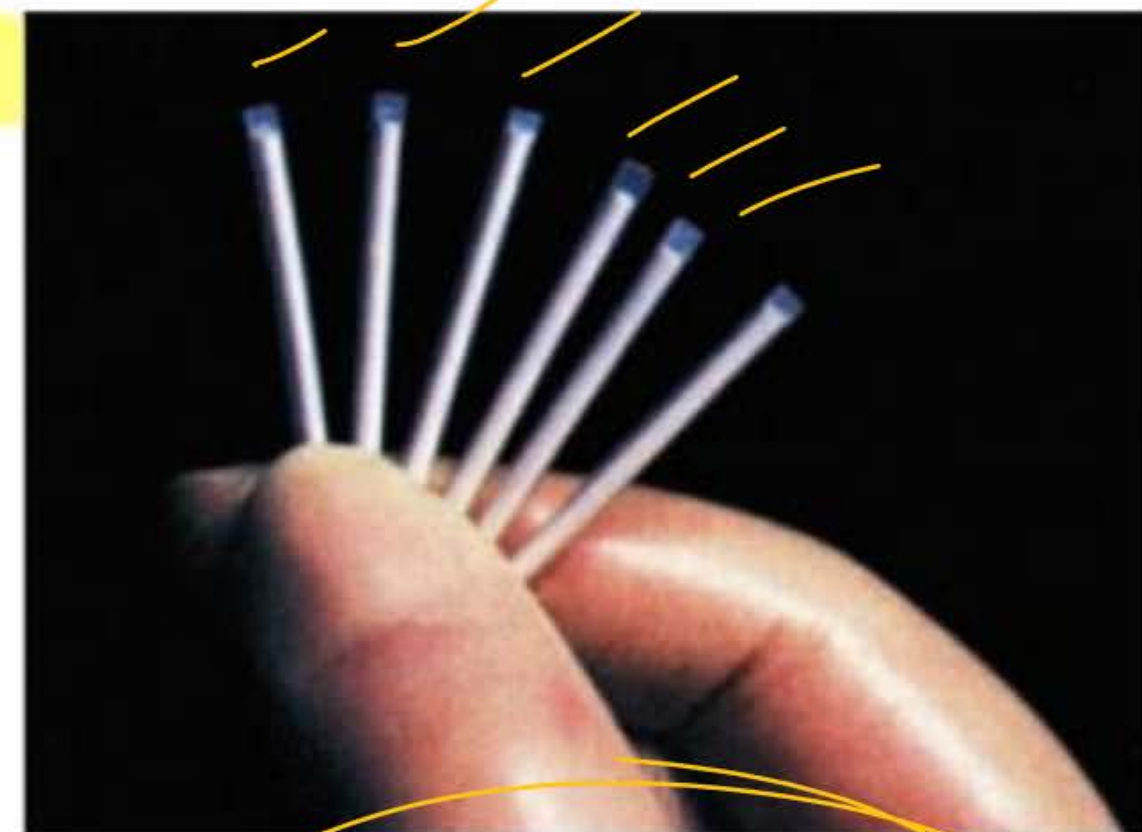


Figure 3.3 Implants

occurs) it has to be repeated in the same pattern till the female desires to prevent conception. They inhibit ovulation and implantation as well as alter the quality of cervical mucus to prevent/retard entry of sperms. Pills are very effective with lesser side effects and are well accepted by the females. *Saheli*—the new oral contraceptive for the females contains a non-steroidal preparation. It is a 'once a week' pill with very few side effects and high contraceptive value.

Progestogens alone or in combination with estrogen can also be used by females as injections or implants under the skin (Figure 3.3). Their mode of action is similar to that of pills and their effective periods are much longer. Administration of progestogens or progestogen-estrogen combinations or IUDs within 72 hours of coitus have been found to be very effective as emergency contraceptives as they could be used to avoid possible pregnancy due to rape or casual unprotected intercourse.

Surgical methods, also called **sterilisation**, are generally advised for the male/female partner as a terminal method to prevent any more

AR

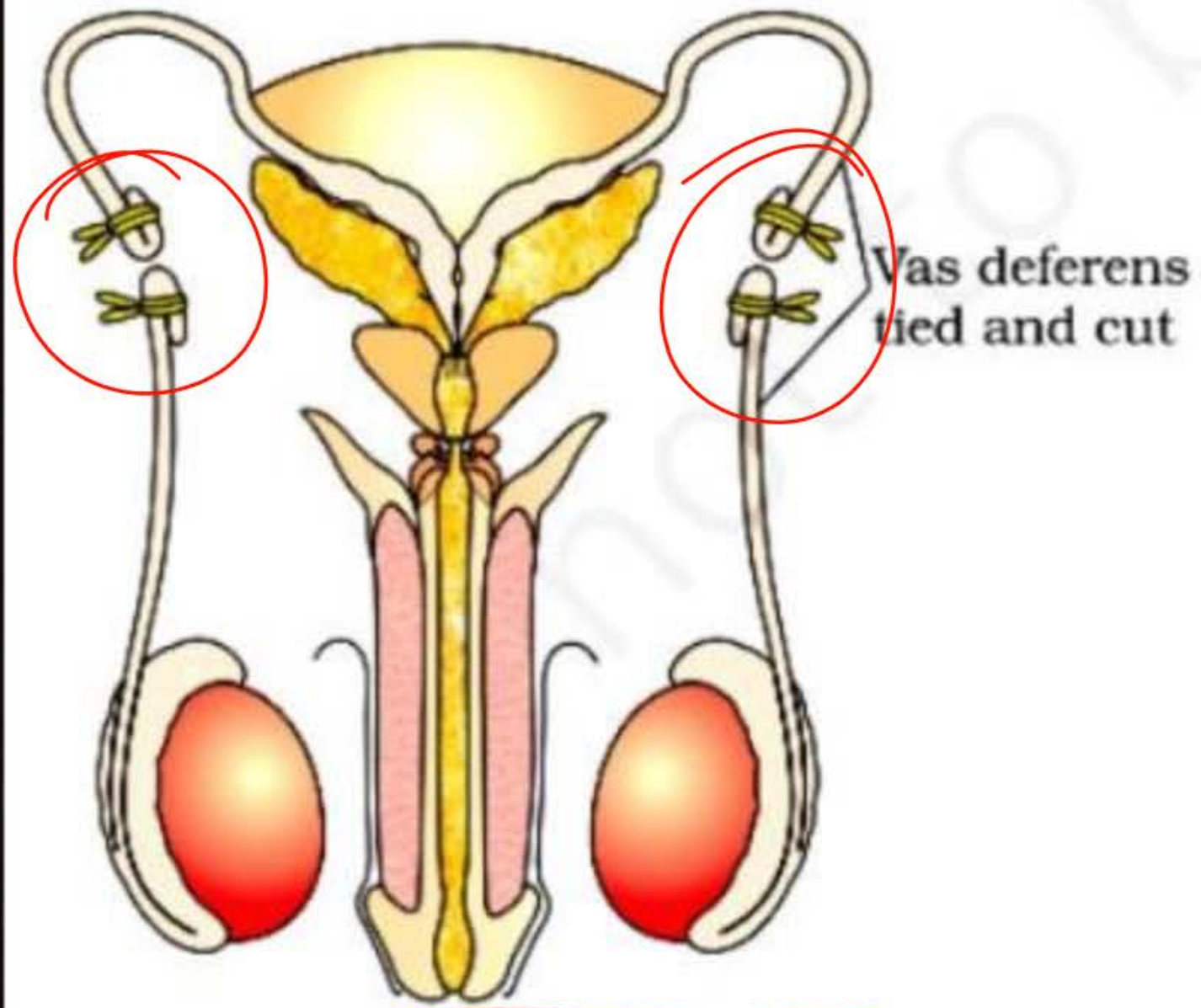


Figure 3.4 (a) Vasectomy

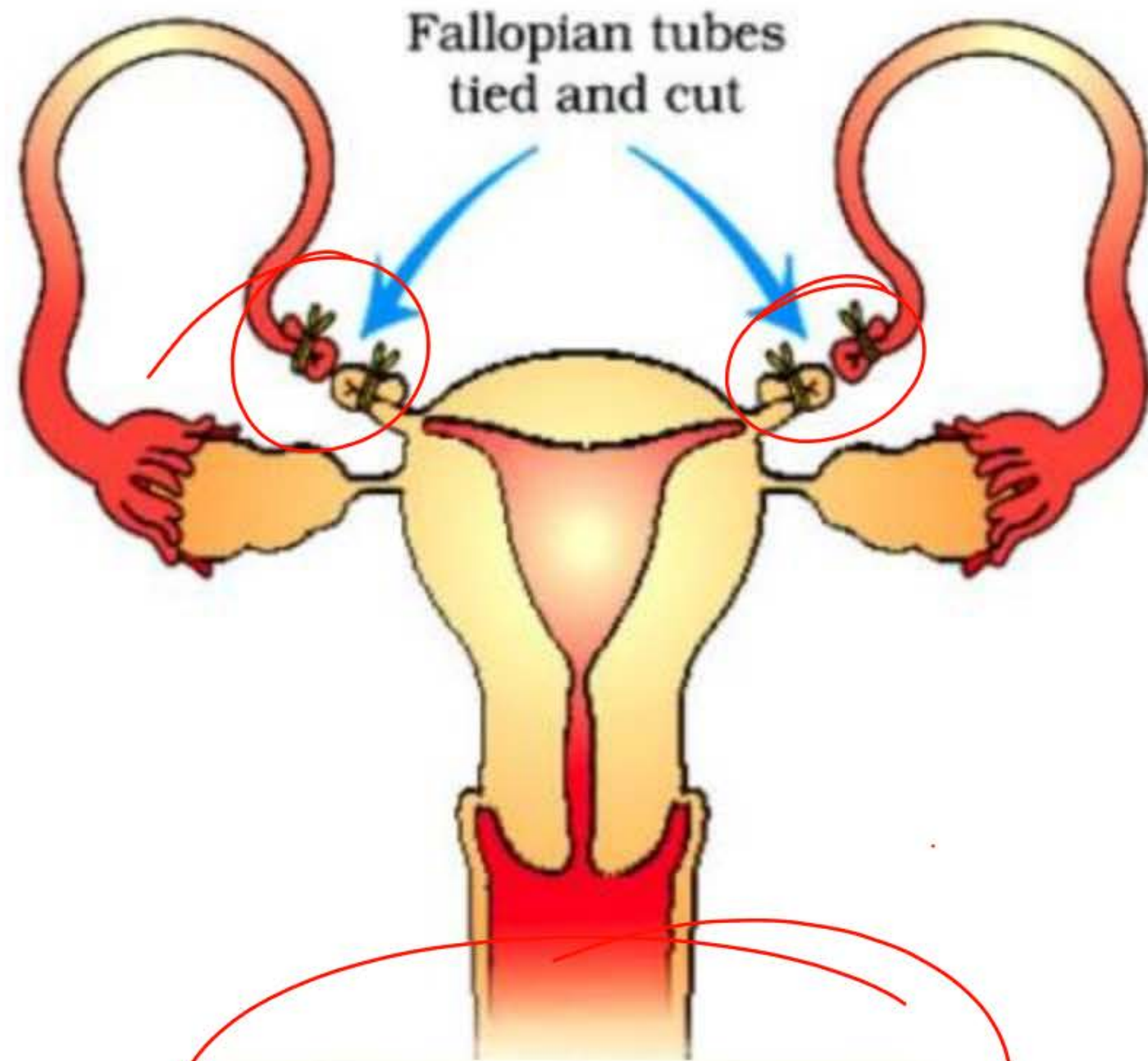


Figure 3.4 (b) Tubectomy

FOR NOTES & DPP CHECK DESCRIPTION

The Medical Termination of Pregnancy (Amendment) Act, 2017

was enacted by the government of India with the intention of reducing the incidence of illegal abortion and consequent maternal mortality and morbidity.

According to this Act, a pregnancy may be terminated on certain considered grounds

pregnancies. Surgical intervention blocks gamete transport and thereby prevent conception. Sterilisation procedure in the male is called 'vasectomy' and that in the female, 'tubectomy'. In vasectomy, a small part of the vas deferens is removed or tied up through a small incision on the scrotum (Figure 3.4a) whereas in tubectomy, a small part of the fallopian tube is removed (Figure 3.4b) or tied up through a small incision in the abdomen or through vagina. These techniques are highly effective but their reversibility is very poor.

It needs to be emphasised that the selection of a suitable contraceptive method and its use should always be undertaken in consultation with qualified medical professionals. One must also remember that

* MTP = Medical Termination of Pregnancy
 — Induced Abortion
 (Voluntary/deliberately)
 — 45 - 50 million MTPs / yr | all over world
 (1/5th of total Conceptions)

within the first 12 weeks of pregnancy on the opinion of one registered medical practitioner. If the pregnancy has lasted more than 12 weeks, but fewer than 24 weeks, two registered medical practitioners must be of the opinion, formed in good faith, that the required ground exist.

contraceptives are not regular requirements for the maintenance of reproductive health. In fact, they are practiced against a natural reproductive event, i.e., conception/pregnancy. One is forced to use these methods either to prevent pregnancy or to delay or space pregnancy due to personal reasons. No doubt, the widespread use of these methods have a significant role in checking uncontrolled growth of population. However, their possible ill-effects like nausea, abdominal pain, breakthrough bleeding, irregular menstrual bleeding or even breast cancer, though not very significant, should not be totally ignored.

The grounds for such termination of pregnancies are:

- (i) The continuation of the pregnancy would involve a risk to the life of the pregnant woman or of grave injury physical or mental health; or
- (ii) There is a substantial risk that if the child were born, it would suffer from such physical or mental abnormalities as to be seriously handicapped.

3.3 MEDICAL TERMINATION OF PREGNANCY (MTP)

Intentional or voluntary termination of pregnancy before full term is called **medical termination of pregnancy** (MTP) or induced abortion. Nearly 45 to 50 million MTPs are performed in a year all over the world which accounts to 1/5th of the total number of conceived pregnancies in a year. Whether to accept / legalise MTP or not is being debated upon in many countries due to emotional, ethical, religious and social issues involved in it. Government of India legalised MTP in 1971 with some strict conditions to avoid its misuse. Such restrictions are all the more important to check indiscriminate and illegal female foeticides which are reported to be high in India.

Why MTP? Obviously the answer is—to get rid of unwanted pregnancies either due to casual unprotected intercourse or failure of the contraceptive used during coitus or rapes. MTPs are also essential in certain cases where continuation of the pregnancy could be harmful or even fatal either to the mother or to the foetus or both.

AR

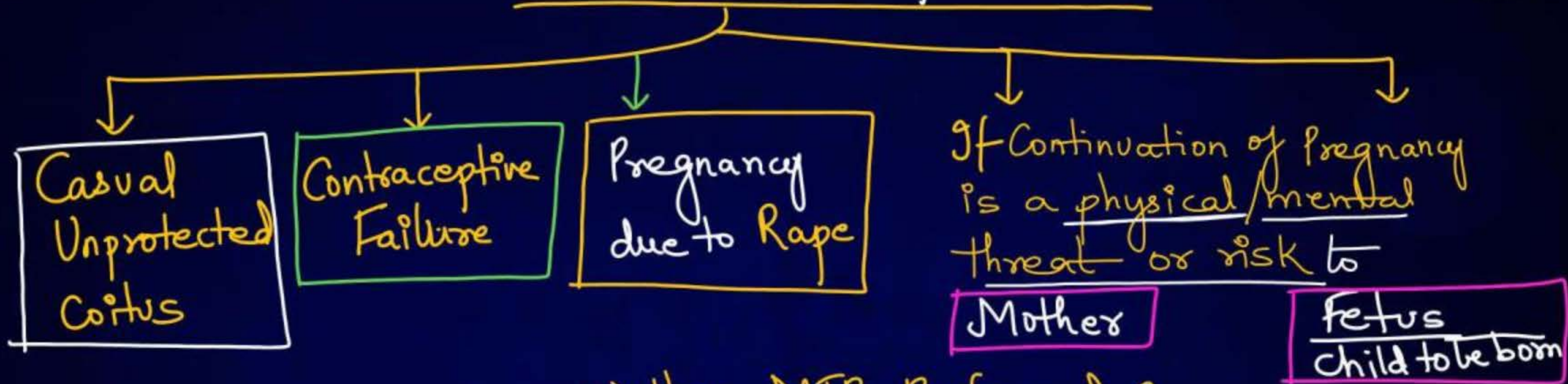
AR

MTPs are considered relatively safe during the first trimester, i.e., upto 12 weeks of pregnancy. Second trimester abortions are much more riskier. One disturbing trend observed is that a majority of the MTPs are performed illegally by unqualified quacks which are not only unsafe but could be fatal too. Another dangerous trend is the misuse of amniocentesis to determine the sex of the unborn child. Frequently, if the foetus is found to be female, it is followed by MTP- this is totally against what is legal.

AR

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

• Ground Basis for MTP



• When MTP Performed?





Immunity Booster = Short Notes

PERMANENT CONTRACEPTION

STERILISATION

SURGICAL METHOD

BLOCK GAMETE TRANSPORT

HIGHLY EFFECTIVE

POOR REVERSIBILITY

• VASECTOMY

Semen
Without
Sperms

→ In Males

→ Small Incision
on Scrotum

→ Vasa deferens
cut and tied

• TUBECTOMY

→ In Females

→ Incision in Abdomen
or through Vagina

→ Fallopian tubes
cut and tied

- Legalised in India, April 1971
- 1/5 of total Conception
- 45-50 million/Year/World

MTP Medical Termination of Pregnancy

- Safest upto 12 weeks (First Trimester): Consent of One RMP
- If preg. >12 wks and <24 weeks: Consent of Two RMPs
- Not allowed after 24 weeks

- Pregnancy fatal to mother or foetus or Both
- Pregnancy due to Rape
- Unprotected Coitus
- Contraceptive Failure

EMERGENCY CONTRACEPTION

- Pregnancy due to Rape
- Casual Unprotected Coitus
- Progestogen alone WITHIN
Estrogen-Progestogen 72 hrs
IUD of Coitus
- Unwanted-72/I-Pill

STI

Sexually Transmitted
Infections

- Reproductive Tract Infection (RTI)
- Venereal disease (VD)
- 15-24 years most vulnerable

EARLY SYMPTOMS

- Swelling
 - Itching
 - Slight pain
 - Fluid discharge
- Genital region

LATE COMPLICATIONS

- Pelvic Inflammatory Disease (PID)
- Infertility
- Ectopic pregnancies
- Abortion, Still birth
- Cancer of Reproductive tract

• All STIs Curable

EXCEPT

- Hepatitis-B
- HIV
- Genital Herpes



Question



Match the following figures (given as A, B, C, D and E) with their respective names given below as (i), (ii), (iii), (iv) and (v)

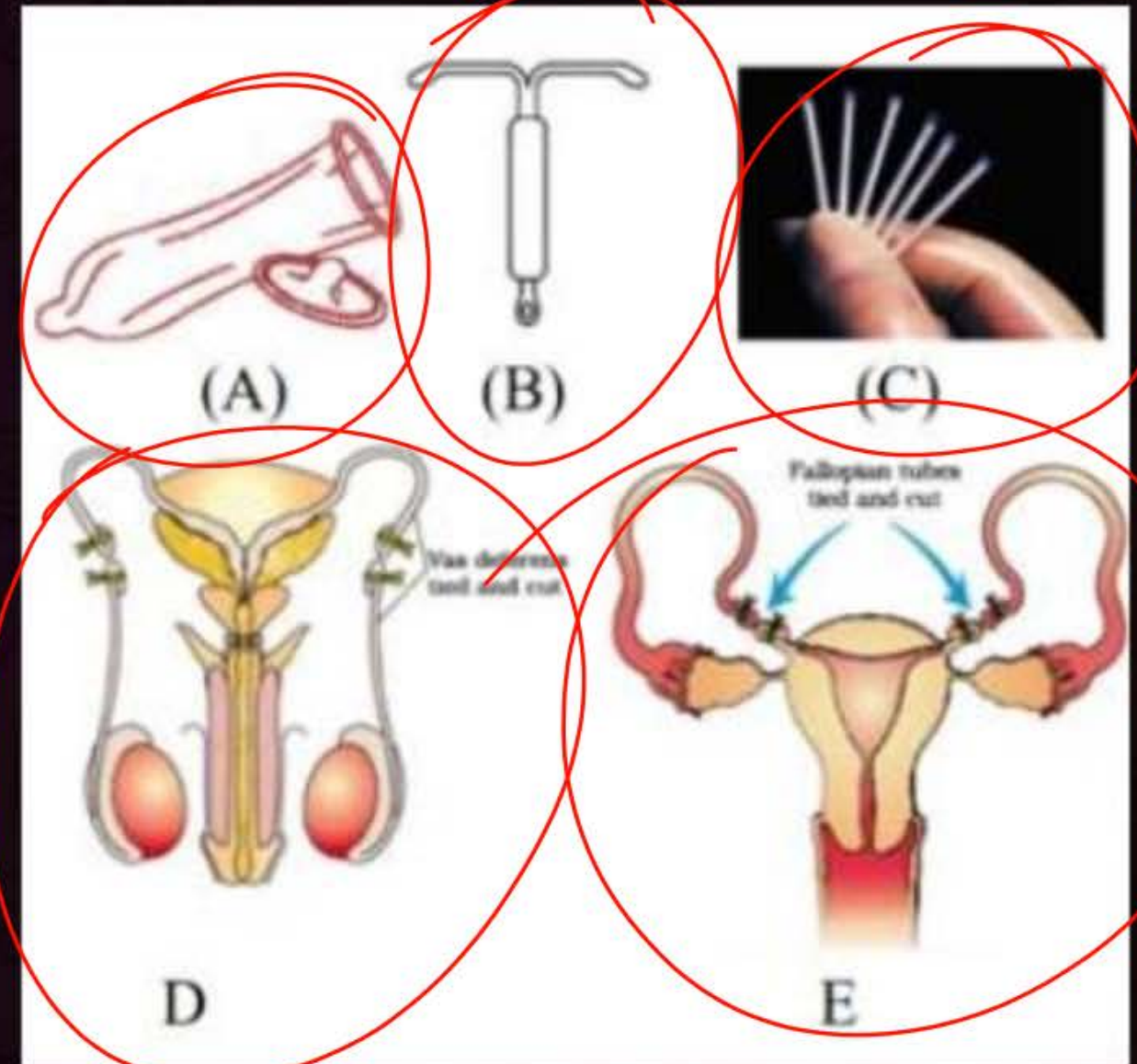
- | | |
|----------------|----------------|
| (i) Tubectomy | (ii) Vasectomy |
| (iii) Implants | (iv) Condoms |
| (v) Copper-T | |

A A- (iv), B- (v), C- (iii), D- (ii), E- (i)

B A- (iv), B- (iii), 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)

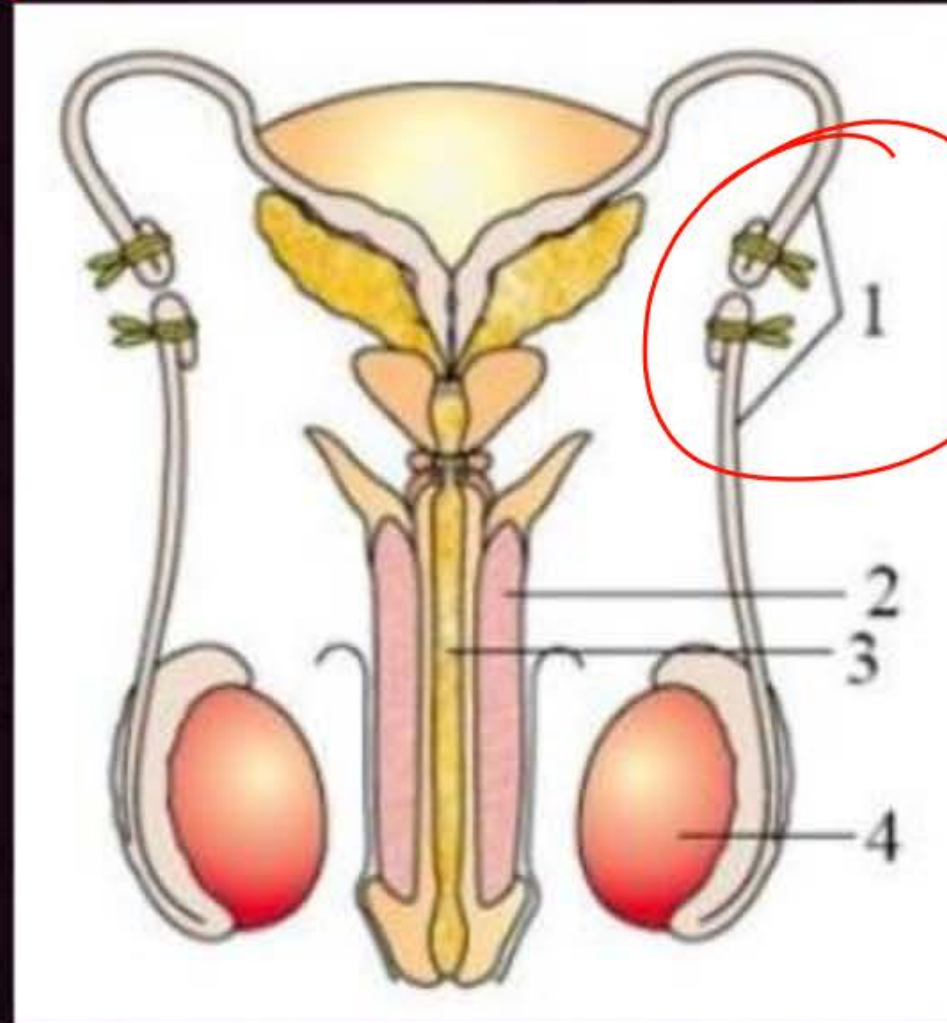


————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question

The given figure is marked by number (1, 2, 3, 4).
Name the part which is cut and tied to block gamete transport.

- A** ~~Vas deferens~~
- B** Epididymis
- C** Ejaculatory duct
- D** Prostate gland



————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Match Column-I with Column-II and select the correct option

Where, B = Birth rate; D = Death Rate; E = Emigration; I = Immigration

- A** ~~(a) – (ii); (b) – (i); (c) – (iii)~~
- B** ~~(a) – (ii); (b) – (iv); (c) – (iii)~~
- C** ~~(a) – (iii); (b) – (iv); (c) – (i)~~
- D** ~~(a) – (i); (b) – (ii); (c) – (iv)~~

	Column-I		Column-II
(a)	Population is stable	(i)	$B + I > D + E$
(b)	Population is increasing	(ii)	$B + I = D + E$
(c)	Population is decreasing	(iii)	$B + I < D + E$
		(iv)	$B + E > D + I$

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question



Consider the following statements about male sterilization

- (a) Male sterilisation is also known as a vasectomy ✓
- (b) The doctor or surgeon will make a small incision in the vas deferens and cut the tube and the cut ends are then tied off ✓
- (c) It causes weakness in males ✗

- A** All are correct ✗
- B** (b) and (c) are correct ✗
- C** (a) and (b) are correct ✓
- D** All are incorrect ✗

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question



Surgical method for terminal contraception works on the following grounds

- A** Block gamete transport
- B** Block gamete generation
- C** Alter biochemical nature of gamete
- D** Gamete destruction permanently

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Following statements are given regarding MTP.

Choose the correct options given below

- (i) MTPs are generally advised during first trimester ✓
- (ii) MTPs are used as a contraceptive method ✗
- (iii) 100 million MTPs are performed in a year all over the world ✗
- (iv) MTPs require the assistance of qualified medical personnel ✓

A (i) and (iii) ✗

B (ii) and (iii) ✗

C (i) and (iv) ✓

D (i) and (ii) ✗

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question



Which of the following statement is incorrect?

- A** The national family planning program was launched in India as early as 1952 1951
X
- B** MTP is considered relatively safe up to 12 weeks of pregnancy ✓
- C** Contraceptive methods are commonly use to prevent unwanted pregnancies ✓
- D** In India, Nirodh is popularly marketed condom made of latex ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Which of the following groups of contraceptives are included under barrier methods?

- A** Condom, ~~Vaults~~, ~~IUDs~~, ~~Cervical caps~~
- B** ~~IUDs~~, ~~Diaphragm~~, ~~Abstinence~~, ~~Injections~~
- C** ~~Condom~~, ~~Diaphragm~~, ~~Cervical caps~~, ~~Vaults~~
- D** ~~Surgical methods~~, ~~Oral contraceptives~~, ~~Cervical caps~~, ~~vaults~~

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Such practices should be avoided because these are dangerous both for the young mother and the foetus. Effective counselling on the need to avoid unprotected coitus and the risk factors involved in illegal abortions as well as providing more health care facilities could reverse the mentioned unhealthy trend.

3.4 SEXUALLY TRANSMITTED INFECTIONS (STIs)

Infections or diseases which are transmitted through sexual intercourse are collectively called sexually transmitted infections (STI) or venereal diseases (VD) or reproductive tract infections (RTI). Gonorrhoea, syphilis, genital herpes, chlamydiasis, genital warts, trichomoniasis, hepatitis-B and of course, the most discussed infection in the recent years, HIV leading to AIDS are some of the common STIs. Among these, HIV infection is most dangerous and is discussed in detail in Chapter 7.

★ AR

✓ Imp.
Out of NCERT
PYQ

DISEASE (STI)	PATHOGEN
1. <u>Chlamydiasis</u> 2. <u>GONORRHOEA</u> 3. <u>SYPHILIS</u>	<div> <ul style="list-style-type: none"> • Chlamydia trachomatis • Neisseria gonorrhoeae • Treponema pallidum </div> <div>BACTERIA</div>
<div> <ul style="list-style-type: none"> • 4. <u>AIDS</u> • 5. <u>Hepatitis - B</u> • 6. <u>Genital Herpes</u> • 7. <u>Genital Warts</u> </div>	<div> <ul style="list-style-type: none"> • Human Immunodeficiency Virus (HIV) • Hepatitis - B Virus (HBV) • Herpes Simplex Virus (HSV) • Human Papilloma Virus (HPV) </div>
8. <u>TRICHOMONIASIS</u>	<ul style="list-style-type: none"> • Trichomonas vaginalis (PROTOZOAL)

} Viral



Symptoms of STIs

* Early

1. Itching
2. Swelling
3. mild pain
4. Fluid discharge

Genital Region

* All STIs completely curable, if
except AIDS, Hep-B, Genital Herpes
Not completely curable

(Severe)

* Late Complications

1. Pelvic Inflammatory disease (PID)

2. Infertility

3. Ectopic pregnancy

4. Abortion

5. Still Birth

6. Reproductive Cancer
detected & t/t early

* AIDS
Hep-B



1) STI, also transmitted

2) From Mother to foetus

3) Blood transfusion

4) Sharing surgical instruments/needle
from infected person

[Do not spread through Kissing]

* Prevention of STIs :-

- 1) Avoid Sex with Unknown/Multiple partners
- 2) Always try to use Condoms during coitus
- 3) In case of doubt, consult qualified doctors for early detection and complete treatment

Some of these infections like hepatitis-B and HIV can also be transmitted by sharing of injection needles, surgical instruments, etc., with infected persons, transfusion of blood, or from an infected mother to the foetus too. Except for hepatitis-B, genital herpes and HIV infections, other diseases are completely curable if detected early and treated properly. Early symptoms of most of these are minor and include itching, fluid discharge, slight pain, swellings, etc., in the genital region. Infected females may often be asymptomatic and hence, may remain undetected for long. Absence or less significant symptoms in the early stages of infection and the social stigma attached to the STIs, deter the infected persons from going for timely detection and proper treatment. This could lead to complications later, which include pelvic inflammatory diseases (PID), abortions, still births, ectopic pregnancies, infertility or even cancer of the reproductive tract. STIs are a major threat to a healthy society.

AR

Therefore, prevention or early detection and cure of these diseases are given prime consideration under the reproductive health-care programmes. Though all persons are vulnerable to these infections, their incidences are reported to be very high among persons in the age group of 15-24 years – the age group to which you also belong. There is no reason to panic because prevention is possible. One could be free of these infections by following the simple principles given below:

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

3.5 INFERTILITY

A discussion on reproductive health is incomplete without a mention of infertility. A large number of couples all over the world including India are infertile, i.e., they are unable to produce children inspite of unprotected

Trick for STD :-

Bipasha is



Bacterial

Charming,



Chancroid

(out of NCERT)
• *Haemophilus ducrei*

Confident,



Chlamydiasis

Gorgeous &



Gonorrhoea

Successful

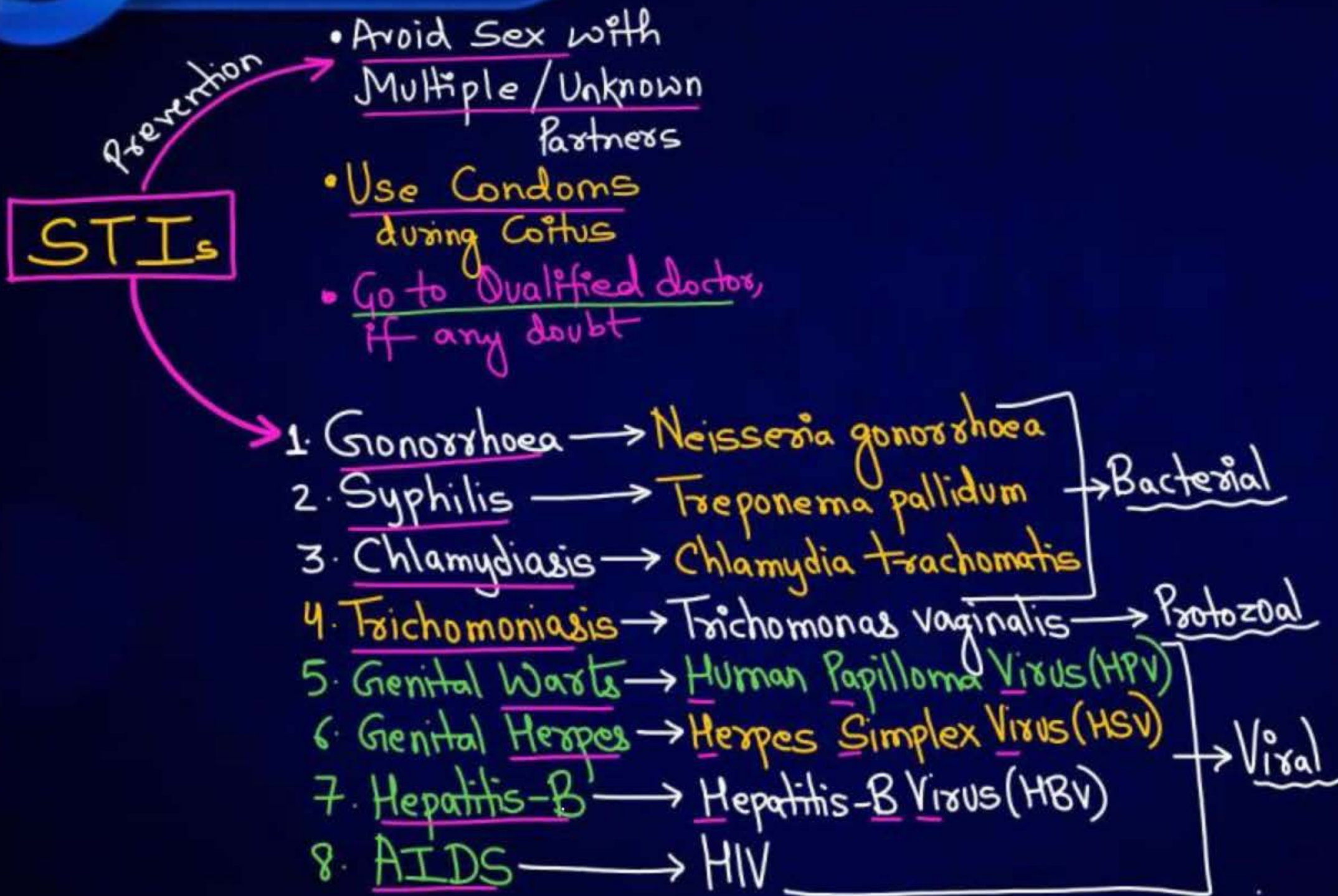


Syphilis





Immunity Booster = Short Notes



Question

Early symptoms of most STDs are ✓

- | | |
|---------------------|------------------------|
| (i) Itching ✓ | (ii) Fluid discharge ✓ |
| (iii) Slight pain ✓ | (iv) Swelling ✓ |

- A** (i), (ii) and (iv)
- B** (i), (ii) and (iii)
- C** (i), (iii) and (iv)
- D** ✓ ~~(i), (ii), (iii), (iv)~~

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Match the following columns:

- A** ~~(a)-1, (b)-2, (c)-4, (d)-3~~
- B** ~~(a)-2, (b)-3, (c)-4, (d)-1~~
- C** ~~(a)-4, (b)-2, (c)-3, (d)-1~~
- D** ~~(a)-4, (b)-3, (c)-2, (d)-1~~

Column-I		Column-II	
(a)	Pills	(1)	Intra uterine device
(b)	Condoms	(2)	Prevent ovulation
(c)	Vasectomy	(3)	Prevent sperm from reaching the cervix
(d)	Cu-T	(4)	Sperm contain no ^{Semen} sperm

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question

Diaphragm, cervical caps and vaults are

- A** Non usable ☒
- B** For female use only ☒
- C** For male use only ☒
- D** None of the above ☒

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question



Read the following statement and choose the correct options.

- (i) Saheli- The new oral contraceptive for the female contains a steroidal preparation. ~~X~~
- (ii) STIs are a major threat to a healthy society ✓
- (iii) IUI- Semen collected either from the husband or a healthy donor is artificially introduced either into the vagina or into the uterus ✓
- (iv) Sterilisation procedure in the female is called tubectomy ✓

A (ii) only is correct ~~X~~

B (ii), (iii) and (iv) are correct ✓

C (iii) and (iv) are correct ~~X~~

D (i) and (iv) are correct ~~X~~

———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question



Which of the following statement are correct?

- (i) Purpose of tubectomy is to prevent egg formation ~~X~~
- (ii) The most important component of the oral contraceptive pills is progesterone ✓
- (iii) Contraceptive oral pills help in birth control by preventing ovulation ✓
- (iv) Sterilisation method of contraception is totally ~~X~~ reversible
- (v) In India, there is rapid decline in infant mortality rate and maternal mortality rate ✓

~~A~~ (i), (ii) and (iii)

~~B~~ (ii), (iii) and (v)

~~C~~ (iii), (iv) and (v)

~~D~~ (ii), (iv) and (v)

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Consider the statements given below regarding contraception and answer as directed there after

- (i) Medical termination of pregnancy (MTP) during first trimester is generally safe ✓
 - (ii) Generally, chances of conception are nil until mother breast-feeds the infant up to two years ~~6 months~~
 - (iii) Intrauterine devices like copper-T are effective contraceptives ✓
 - (iv) Contraception pills may be taken up to one week after coitus to prevent conception
- Which two of the above statements are correct? 72 hrs

A (i), (iii)

B (i), (ii)

C (ii), (iii)

D (iii), (iv)

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question



Select the option including all sexually transmitted diseases.

- A** ✓ ✓ ✓ ✓
Gonorrhoea, Syphilis, Genital herpes
- B** ✓ ✗ ✓
Gonorrhoea, Malaria, Genital herpes
- C** ✓ ✗ ✗
AIDS, Malaria, Filaria
- D** ✗ ✓ ✓
Cancer, AIDS, Syphilis

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

* INFERTILITY :- Inability / Unable to Conceive (get pregnant)
Even after 2 years of Unprotected Sexual co-habitation

* Causes of Infertility :-

- Physics → Physical
- Chemistry → Psychological
- Is → Congenital disease
(since birth)
- Is → Immunological
- Dangerous → Drugs

* In India, Often the female is blamed for couple being childless, but, more often than not, problem lies in ♂ partner

* Infertility Clinics : Special health-care units for diagnosis and corrective treatment of infertility

* Assisted Reproductive Technologies (ART) :-
Special Techniques to help the couple to have children

- * ART →
- Extreme precision handling by
 - Expert professionals
 - Expensive instrumentation
 - Very few Centres in India
 - Not affordable by many couples

* AI = Artificial Insemination

- ♂ partner is unable to inseminate ♀ partner or have very low sperm count in Ejaculate
- Semen from husband or healthy donor, is injected ^{artificially} into Vagina or Uterus of ♀ partner
- Fertilisation Inside Body (In-Vivo) _{of ♀}

= Intra-Uterine
Insemination
(IUI)

* Gamete Intra - Fallopian Transfer (GIFT)

- Transfer of ♀ gamete/ovum from ♀ donor into Fallopian tube of another woman, who

* Cannot produce Ova, But can provide suitable environment * for fertilisation and
(FT Normal)

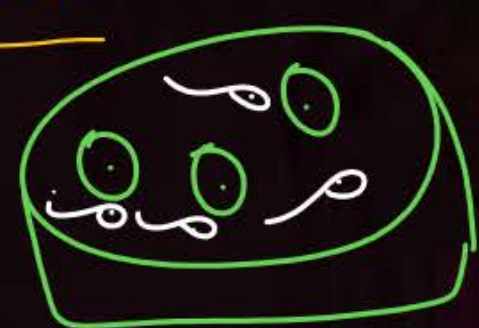
* further development
(Uterus Normal)

- Fertilisation Inside body
(In-Vivo)

* In-Vitro Fertilisation — Embryo Transfer (ET)

(Fertilisation Outside Body in lab)

- Ova collected from Wife / female donor
 - Semen " " husband / ♂ donor
- are induced to form a Zygote in lab (outside body)
 in simulated conditions
 (Similar conditions as inside body)
- commonly K/a "Test-tube programme"





- Now, IVF is followed by Embryo-transfer (ET)

+ 2 types

ZYGOTE or Early Embryo
upto 8-blastomeres

OR

Embryos with
>8 blastomeres

Transfer into Fallopian tube

Called Zygote Intra-fallopian Transfer
(or early emb. 8-celled) ZIFT

Transfer into Uterus

Called "Intra-Uterine
Transfer"
(IUT)



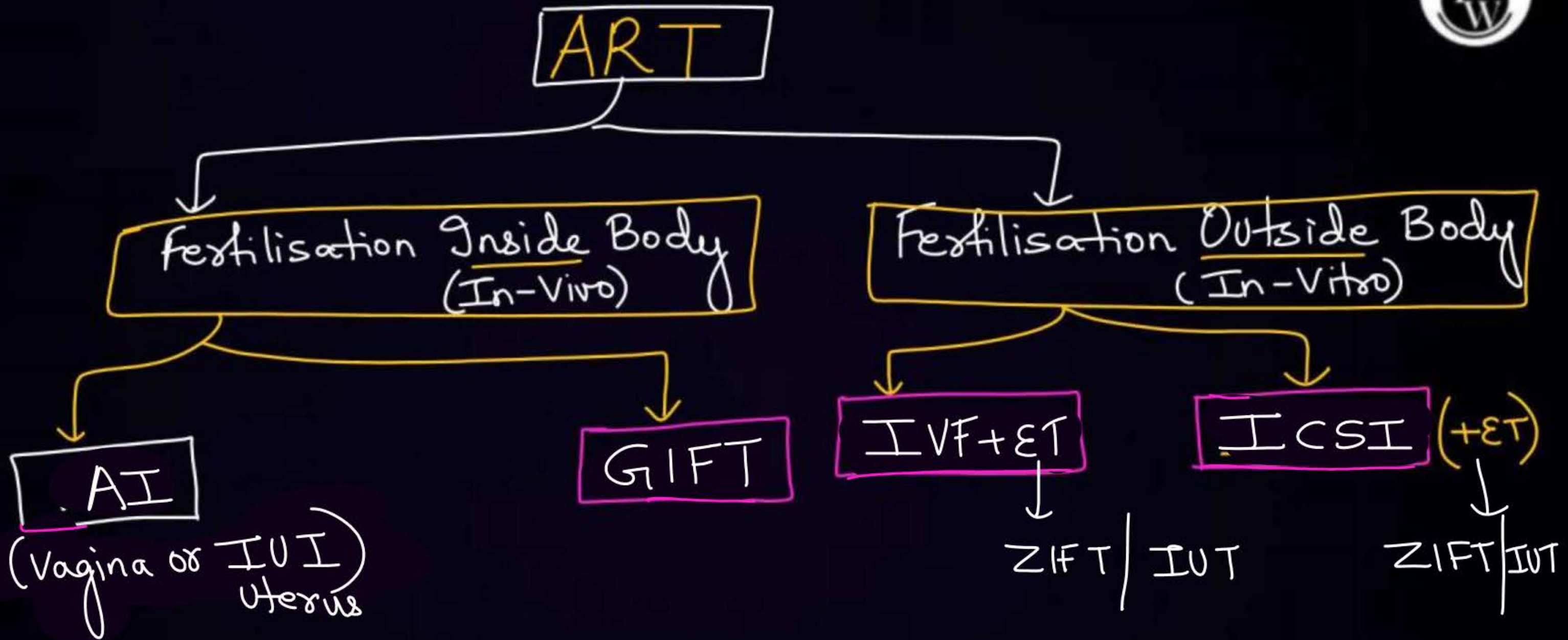
*

ICSI = Intra-Cytoplasmic Sperm Injection

- Sperm is Directly injected into Cytoplasm of Ovum
- Fertilisation Outside body, followed

by ET $\begin{cases} \xrightarrow{\text{In-Vitro}} \text{ZIFT or IUT} \\ \searrow \end{cases}$







Immunity Booster
= Short Notes



- Embryo formed in lab
- In-vitro Fertilisation

• Sperm directly injected into Ovum
Intra-Cytoplasmic Sperm Injection (ICSI)

1. Physical
2. Congenital disease
3. Drugs
4. Immunological
5. Psychological

CAUSES

• **ZIFT** = Zygote Intra-fallopian Transfer

• **IUT** = Intra-Uterine Transfer

• Infertility Clinics

• **ART** = Assisted Reproductive Technologies

- Specialised professionals
- Expensive instrumentation
- Very few centres in India

ARTIFICIAL INSEMINATION (AI)

- ♂ Unable to inseminate ♀ Partner OR Very low Sperm Count
- Semen from husband/donor into Vagina or Uterus of ♀

- Fertilisation Inside body

Intra-Ut. Insemin.
IUI

INFERTILITY

Unable to Conceive Even After 2 yrs of Unprotected Sexual Co-habitation

Gamete Intra-Fallopian Transfer (GIFT)

- Transfer of Ovum from donor into Fallopian tube
- FT & Uterus Normal
- Fertilisation Inside Body

> 8-celled Embryo
↓
into Uterus

ZIFT

Zygote or < 8-celled Embryo
↓

Into FT

IUT

(IVF-ET)
In-vitro-fertilisation & Embryo-Transfer

Zygote form. Outside body in lab
↓

TEST-TUBE BABY

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. Specialised health care units (infertility clinics, etc.) could help in diagnosis and corrective treatment of some of these disorders and enable these couples to have children. However, where such corrections are not possible, the couples could be assisted to have children through certain special techniques commonly known as **assisted reproductive technologies** (ART).

In vitro fertilisation (IVF—fertilisation outside the body in almost similar conditions as that in the body) followed by **embryo transfer** (ET) is one of such methods. In this method, popularly known as **test tube baby** programme, ova from the wife/donor (female) and sperms from the husband/donor (male) are collected and are induced to form zygote under simulated conditions in the laboratory. The zygote or early embryos (with upto 8 blastomeres) could then be transferred into the fallopian tube (ZIFT—**zygote intra fallopian transfer**) and embryos with more than

8 blastomeres, into the uterus (IUT – **intra uterine transfer**), to complete its further development. Embryos formed by **in-vivo fertilisation** (fusion of gametes within the female) also could be used for such transfer to assist those females who cannot conceive.

Transfer of an ovum collected from a donor into the fallopian tube (GIFT – **gamete intra fallopian transfer**) of another female who cannot produce one, but can provide suitable environment for fertilisation and further development is another method attempted. **Intra cytoplasmic sperm injection** (ICSI) is another specialised procedure to form an embryo in the laboratory in which a sperm is directly injected into the ovum. Infertility cases either due to inability of the male partner to inseminate the female or due to very low sperm counts in the ejaculates, could be corrected by **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.

Though options are many, all these techniques require extremely high precision handling by specialised professionals and expensive instrumentation. Therefore, these facilities are presently available only in very few centres in the country. Obviously their benefits is affordable to only a limited number of people. Emotional, religious and social factors are also deterrents in the adoption of these methods. Since the ultimate aim of all these procedures is to have children, in India we have so many orphaned and destitute children, who would probably not survive till maturity, unless taken care of. Our laws permit legal adoption and it is as yet, one of the best methods for couples looking for parenthood.

✓
———— **FOR NOTES & DPP CHECK DESCRIPTION** ————

Question (2016-I)

In context of amniocentesis, which of the following statement is incorrect?

- A** It is usually done when a woman is between 14-16 weeks pregnant. *False* ✓
- B** It is used for prenatal sex determination. ✓
- C** It can be used for detection of Down syndrome. ✓
- D** ~~It can be used for detection of cleft palate.~~ *Out of NCERT*

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2013)

Which of the following cannot be detected in a developing foetus by amniocentesis?

- A** Jaundice X
- B** Klinefelter's syndrome ✓
- C** Sex of the foetus ✓
- D** Down syndrome ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2022)

Lippe's loop is a type of contraceptive used as:

- A** Copper releasing IUD
- B** Cervical barrier
- C** Vault barrier
- D** Non-Medicated IUD

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2022)



Match List-I with List-II with respect to methods of Contraception and their respective actions.

Choose the correct answer from the options given below.

A ~~A-(III), B-(II), C-(I), D-(IV)~~

B ~~A-(IV), B-(I), C-(III), D-(II)~~

C ~~A-(IV), B-(I), C-(II), D-(III)~~

D ~~A-(I), B-(IV), C-(I), D-(III)~~

List-I		List-II	
(A)	Diaphragms	(I)	Inhibit ovulation and Implantation
(B)	Contraceptive Pills	(II)	Increase phagocytosis of sperm within Uterus
(C)	Intra Uterine Devices	(III)	Absence of Menstrual cycle and ovulation following parturition
(D)	Lactational Amenorrhea	(IV)	They cover the cervix blocking the entry of sperms

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2021)



Match List-I with List-II.

Choose the correct answer from the options given below.

A ~~A-(I), B-(III), C-(II), D-(IV)~~

B ~~A-(IV), B-(IV), C-(III), D-(I)~~

C ~~A-(III), B-(I), C-(IV), D-(II)~~

D ~~A-(IV), B-(II), C-(I), D-(III)~~

List-I		List-II	
(A)	Vaults	(I)	Entry of sperm through Cervix is blocked
(B)	IUDs	(II)	Removal of Vas deferens
(C)	Vasectomy	(III)	Phagocytosis of sperms within the Uterus
(D)	Tubectomy	(IV)	Removal of fallopian tube

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2021)

Which one of the following is an example of Hormone releasing IUD?

- A** LNG 20 ✓
- B** Cu 7 X
- C** Multiload 375 X
- D** CuT X

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2020-Covid)

Progestogens alone or in combination with estrogens can be used as a contraceptive in the form of

- A** Injections only ☒
- B** ~~Pills~~, injections and implants ☒
- C** Pills only ☒
- D** Implants only ☒

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2019)

Select the hormone-releasing Intra-Uterine Devices.

- ☒ **A** ~~Vaults~~, LNG-20 ✓
- ☒ **B** ~~Multiload 375~~, Progestasert ✓
- ☒ **C** Progestasert, LNG-20 ✓
- ☐ **D** ~~Lippes loop~~, ~~Multiload 375~~

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2019)



Which of the following contraceptive methods do involve a role of hormone?

- A** ^(Prolactin) Lactational amenorrhea, Pills, Emergency contraceptives. ✓
- B** Barrier method, Lactational amenorrhea, Pills. ✓
- C** CuT, Pills, Emergency contraceptives. ✓
- D** Pills, Emergency contraceptives, Barrier methods. ✓

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2018)

The contraceptive 'SAHELI':

Out of NCERT

- 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.

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2017-Delhi)

The function of copper ions in copper releasing IUD's is:

- A** They suppress sperm motility and fertilising capacity of sperms
- B** They inhibit gametogenesis X
- C** They make uterus unsuitable for implantation X
- D** They inhibit ovulation X

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2016-II)

Which of the following is incorrect regarding vasectomy?

- A** Vasa deferentia is cut and tied *False*
- B** Irreversible sterility ✓
- C** No sperm occurs in seminal fluid ✓
- D** No sperm occurs in epididymis

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2016-II)

Which of the following is hormone releasing IUD?

- A** Lippes loop X
- B** Cu7 X
- C** LNG-20 ✓
- D** Multiload 375 X

3rd time repeat

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2016-I)



Which of the following approaches does ^{False} not give the defined action of contraceptive?

- A** Barrier Methods
 - Prevent fertilisation ✓
- B** Intrauterine
 - Increase phagocytosis of sperms, suppress sperm motility and fertilising capacity of sperms
- C** Hormonal contraceptives
 - Prevent/retard entry of sperms, prevent ovulation and fertilisation ✓
- D** Vasectomy
 - Prevents spermatogenesis ✗

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2015)

Hysterectomy is surgical removal of:

Out of NCERT

- A** Vas-deferens
- B** Mammary glands
- C** ~~Uterus~~
- D** Prostate gland

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2014)

Tubectomy is a method of sterilisation in which

- ☒ **A** Uterus is removed surgically
- ☒ **B** Small part of the fallopian tube is removed or tied up
- ☒ **C** Ovaries are removed surgically
- ☒ **D** Small part of vas deferens is removed or tied up

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2014)

Which of the following is a hormone releasing Intra Uterine Device (IUD)?

- A** Vault ☒
- B** Multiload 375 ☒
- C** LNG-20 ☒
- D** Cervical cap ☒

4th time repeat

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2021)



Venereal diseases can spread through

- A. Using ~~sterile~~ needles. ^{infected}
- B. Transfusion of blood from infected person. ✓
- C. Infected mother to foetus ✓
- D. Kissing
- E. Inheritance X

Choose the correct answer from the options given below.

some STIs → Oral Herpes
→ Syphilis
→ CMV

A B, C and D only

B B and C only (NTA Answer)

C A and C only

D A, B and C only

NCERT → AIDS, Hep - B

FOR NOTES & DPP CHECK DESCRIPTION

Question (2020)

Select the option including all sexually transmitted diseases

- A** Gonorrhoea, Malaria, Genital herpes
- B** AIDS, Malaria, Filaria
- C** Cancer, AIDS, Syphilis
- D** Gonorrhoea, Syphilis, Genital herpes

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2020-Covid)

Which of the following STDs are not curable?

- A** Chlamydia, Syphilis, Genital warts
- B** HIV, Gonorrhoea, Trichomoniasis
- C** Gonorrhoea, Trichomoniasis, Hepatitis B
- D** Genital herpes, Hepatitis B, HIV infection

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2019)

Which of the following sexually transmitted diseases is not completely curable?

- A** Gonorrhoea
- B** Genital warts
- C** Genital herpes
- D** Chlamydiasis

Repeat

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2017-Delhi)

Match the following sexually transmitted diseases (Column - I) with their causative agent (Column II) and select the correct option.

A ~~A-(II), B-(III), C-(IV), D-(I)~~

B ~~A-(III), B-(IV), C-(I), D-(II)~~

C ~~A-(IV), B-(II), C-(III), D-(I)~~

D ~~A-(IV), B-(III), C-(II), D-(I)~~

Out of NCERT

Column-I		Column-II	
(A)	Gonorrhea	(I)	HIV
(B)	Syphilis	(II)	<i>Neisseria</i>
(C)	Genital Warts	(III)	<i>Treponema</i>
(D)	AIDS	(IV)	Human Papilloma virus

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2015 Re)

Ectopic pregnancies are referred to as:

STI (Late Comp)

Out of NCERT

- A** Implantation of embryo at site other than uterus.
- B** Implantation of defective embryo in the uterus.
- C** Pregnancies terminated due to hormonal imbalance.
- D** Pregnancies with genetic abnormality.

Question (2015 Re)

Which of the following is not a sexually transmitted disease?

- A** Trichomoniasis ✓
- B** Encephalitis ✗
- C** Syphilis ✓
- D** Acquired Immuno Deficiency Syndrome ✓

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2013)

One of the legal methods of birth control is:

- A** By a premature ~~ejaculation~~ during coitus *Controversial*
- B** Abortion by taking an ~~appropriate~~ medicine
- C** ☒ By abstaining from coitus from day 10 to 17 of the menstrual cycle *NTA (Natural)*
- D** By having coitus at the time of day break ~~X~~

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2020)

In which of the following techniques, the embryos are transferred to assist those females who cannot conceive?

- A** ~~GIFT~~ ^{ovum} and ZIFT ✓
- B** ~~ICSI~~ and ZIFT ✓
- C** ~~GIFT~~ and ~~ICSI~~
- D** ✓ ZIFT and IUT

———— FOR NOTES & DPP CHECK DESCRIPTION ————

Question (2017-Delhi)

In case of a couple where the male is having a very low sperm count, which technique will be suitable for fertilisation?

- A** Intrauterine transfer
- B** Gamete intracytoplasmic fallopian transfer
- C** ~~Artificial Insemination~~ NCERT (NTA)
- D** Intracytoplasmic sperm injection

Controversial

Question (2016-II)

Embryo with more than 16 blastomeres formed due to in vitro fertilisation is transferred into:

- A** Fimbriae
- B** Cervix
- C** Uterus
- D** Fallopian tube

> 8 → IUT

Question (2015 Re)

A childless couple can be assisted to have a child through a technique called GIFT. The full form of this technique is:

- A** Gamete intra fallopian transfer
- B** Gamete internal fertilisation and transfer
- C** Germ cell internal fallopian transfer
- D** Gemete inseminated fallopian transfer

Question (2014)

Assisted reproductive technology, IVF involves transfer of:

ET $\begin{cases} \rightarrow \text{ZIFT} \\ \rightarrow \text{IUT} \end{cases}$

- A** Embryo with 16 blastomeres into the fallopian tube ~~X~~ ^{Uterus}
- B** Ovum into the fallopian tube ~~X~~ ^{GIFT}
- C** Zygote into the fallopian tube \checkmark
- D** Zygote into the uterus ~~X~~

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (2013)

Artificial insemination means:

- A** Introduction of sperms of healthy donor ^{Semen} directly into the ~~ovary~~
- B** Transfer of sperms of a healthy donor to a test tube containing ova
- C** Transfer of sperms of husband to a test tube containing ova
- D** ~~Artificial~~ introduction of sperms of a healthy donor into the vagina _{husb. of uterus}

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2023)

Which one of the following common sexually transmitted diseases is completely curable when detected early and treated properly?

- A** HIV Infection X
- B** Genital herpes X
- C** Gonorrhoea ✓
- D** Hepatitis-B X

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2023)



Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A): Amniocentesis for sex determination is one of the strategies of Reproductive and Child Health Care Programme.

Reason (R): Ban on amniocentesis checks increasing menace of female foeticide. True

In the light of the above statements. Choose the correct answer from the options given below:

- A** A is false but R is true.
- B** Both A and R are true and R is the correct explanation of A.
- C** Both A and R are true and R is NOT the correct explanation of A.
- D** A is true but R is false.

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (2023)

Match List-I with List-II.

- A** ~~A-(IV), B-(II), C-(I), D-(III)~~
- B** ~~A-(III), B-(I), C-(IV), D-(II)~~
- C** ~~A-(III), B-(IV), C-(II), D-(I)~~
- D** ~~A-(I), B-(III), C-(I), D-(IV)~~

List-I		List-II	
(A)	Vasectomy	(I)	Oral method
(B)	Coitus interruptus	(II)	Barrier method
(C)	Cervical caps	(III)	Surgical method
(D)	Saheli	(IV)	Natural method

————— **FOR NOTES & DPP CHECK DESCRIPTION** —————

Question (NEET 2024)

Which of the following is not a natural/traditional contraceptive method?

- A** Lactational amenorrhea ✓
- B** ~~Vaults~~ *X Barrier*
- C** Coitus interruptus ✓
- D** Periodic abstinence ✓

————— FOR NOTES & DPP CHECK DESCRIPTION —————

Question (NEET 2024)

Match List-I with List-II:

Choose the correct answer from the option given below:

A ~~A-IV, B-I, C-II, D-III~~

B ~~A-III, B-I, C-IV, D-II~~

C ~~A-III, B-I, C-II, D-IV~~

D ~~A-I, B-III, C-IV, D-II~~

	List-I		List-II
A.	Non-medicated IUD	I. →	Multiload 375
B.	Copper releasing IUD	II. →	Progestoger
C.	Hormone releasing IUD	III. →	Lippes loop
D.	Implants	IV. →	<u>LNG-20</u>

———— FOR NOTES & DPP CHECK DESCRIPTION ————



Homework



Read NCERT

———— FOR NOTES & DPP CHECK DESCRIPTION ————



AKANKSHA MAAM

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THANK YOU

