

ULTIMATE KCET

CRASH COURSE 2026

Biology (Zoology)

Lecture - 01

Reproductive Health

By – Raghunath Sir



Recap *of previous lecture*

- 1 Human Reproduction - Synopsis
- 2 Most Important MCQs

4-5 questions
in KCET

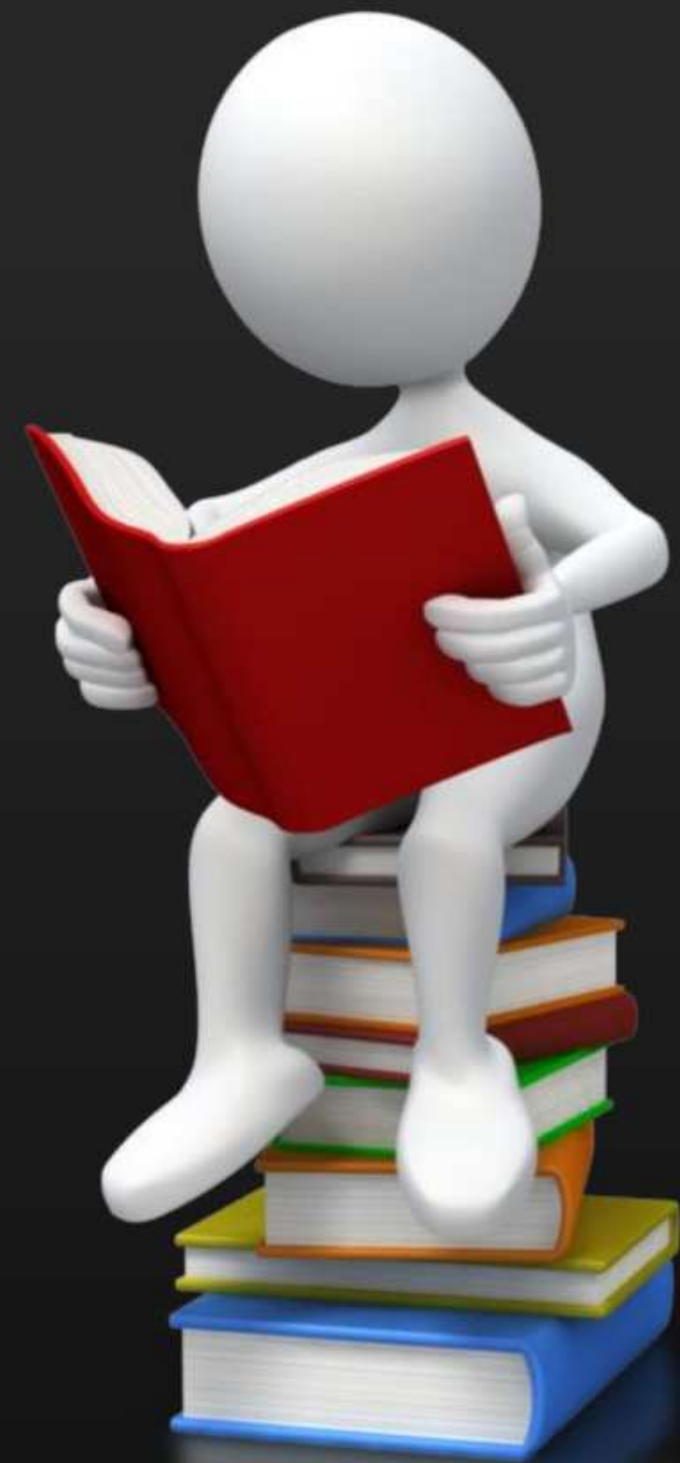


Topics *to be covered*

- 1 Reproductive Health - Synopsis
- 2 Most Important MCQs

3 questions

KCET





Reproductive Health - Problems

→ statement based question.

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

- There is little knowledge of personal hygiene and hygiene of reproductive organs. This causes **sexually transmitted diseases** (STDs).
- **Early marriages** lead to high ^{mother} maternal and infant mortality rates. ^{Foetus} maternal and infant mortality rates → ^{Death} maternal and infant mortality rates.
- Due to lack of awareness, there has been a rapid increase in population size.
- People encourage beliefs in myths and misconceptions about sex-related issues.



Reproductive Health - Strategies

- Family planning program programmes were initiated as early as 1951.
- Reproductive & child health care (RCH) programmes were launched in 1997 for:
 - a) Creating awareness among people about various reproduction related aspects.
 - b) Providing facilities and support for building up a reproductively healthy society.
 - With the help of Audio-visuals and print media, both government and non-government agencies are engaged in creating awareness among people about reproduction-related aspects.



Reproductive Health - Strategies

- Encouraging Sex education in schools to give the right information to young minds and save them from myths and misconceptions about sex-related aspects.
- Proper information about reproductive organs, adolescence and related changes, safe and hygienic sexual practices and sexually transmitted diseases (STDs) should be given.
- Statutory ban on Amniocentesis (a foetal sex-determination test based on the chromosome pattern in the cells found in amniotic fluid surrounding the developing embryo) for sex-determination to legally check increasing female Foeticide.



Population Explosion

- 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.
- 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.

Reasons

Boys - 21
Girls - 18

contraceptives - Methods, procedures,
devices used prevent unwanted
pregnancies.

→ Natural
Barrier
IUDs
oral contraceptives
Injection & Implants
sterilization.

Contraceptives	Methods/Devices	Principle
Natural Method	periodic abstinence	Couple avoids or abstains from coitus from day 10-17 of the menstrual cycle, when ovulation is expected to occur.
	coitus interruptus	Male partner withdraws his penis from the vagina just before ejaculation to avoid insemination.
	Lactational amenorrhoea	During the period of lactation after parturition, ovulation does not occur.
Barrier Method	Condoms	Prevents the deposition of ejaculated semen into the vagina of the female.
	Diaphragms, Cervical caps, Vaults	Prevent the entry of sperms through cervix.
	Spermicidal jellies, foams & Creams	Increase the contraceptive efficiency of barriers by the <u>phagocytosis</u> of sperms.

Natural

In traditional / conventional.

periodic abstinence - Avoid coitus from



coitus interruptus - withdrawal method

Fertile period
ovulation

Lactational amenorrhoea.

During lactation ovulation does not occur

Effective upto 6 months

→ destroy / Kill

Contraceptives	Methods/Devices	Principle/Action
<p>Intrauterine devices (IUDs)</p>	<p>Non-medicated IUD Lippes loop</p>	<p>These increase <u>phagocytosis</u> of sperms within the <u>uterus</u>.</p>
	<p>Cu-releasing IUDs Cu-7, Cu-T, Multiload 375</p>	<p>Cu ions released suppress sperm <u>motility</u> and the fertilizing capacity of sperms.</p>
	<p>Hormone-releasing progestogen, LNG-20 progestogen / progestogen + estrogen</p>	<p>They make the <u>uterus unsuitable</u> for <u>implantation</u> and the <u>cervix hostile</u> to the sperms.</p>
<p>Oral Contraceptive</p>	<p>Oral pills <u>Saheli</u> <u>weekly pill</u></p>	<p>They inhibit <u>ovulation</u> and <u>implantation</u> as well as alter the quality of cervical mucus to prevent entry of sperms. <u>within 72 hrs of coitus.</u></p>

non-steroidal. - CDRI - Lucknow

Contraceptives	Methods/Devices	Principle
Injection and Implants	<p style="text-align: center;"><u>Inserted beneath the skin</u></p>	<p>They inhibit <u>ovulation and implantation</u> as well as alter the quality of cervical mucus to prevent entry of sperms.</p>
<p style="text-align: center;">Surgical Methods</p>	<p style="text-align: center;"><u>Vasectomy</u></p> <p style="text-align: center;">Male</p>	<p>In vasectomy, a small part of the vas deferens is removed or tied up through a small incision <u>on the scrotum</u></p> <p style="text-align: right;"><u>Irreversible</u></p>
	<p style="text-align: center;"><u>Tubectomy</u></p> <p style="text-align: center;">Female</p>	<p>In tubectomy, a small part of the <u>fallopian tube</u> is removed or tied up through a small incision in the <u>abdomen or through vagina</u>.</p>



Sexual Transmitted Diseases - STDs

S.No.	Disease	Causative agent
1	AIDS ✓ X	Human Immunodeficiency Virus (HIV)
2	Syphilis ✓	<i>Treponema pallidum</i> (Bacteria)
3	Gonorrhoea ✓	<i>Neisseria gonorrhoea</i> (Bacteria)
4	Hepatitis - B ✓ X	Hepatitis B virus
5	Genital herpes ✓ X	<i>Herpes simplex virus I, II</i> (HSV)
6	Genital warts ✓	Human Papillomaviruses (HPV)
7	Trichomoniasis X	<i>Trichomonas vaginalis</i>
8	Chlamydiasis	<i>Chlamydia trachomatis</i> (Protozoan)
9	Candidiasis	<i>Candida albicans</i> (Fungi)
10	Bacterial vaginosis X	<i>Gardnerella vaginalis</i>
11	Scabies X	<i>Sarcoptes scabiei</i>





Medical Termination of Pregnancy - MTP

It is defined as intentional or voluntary termination of pregnancy before full term."

Safest period MTP - First 12 weeks - First trimester

24 weeks

Legalized - 1971

- To get rid of unwanted pregnancies either due to casual unprotected intercourse or failure of the contraceptive used during coitus or rapes.

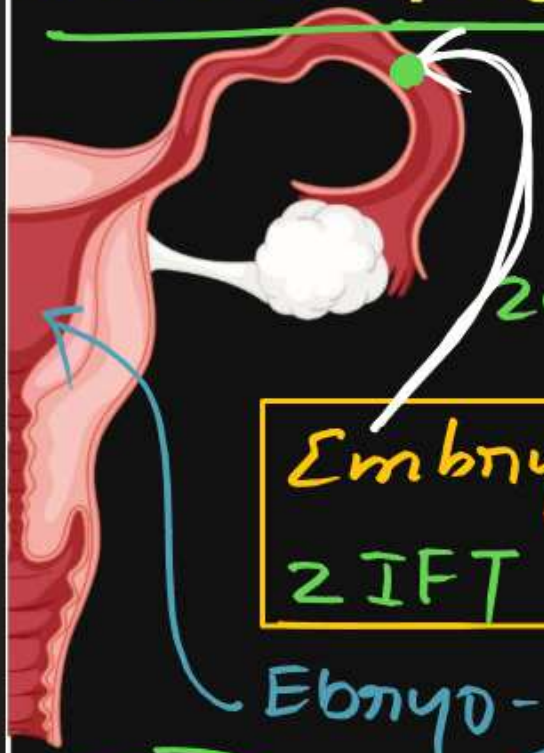
- MTPs are also essential in certain cases where continuation of the pregnancy could be harmful or even fatal either to the mother or to the foetus or both.

Genetic abnormalities in the foetus.

1. Test tube programme

IVF

in vitro fertilization



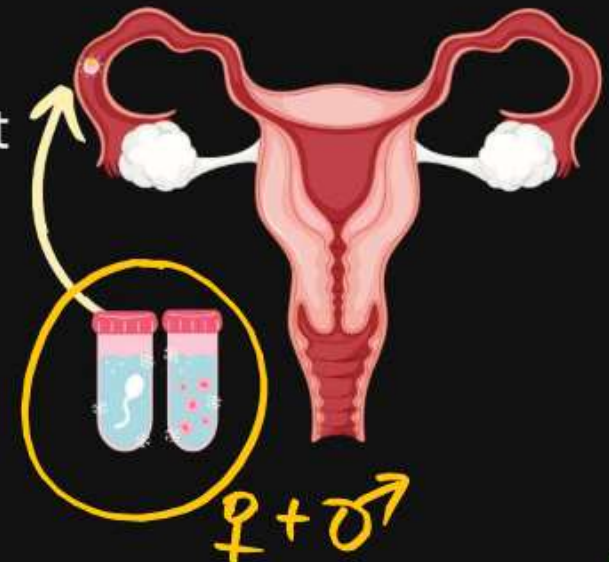
zygote formed outside

Embryo - < 8 blastomeres
ZIFT
Fallopian tube

Embryo - > 8 blastomeres → Uterus

2. GIFT

Transfer of an ovum collected from a donor into the fallopian tube (GIFT - gamete intrafallopian transfer) of another female who cannot produce one, but can provide suitable environment for fertilisation and further development is another method attempted.

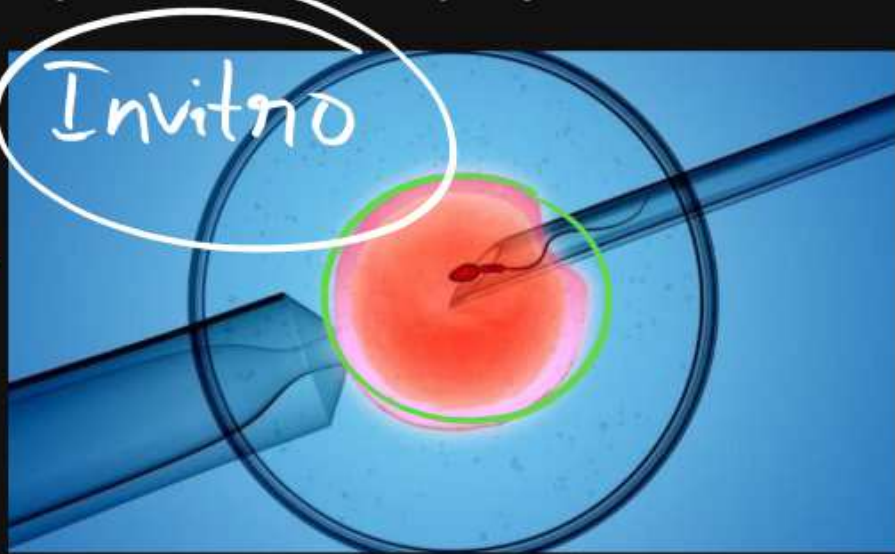


3. ICSI

IUT

Specialised procedure to form an embryo in the laboratory in which a sperm is directly injected into the ovum.

Intra cytoplasmic sperm injection

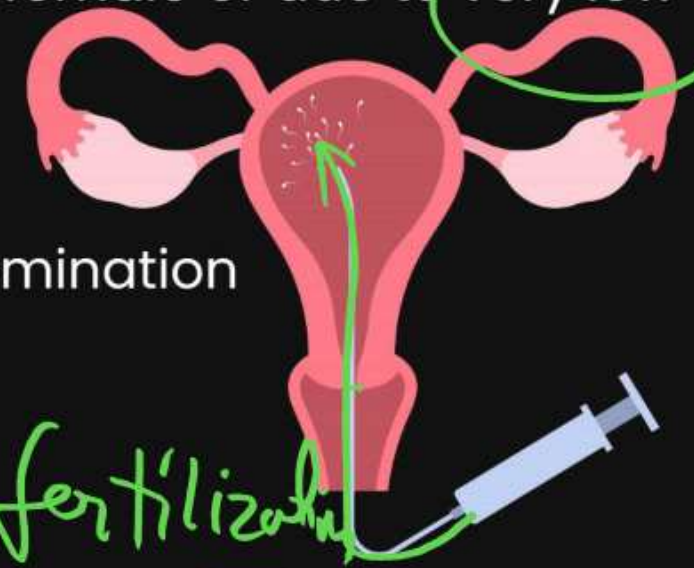


In vitro

4. AI / IUI

Artificial insemination

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-vivo fertilization

ZIFT - Zygote intra fallopian transfer

→ IVF - In vitro fertilization

GIFT - Gamete intra fallopian transfer.

→ In vivo fertilization

Male → Sperm }
 Female → Ovum } → Fallopian tube of the another woman.

Question



What is the primary objective of the Reproductive and Child Health Care (RCH) programs?

- A** Uncontrolled population growth. ✗
- B** Creating awareness about reproductive health. ✓
- C** Inhibit the use of birth controls. ✗
- D** Promote the abuse of MTPs. ✗

Question



Which one of the following is the most widely accepted method of contraception in India at present?

A IUDs (Intrauterine devices) ✓

B Cervical caps ✗

C Male oral contraceptives ✗

D Female oral contraceptives ✗

Question



Which of the following is the correct reason for delivering sex education at schools?

A Discouraging myths and misconceptions. ✓

B Encouraging rise in population ✗

C Solve the issue of global warming ✗

D Promote myths of reproductive health ✗

Question

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

A Down's syndrome X

B Jaundice ✓

C Sickle-cell anaemia X

D Sex of the foetus X

Question



Amniocentesis is one of the methods

- A** Adapted for MTP
- B** Of birth control
- C** For fetal sex determination
- D** Used for safe parturition

Illegal

Handwritten green annotations include a checkmark next to option C, a circle around option C, and the word 'Illegal' written in cursive with two arrows pointing towards options B and C.

Question



Reproductive health in society can be improved by -

- I. Introduction of sex education in schools. ✓
- II. Increased medical assistance. ✓
- III. Awareness about contraception and STDs ✓
- IV. Equal opportunities to male and female child. ✓
- V. Ban on amniocentesis for sex determination. ✓
- VI. Encouraging myths and misconceptions ✗

A All

~~**B** I, II, IV, VI~~

C I, II, III, IV, V

~~**D** II, V~~

Question



Which of the following are the contributing factors in population explosion in India?

A Decrease in death rate, maternal mortality rate and infant mortality rate

B Decrease in death rate and increase in maternal mortality rate X

C Decrease in infant mortality rate and increase in death rate X

D Decrease in infant mortality rate and decrease in the number of people in reproductive age

Question



Increased IMR and decreased MMR in a population will

↓ Infant mortality rate

- A** Cause a rapid increase in growth rate
- B** Result in the decline in growth rate
- C** Not cause a significant change in growth rate
- D** Result in an explosive population

Question



The most important measure to check the population explosion in India is

- A** Enforce one child norm by law with strict penalties for non-compliance
- B** Progressively increasing the statutory marriage age in males to 25 years
- C** Motivate smaller families by using contraceptive methods
- D** Allowing pre-natal sex determination to encourage selective foeticide

Question



Which of the following is traditional method of contraception?

- A** Implantation ✗
- B** Lactational amenorrhoea ✓
- C** Condoms ✗
- D** Sterilization ✗

Question



A method in which the male partner withdraws his penis from the vagina just before ejaculation so as to avoid insemination is known as:

10-17

A periodic abstinence. X

B lactational amenorrhea. X

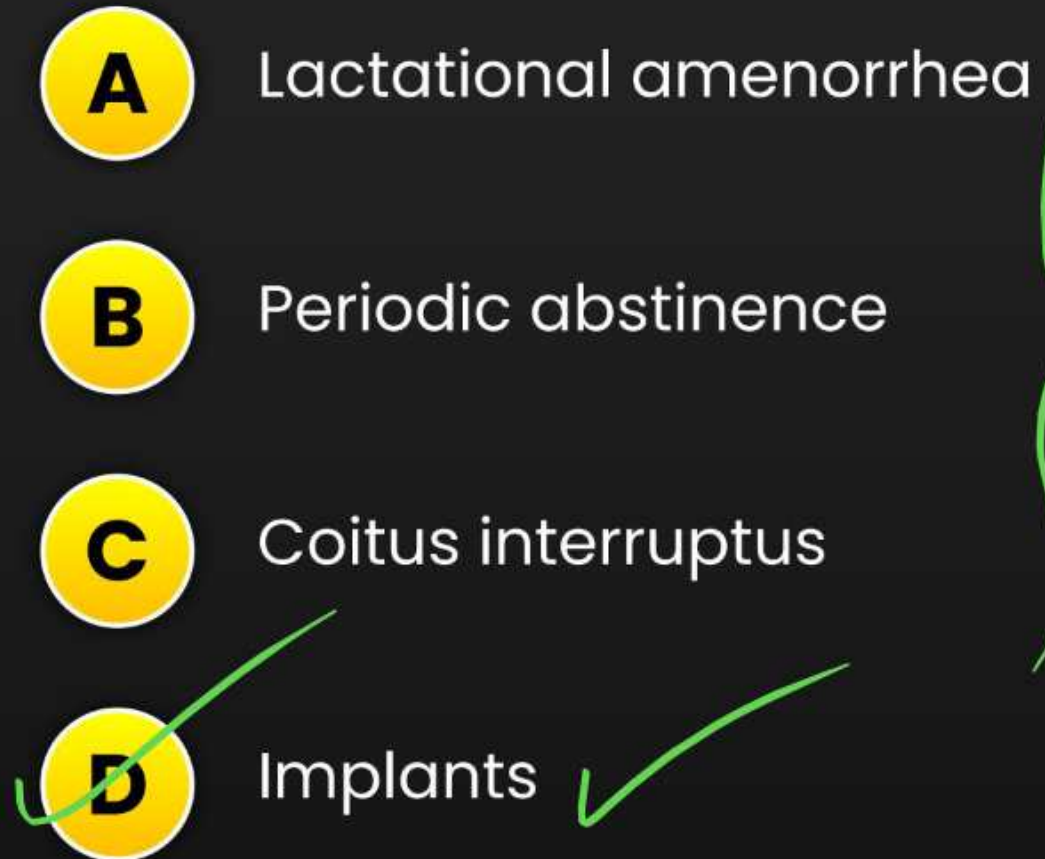
C coitus interruptus. ✓

D All of these X

Question (KCET - 2025)



Out of the following options, identify which one is NOT a natural method of contraception?

- A** Lactational amenorrhea
 - B** Periodic abstinence
 - C** Coitus interruptus
 - D** Implants
- 
- Hand-drawn green annotations include a bracket on the right side grouping options A, B, and C. A checkmark is drawn next to option D, and another checkmark is drawn over the letter 'D' in the option label.

Question



A natural method of contraception, periodic abstinence is abstaining from coitus from;

- A** Day 1 to 5 of the menstrual cycle. *menstruation*
- B** Day 17 to 22 of the menstrual cycle. *ovulation*
- C** Day 10 to 17 of the menstrual cycle. ✓
- D** Day 5 to 10 of the menstrual cycle. ✗

Question



Lactational amenorrhea is effective for a maximum period of _____ after parturition.

prolactin

Because of intense lactation.

Decrease in - FSH, LH

A One week only

B One month only

C 2 years

D Up to 6 months

Question



Given below are the two statements.

Statement-I: In traditional/natural methods of contraception, side effects are almost nil, though chances of failure in this method are also high. ✓

Statement-II: Lactational amenorrhea is not included in natural methods of birth control. ✗

In the light of the above statements, choose the most appropriate answer from the options given below:

A Statement I is correct but Statement II is incorrect. ✓

B Statement I is incorrect but Statement II is correct.

C Both Statement I and Statement II are correct.

D Both Statement I and Statement II are incorrect.

Question



Use of which of the following contraceptive devices has increased in recent years due to its additional benefit of protecting the user from contracting STDs and AIDS?

- A** Vasectomy
- B** Coitus interruptus
- C** Condoms
- D** Intrauterine Devices

Question



Read the following statements (A-D).

A. An ideal contraceptive must have side-effects. X

no/less side effects.

B. Vault is a barrier contraceptive method. ✓

C. Progestasert is a hormone releasing IUD. ✓

D. Emergency contraceptive must be taken within 80 hours of coitus. X

72 hr

Which of the following statements is/are incorrect?

A A only

B B only

C B and C only

~~**D** A and D only~~

Question



Use of spermicidal creams leads to:

A Increase in contraceptive efficiency. ✓

B Prevention of ovulation. ✗

C Prevention of implantation. ✗

D Increase in sexual desire and drive. ✗

Question



Select the incorrect statement w.r.t. female contraceptive barrier method.

- A** Diaphragms, cervical caps and vaults are barriers made of rubber.
- B** They prevent conception by blocking the entry of sperms.
- C** They are not reusable. ✓
- D** Both male and female condoms are disposable.

Question



Match the months listed in Column – I with the organogenesis of foetus in Column – II.

	Column I		Column II
A	Chemical	p	Tubectomy and vasectomy
B	IUDs (q)	q	Copper T and Lippes loop
C	Barriers (r)	r	Condom and cervical cap
D	Sterilisation (P)	s	Spermicidal jelly and foam
		t	Coitus interruptus and calendar method

A A - (s), B - (q), C - (r), D - (p) ✓

B A - (s), B - (t), C - (q), D - (r) ✗

C A - (p), B - (p), C - (q), D - (t) ✗

D A - (s), B - (q), C - (t), D - (p) ✗

Question



Cu ions released from the copper releasing IUDs to:

- A. Suppress sperm motility. ✓
- B. Make uterus unsuitable for implantation. ✗
- C. Suppress fertilising capacity of sperms. ✓
- D. Make cervix hostile to sperms. ✗

A A and B only

B B and D only

✓ **C** A and C only ✓

D A, C and D only

Question



Which of the following cannot be used as an emergency contraceptives?

oral pill

- A** Administration of progestogens within 72 hours of coitus.
- B** Administration of estrogen within 72 hours of coitus.
- C** Administration of progestogen-estrogen combinations within 72 hours of coitus.
- D** Administration of IUDs within 72 hours of coitus.

Question



Progestasert and LNG-20 are

- A** Implants ~~X~~
- B** Copper releasing IUDs ~~X~~
- C** Non-medicated IUDs ~~X~~
- D** Hormone releasing IUDs ✓

Question

Which of the following statement is incorrect regarding implants?

- ~~A~~ It contains progestogens or combinations of estrogen and progestogen. ✓
- ~~B~~ It is effective for longer period as compared to pills. ✓
- ~~C~~ They are used by both males and females. ✗
- ~~D~~ All of these ✗

Question

All of the following statements are true for an IUD except;

Intra-uterine device

- A** It is one of the most widely accepted methods of contraception for males in India. ✓
- B** Progesterone is a hormone releasing IUD. ✗
- C** IUD is an ideal contraceptive to delay pregnancies. ✗
- D** IUD increases phagocytosis of sperms within the uterus. ✗

Question



What is the function of IUD's?

A Inhibit Ovulation

oral pills

B Increase phagocytosis of sperm

C Inhibit fertilization

D Both (B) and (C)

Question



Choose the right one among the statements given below:

~~A~~ IUDs are generally inserted by the user herself ~~X~~

~~B~~ IUDs increase phagocytosis reaction in the uterus ✓

~~C~~ IUDs suppress gametogenesis ~~X~~

~~D~~ IUDs once inserted need not be replaced ~~X~~

→ doctor's

Question



What is the work of progesterone which is present in oral contraceptive pills?

- A** To inhibit ovulation ✓
- B** To check ^{stop} oogenesis ✗
- C** To check entry of sperms into cervix and to make them inactive ✗
- D** To check sexual behaviour ✗

Question



The contraceptive SAHELL'

- A** Is an IUD.
- B** Increases the concentration of estrogen and prevents ovulation in females. X
- C** Blocks estrogen receptors in the uterus, preventing eggs from getting implanted. ✓
- D** Is a post-coital contraceptive. X

Question



Which is the irreversible method of contraception?

A Lactational amenorrhea X

B Vasectomy ✓

C Use of condom X

D Intrauterine devices X

Question



Surgical method for terminal contraception works on which ground?

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

Question



Which of the following statement is incorrect regarding surgical methods of contraception?

- A** Surgical intervention blocks gamete transport and thereby prevent conception.
- B** Surgical methods are also known as sterilisation method.
- C** In vasectomy, a small part of the vas deferens is removed or tied up through a small incision on the scrotum.
- D** These techniques are not much effective and their reversibility is very poor. ✓

Very Effective

Question



Which of the following is not considered as a preventive measure of STDs?

- A** Avoid sex with unknown partner.
- B** Use of condoms during coitus.
- C** Use of oral pills. ✓
- D** Avoid sex with multiple partners.

Question



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

A Gonorrhoea

B Genital warts

C Genital herpes

D Chlamydiasis

Hepatitis - B
AIDS

Question



Select the option including all sexually transmitted diseases

~~A~~ Gonorrhoea, Malaria, Genital herpes

~~B~~ AIDS, Malaria, Filariasis

~~C~~ Cancer, AIDS, Syphilis

D Gonorrhoea, Syphilis, Genital herpes

Question (KCET - 2025)

H.W



Get rid off wanted pregnancies due to causal unprotected intercourse;

Statement I: MTP is to get rid off wanted pregnancies due to casual unprotected intercourse or failure of contraceptives used during coitus or rapes

Statement II: MTPs are performed legally by qualified doctors by giving proper medical justification.

Choose the correct answer from the options given below:

- A** Statement I is correct but Statement II is incorrect
- B** Statement I is incorrect but Statement II is correct
- C** Statements I and II are correct
- D** Statements I and II are incorrect

Question



Assertion (A): MTP helps to get rid of unwanted pregnancies due to unprotected intercourse.

Reason (R): MTPs are considered safe up to 28 weeks of pregnancy.

- A** Both Assertion (A) and Reason (R) are true, and R is correct explanation of (A)
- B** Both Assertion (A) and Reason (R) are true, but (R) is not correct explanation of (A)
- C** Assertion (A) is true, and Reason (R) is false
- D** Assertion (A) is false, and Reason (R) is true

Question



Nearly 'X' MTPs are performed in a year all over the world. Select the correct option for 'X'.

- A** 45 to 50 million
- B** 45 to 50 billion
- C** 60 to 70 million
- D** 60 to 70 billion

$\frac{1}{5}^{\text{th}}$ of total no. of pregnancies

Question



Given below are two statements:

Statement-I: Nearly 45-50 million MTPs are performed in a year all over the world. ✓

Statement-II: MTPs are considered relatively safe during the first trimester. ✓

In the light of the above statements, choose the most appropriate answer from the options given below:

A Statement I is correct but Statement II is incorrect.

B Statement I is incorrect but Statement II is correct.

C Both Statement I and Statement II are correct. ✓

D Both Statement I and Statement II are incorrect.

12 weeks

Question

H-W



Which of the following statements is incorrect regarding MTP?

- A** Intentional or voluntary termination of pregnancy before full term is called medical termination of pregnancy.
- B** MTPs are safe during the third trimester.
- C** Majority of the MTPs are performed illegally by unqualified quacks.
- D** Government of India legalised MTP in 1971.

Question



A childless couple visit Assisted Reproductive Technologies (ARTS) centre to get assistance to have a child. On diagnosis, it was noticed that there was low sperm count in the male partner. Which of the following strategy of ART is most suitable in this case?

- A** Gamete Intra-Fallopian Transfer (GIFT) ✗
- B** Artificial Insemination (AI) ✓
- C** Zygote Intrafallopian Transfer (ZIFT) ✗
- D** In vitro Fertilization (IVF) ✗

Question



The transfer of an ovum collected from a donor into the fallopian tube occurs in:

Gamete

A ZIFT ~~X~~

B GIFT ✓

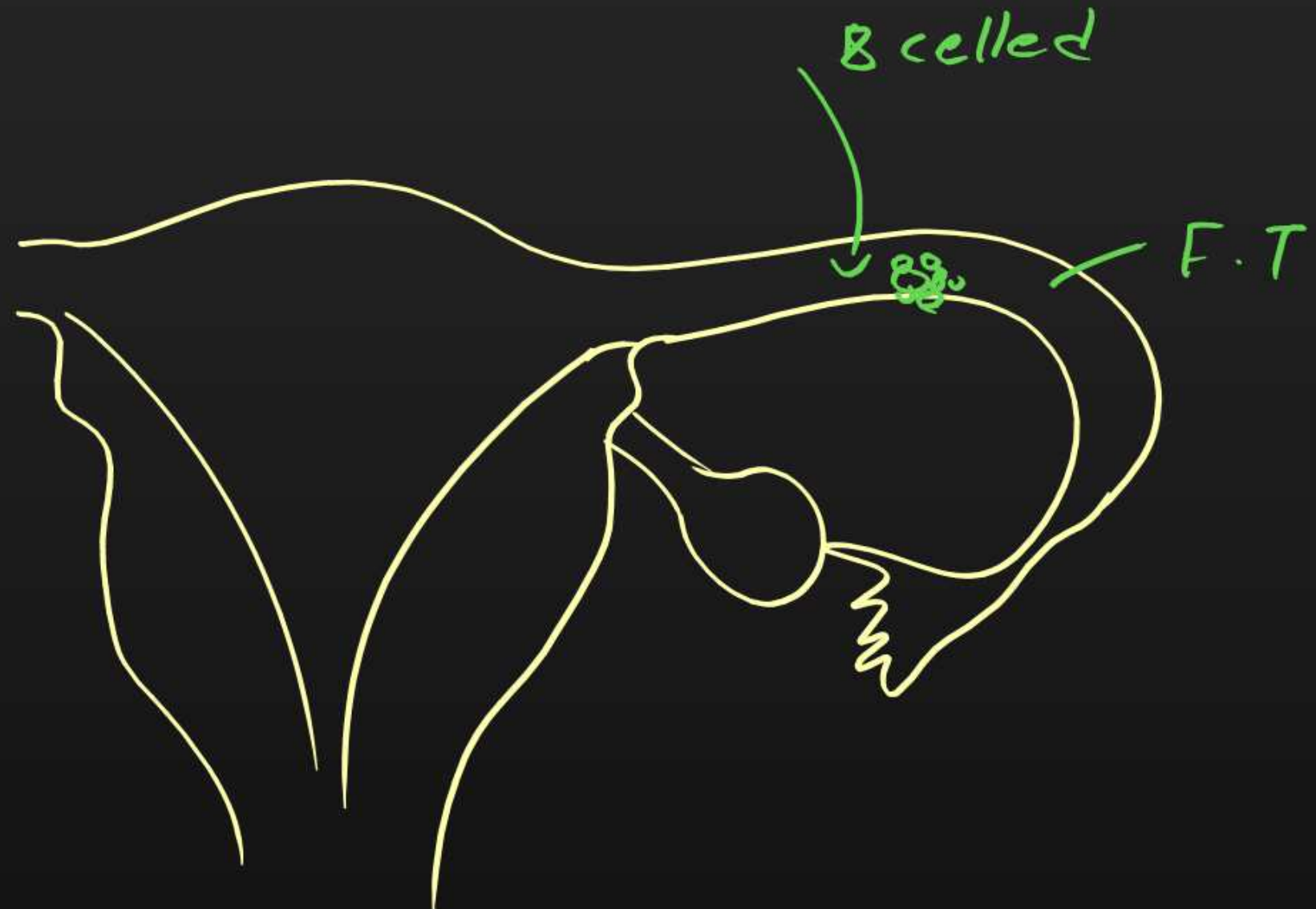
C ET ~~X~~

D IUT ~~X~~

Question (KCET - 2025)

In zygote intrafallopian tube transfer, the embryo upto 8 stage is transferred into the fallopian tube

- A** 8 blastomeres ✓
- B** 32 blastomeres
- C** 2 blastomeres
- D** 16 blastomeres



Question



Which of the following is a specialised procedure in which a sperm is directly injected into the ovum?

A Intracytoplasmic sperm injection ✓

B Artificial insemination

C Intrauterine insemination

D Intrauterine devices

Question



Which of the following technique of assisted reproductive technology is best for a female who cannot produce ovum but can provide suitable environment for fertilization and further development?

- A** Zygote intrafallopian transfer ✗
- B** Gamete intra fallopian transfer ✓
- C** Artificial insemination ✗
- D** Intrauterine insemination ✗

Question



Which of the following statements is incorrect about ZIFT?

A Zygote in the Fallopian transfer

B Type of IVF

C Embryo with more than 8 blastomeres are used ✓

D Zygote or embryo with up to 8 blastomeres are used

< 8 blastomeres

Thank

You