

DPP

DAILY PRACTICE PROBLEMS

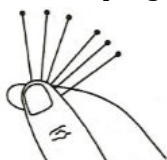
Class : XIIth
Date :

Solutions

Subject : BIOLOGY
DPP No. : 6

Topic :- Reproductive Health

- 2 (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
- 3 (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
- 4 (b)
MTP was legalized in India in 1971
- 5 (a)
Six matchstick-sized capsules containing steroids are inserted under the skin of the inner arm above the elbow. These steroid capsules slowly releases the synthetic progesterone for about five years



Hormone implant capsules

- 7 (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

9 **(a)**

IUD

- (i) Increases phagocytosis of sperms
- (ii) Releases ions that suppresses the sperm motility and fertilizing capacity of sperms
- (iii) Makes uterus unsuitable for implantation

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

12 **(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)

14 **(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 |
| 1975 | 4 billion |
| 1990 | 5 billion |
| 2000 | 6.1 billion |
| 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 |

15 **(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

17 **(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 calmitte 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 | 10 weeks influenza Type B 14 weeks 2 years hepatitis-A vaccine Two doses 6 |

| | Vaccine 2nd Dose | 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 | |

18 (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

19 **(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

| ANSWER-KEY | | | | | | | | | | |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Q. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| A. | B | B | C | B | A | D | B | A | A | B |
| Q. | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| A. | B | D | D | A | B | D | A | A | D | D |