1. During copulation, semen is released into the female reproductive tract by the process called:
   A. Ovulation B. Insemination
   C. Implantation D. Gestation (B)

Explanation : During copulation (coitus), semen is released into the vagina. This process is called insemination.

2. Fertilisation in humans takes place in the:
   A. Uterus
   B. Ovary
   C. Ampulla region of oviduct
   D. Vagina (C)

Explanation : The sperm and ovum fuse in the ampulla region of the fallopian tube (oviduct) to form a zygote.

3. The contact of sperm with the zona pellucida causes:
   A. Formation of placenta
   B. Entry of many sperms into ovum
   C. Changes in membrane blocking additional sperms
   D. Release of hormones from ovary (C)

Explanation : When sperm contacts the zona pellucida, it induces changes in the membrane that prevent entry of additional sperms, ensuring fertilisation by a single sperm.

4. The acrosome of sperm helps in fertilisation because it contains:
   A. Chromosomes B. Enzymes
   C. Mitochondria D. Hormones (B)

Explanation : The acrosome contains enzymes that help the sperm penetrate the zona pellucida and enter the ovum.

5. Fusion of haploid nucleus of sperm with haploid nucleus of ovum results in the formation of:
   A. Blastocyst B. Morula
   C. Zygote D. Embryo (C)

Explanation : After fertilisation, the male and female haploid nuclei fuse to form a diploid zygote.

6. The chromosome pattern in a human female is:
   A. XY B. XX
   C. YY D. XO (B)

Explanation : Human females have an XX chromosome pattern, while males have an XY chromosome pattern.

7. A zygote develops into a male baby when it contains:
   A. XX chromosomes
   B. XY chromosomes
   C. Only X chromosome
   D. YY chromosomes (B)

Explanation : A zygote with XY chromosomes develops into a male baby, whereas XX develops into a female baby.

8. The embryo with 8–16 blastomeres is called:
   A. Blastocyst
   B. Morula
   C. Zygote
   D. Trophoblast (B)

Explanation : As the zygote undergoes cleavage divisions, it forms 2, 4, 8, and 16 cells. The embryo with 8–16 blastomeres is called morula.

9. In a blastocyst, the outer layer of cells is called:
   A. Inner cell mass
   B. Endometrium
   C. Trophoblast
   D. Zona pellucida (C)

Explanation : In the blastocyst, blastomeres are arranged into an outer layer called trophoblast and an inner group called inner cell mass.

10. The embedding of blastocyst into the uterine lining is called:
    A. Fertilisation B. Implantation
    C. Ovulation D. Menstruation (B)

Explanation : When the blastocyst attaches and becomes embedded in the uterine lining (endometrium), the process is called implantation, which leads to pregnancy.