


INDIAN SCHOOL AL WADI AL KABIR		
	DEPARTMENT OF SCIENCE (2020 – 2021) SUBJECT: BIOLOGY	Date of completion: 30.08.2020
Worksheet No: 2B WITH ANSWERS	Topic: HOW DO ORGANISMS REPRODUCE? (Sexual Reproduction)	A4 FILE FORMAT (PORTFOLIO)
CLASS & SEC:	NAME OF THE STUDENT:	ROLL No.

I OBJECTIVE TYPE QUESTIONS

1. The flower of the Hibiscus plant is
 - (a) bisexual
 - (b) unisexual
 - (c) neuter
 - (d) very small
2. The part of the flower which is present in the center of the flower is
 - (a) Sepals
 - (b) Petals
 - (c) Carpels
 - (d) Stamens
3. The fertilisation of human egg by the sperm takes place in
 - (a) vagina
 - (b) uterus
 - (c) ovary
 - (d) oviduct
4. Pollen grains are produced by
 - (a) ovary
 - (b) ovule
 - (c) anther
 - (d) carpel
5. When a sperm is deposited into the vagina which route does it travel?
 - (a) Vagina → Oviduct → Uterus → Cervix
 - (b) Vagina → Ovary → Uterus → Oviduct
 - (c) Vagina → Cervix → Uterus → Oviduct
 - (d) Vagina → Uterus → Cervix → Oviduct
6. The importance of variations in organisms is that it helps the species of various organisms to survive in adverse environment. [True/False]
7. The killing of the unborn girl child is called female foeticide. [True/False]

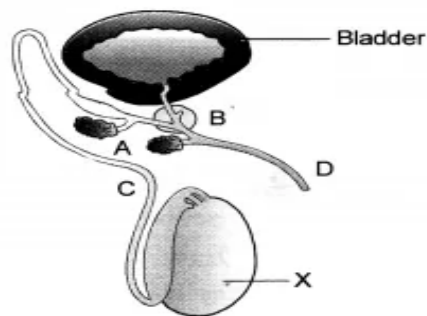
8. Growing foetus derive nutrition from mother's blood through.....
9. The correct sequence of reproductive stages seen in flowering plants is _____
- Gamete, zygote, embryo, seedling
 - zygote, gamete, embryo, seedling
 - seedling, embryo, zygote, gametes
 - gamete, embryo, zygote, seedling
- Assertion & Reasoning
- If both, Assertion and Reason are true and the Reason is the correct explanation of the Assertion.
 - If both, Assertion and Reason are true but Reason is not a correct explanation of the Assertion.
 - If Assertion is true but the Reason is false.
 - If both, Assertion and Reason are false.
- 10.a. Assertion: In male reproductive system, transport of sperm takes place in a fluid which also provide nutrition.
Reason: Prostate glands and seminal vesicles secret in the vas deferens.
- 10.b. Assertion: Ovary releases one egg every month.
Reason: The lining of uterus is always thick and spongy.

II. VERY SHORT ANSWER TYPE QUESTIONS CARRYING 1 MARK EACH

- Name the disease caused by HIV.
- Name the male and the female gametes in human beings.
- Mention any two functions of human ovary.
- Where does fertilization take place in human females?
- Define fertilisation.

III. SHORT ANSWER TYPE QUESTIONS CARRYING 3 MARKS EACH

- What are sexually transmitted diseases? Name four such diseases? Which one them damages the immune system of the human body?
- List any three differences between pollination and fertilization.
- State one function each of the following parts of human male reproductive system:
 - Vas deferens
 - Testis
 - Prostate Gland.
- In the diagram of the human male reproductive system



- (a) Label A and B
- (b) Name the hormone produced by X. What is the role of this hormone in human male?
- (c) Mention the name of substances that are transported by C and D.

- 20.(a)Name any two plants bearing bisexual flower.
- (b) Draw a neat diagram of germinating seed and label on it the following:
Cotyledon, Plumule, Radicle.
21. How do oral pills function as contraceptives?

IV. LONG ANSWER TYPE QUESTIONS CARRYING 5 MARKS EACH

22. Draw the diagram of a flower to show its male and female reproductive parts. Label the following in it; 1. Ovary 2. Anther 3. Filament 4. Stigma
What is the function of anther? How does fusion of male and female gametes take place in plants?
23. (a) Draw a diagram showing germination of pollen on stigma of a flower.
(b) Label pollen grain, male germ cells, pollen tube, stigma, ovary and female germ cell in the above diagram.
(c) How zygote is formed?
24. (a) Explain the role of placenta in the development of human embryo.
(b) Give example of two bacterial and two viral sexually transmitted diseases. Name the most effective contraceptive which prevents spread of such diseases.
25. (a) How do the following contraceptives prevent pregnancy:
1. Oral pills
2. Condom
(b) Mention the possible misuse of surgical method of birth control by some people. How is this method causing harm to the society? State the steps taken by the government to prevent this misuse.

V. BOARD BASED QUESTIONS:

26. What is sexual reproduction? List its four significance. (3marks) (2017-18)

27. Answer question numbers 3(a) to 3(d) and 4(a) to 4(d) on the basis of your understanding of the following paragraphs and the related studied concepts.

The growing size of the human population is a cause of concern for all people. The rate of birth in a given population will determine its size. Reproduction is the process by which organisms increase their population. The process of sexual maturation for reproduction is gradual and takes place while general body is still going on. Some degree of sexual maturation does not necessarily mean that mind or body is ready for sexual acts or for having and bringing up children. Various contraceptive devices are being used by human beings to control the size of population.

- (a) List two common signs of sexual maturation in boys and girls.
- (b) What is the result of reckless female foeticide?
- (c) Which contraceptive method changes the hormonal balance of the body?
- (d) Write two factors that determine the size of a population.

Answers for the worksheet 2B

I OBJECTIVE TYPE QUESTIONS

1. (a), 2. (c), 3. (d), 4. (c), 5 (c), 6 (T) 7. (T), 8. Placenta, 9. (A), 10. a. (C), 10. b. (C)

II. VERY SHORT ANSWER TYPE QUESTIONS CARRYING 1 MARK EACH

11. AIDS.

12. Male – sperm, Female – Ovum

13. Produce Egg or Ovum, Secrete female sex hormones – Progesterone and Estrogen

14. Fallopian tube

15. A process in sexual reproduction that involves the union of male gametes (sperms) and female gametes (ovum) to produce a zygote.

III. SHORT ANSWER TYPE QUESTIONS CARRYING 3 MARKS EACH

16. The diseases that spread due to sexual contact from infected to a healthy person are called sexually transmitted diseases.

Four diseases (STD's)

(i) Gonorrhoea (ii) Syphilis (iii) Warts (iv) AIDS

AIDS Acquired Immune Deficiency Syndrome damages the immune system.

17.

Pollination	Fertilization
1. It is the transfer of pollen grains from anther to stigma of the flower	It is the fusion of male gametes and egg cell in embryo sac situated inside the ovule.
2. This process takes place before fertilization	This process takes place after pollination
3. For the completion of this process, insects, water, air like agencies are essential	There is no external medium for this process
4. It takes place on outer parts of flower (external mechanism)	It occurs inside the flower (internal mechanism)

18. i. Vas deferens - The vas deferens is a long, **muscular** tube that travels from the **epididymis** into the pelvic cavity, to just behind the **bladder**. The vas deferens transports mature sperm to the **urethra** in preparation for ejaculation.

ii. The testes have two functions – to produce sperm and to produce **hormones**, particularly testosterone.

iii. The prostate's most important function is the production of a fluid that, together with sperm cells from the testes and fluids from other glands, makes up semen. The **muscles** of the prostate also ensure that the semen is forcefully pressed into the **urethra** and then expelled outwards during ejaculation.

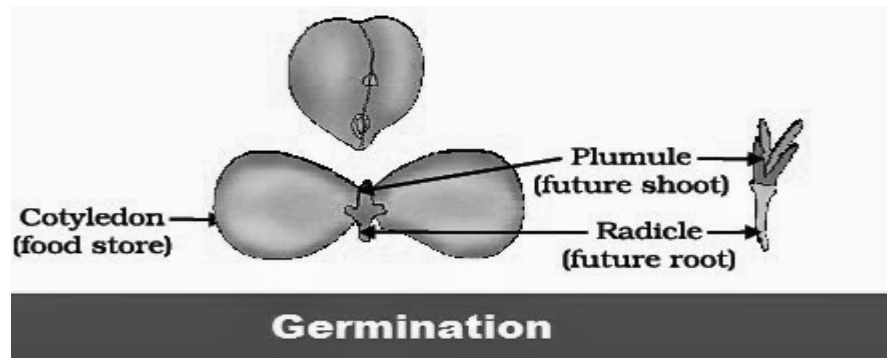
19. (a) A - Seminal Vesicles B – Prostate gland

(b) 'X' Hormone produces – Testosterone. It is a male hormone responsible for growth and development male reproductive organs, and secondary sexual characteristics.

(c) 'C' Seminal vesicles – transport sperms, 'D' Urethra – transports both sperms and Urine

20. (a) Two plants bearing bisexual flower – Mustard and Hibiscus

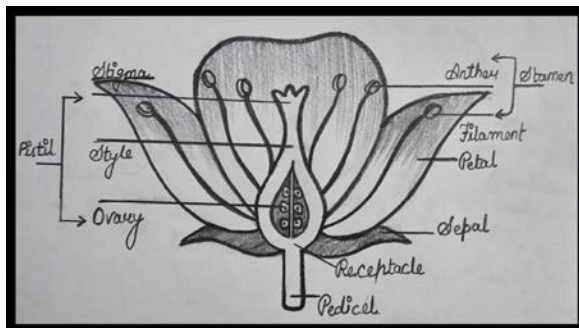
(b)



21. The function of oral pills is to change the hormonal balance of the body.

This prevents release of ova from the ovary and hence fertilization does not occur.

22.



The main function of the stamen is to produce the pollen grains, which house male gametes, or sex cells, necessary for reproduction.

23. (a) & (b) Label pollen grain, male germ cells, pollen tube, stigma, ovary and female germ cell in the above diagram.

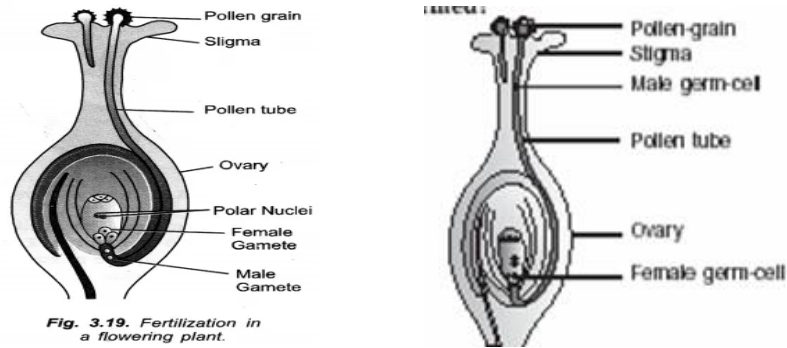


Fig. 3.19. Fertilization in a flowering plant.

(c) A **zygote** is the cell **formed** when two gametes (male and female) fuse during fertilization.

24(a) Placenta is a disc which is embedded in the uterine wall. It contains villi on the embryo's side of the tissue.

On the mother's side are blood spaces, '

This provides a large surface area for diffusion of glucose, oxygen and other nutrients from the mother to the embryo. And excretory substances from the embryo to the mother.

(b) Two bacterial STDs are:

1. Syphilis
2. Gonorrhoea

Two viral STDs are:

1. Acquired immuno deficiency syndrome (AIDS)
2. Genital Warts

And The effective contraceptive method is condom.

25. (a) 1. Oral pills - Oral contraceptive pills acts by changing the hormonal balance of the body so that eggs are not released and fertilisation cannot occur.

2. Condoms – Act as a mechanical barrier so that sperm does not reach the egg. Condoms on the penis or similar coverings worn in the vagina can serve this purpose.

(b) misuse of surgical method – Abortion as a means of termination of unwanted pregnancy has been misused to terminate only female foetus. This has caused a decline in the sex ratio which is likely to create social tension. In order to prevent, the government has banned prenatal sex determination.

26. Two major processes namely formation of gametes and fusion of gametes constitute sexual reproduction.

1) It is a source of genetic variation among a population of organisms. (2) It gives rise to individuals more adapted to **the** environment. (3) It helps in survival of species. (4) It helps in evolution of organisms.

27.a) i. Thinner hair can also appear on legs and arms, as well as on the face.

ii. The skin frequently becomes oily and we might begin to develop pimples.

b) The result of reckless female foeticide decline in male female sex ratio.

c) Oral contraceptive pills.

d) rate of birth in a given population