

Section A

- Write the answer of the following questions. [Each carries 1 Mark] [20]
- The period during adolescence is called
 - Child sex ratio is at an alarming rate.
 - DNA possesses information for of features.
 - In cell division occurs in any plane.
 - are useful for ensuring the survival of species.
 - Gonorrhoea kills resistance / immunity of the body.
 - Stigma is sticky.
 - Budding takes place in Amoeba.
 - RNA has a message of inheritance characters.
 - The tendency for variation during reproduction is the basis for evolution.
 - Which of the following is the disease transmitted sexually (STD) ?
(A) Fever (B) Syphilis (C) Jaundice (D) Typhoid
 - is included in diseases transmitted by virus.
(A) Syphilis (B) Piles (C) Gonorrhoea (D) Malaria
 - regulates the characters of youth in adult males.
(A) Oestrogen (B) Progesterone (C) Testosterone (D) Cholesterol
 - is not a vector in transfer of pollen grain.
(A) wind (B) water (C) animals (D) flower
 - The reproductive part located in the centre at a basal part is called
(A) pistil (B) stamen (C) petal (D) sepal
 - Give location and function of DNA.
 - When DNA copies created ?
 - Give names of Nucleic acids –
 - What is important for the survival of species ?
 - On what the reproduction method of living organisms depend ?

Section B

- Write the answer of the following questions. [Each carries 2 Marks] [16]
- During which process DNA copy is formed ? Give its effect.
 - Variation is beneficial to the species but not necessarily for the individuals why ?
 - Explain fragmentation reproduction.
 - Explain transmission of diseases by sexual actions giving an example :
 - How are the modes for reproduction different in unicellular and multicellular organisms ?
 - How is binary fission indifferent from multiple fission ?

27. Why is DNA copying an essential part of the process of reproduction ?
28. What is the role of seminal vesicles and the prostate gland ?

Section C

- Write the answer of the following questions. [Each carries 3 Marks] [12]
29. What is vegetative propagation ? Explain its advantages.
30. Explain : Implantation of embryo in uterus and birth of an infant.
31. Mention various methods of contraception.
32. Explain : In our country, child sex ratio is declining at an alarming rate.

Section D

- Write the answer of the following questions. [Each carries 4 Marks] [12]
33. Explain spore formation in Rhizopus by drawing a diagram.
34. Explain germination of pollen grain on Stigma with the help of a suitable diagram.
35. Explain female reproductive system by drawing a diagram.



OPEN STUDENT FOUNDATION**CHAPTER:7****STD 10 : SCIENCE****Date : 24/02/24****IMPORTANT QUESTION DAY 7**

Section [A] : 1 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
1.	-	Chap 7	S4	22	QP23P11B1012_P1C7S4Q22
2.	-	Chap 7	S4	29	QP23P11B1012_P1C7S4Q29
3.	-	Chap 7	S4	3	QP23P11B1012_P1C7S4Q3
4.	-	Chap 7	S4	7	QP23P11B1012_P1C7S4Q7
5.	-	Chap 7	S4	14	QP23P11B1012_P1C7S4Q14
6.	-	Chap 7	S5	18	QP23P11B1012_P1C7S5Q18
7.	-	Chap 7	S5	12	QP23P11B1012_P1C7S5Q12
8.	-	Chap 7	S5	7	QP23P11B1012_P1C7S5Q7
9.	-	Chap 7	S5	1	QP23P11B1012_P1C7S5Q1
10.	-	Chap 7	S5	2	QP23P11B1012_P1C7S5Q2
11.	B	Chap 7	S6	70	QP23P11B1012_P1C7S6Q70
12.	B	Chap 7	S6	57	QP23P11B1012_P1C7S6Q57
13.	C	Chap 7	S6	40	QP23P11B1012_P1C7S6Q40
14.	D	Chap 7	S6	32	QP23P11B1012_P1C7S6Q32
15.	A	Chap 7	S6	29	QP23P11B1012_P1C7S6Q29
16.	-	Chap 7	S7	2	QP23P11B1012_P1C7S7Q2
17.	-	Chap 7	S7	5	QP23P11B1012_P1C7S7Q5
18.	-	Chap 7	S7	4	QP23P11B1012_P1C7S7Q4
19.	-	Chap 7	S7	8	QP23P11B1012_P1C7S7Q8
20.	-	Chap 7	S7	11	QP23P11B1012_P1C7S7Q11

Section [B] : 2 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
21.	-	Chap 7	S1	2	QP23P11B1012_P1C7S1Q2
22.	-	Chap 7	S1	4	QP23P11B1012_P1C7S1Q4
23.	-	Chap 7	S1	6	QP23P11B1012_P1C7S1Q6
24.	-	Chap 7	S1	26R	QP23P11B1012_P1C7S1Q26R
25.	-	Chap 7	S3	9	QP23P11B1012_P1C7S3Q9
26.	-	Chap 7	S8	2.1	QP23P11B1012_P1C7S8Q2.1
27.	-	Chap 7	S8	2.5	QP23P11B1012_P1C7S8Q2.5
28.	-	Chap 7	S8	3.2	QP23P11B1012_P1C7S8Q3.2

Section [C] : 3 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
29.	-	Chap 7	S1	10R	QP23P11B1012_P1C7S1Q10R
30.	-	Chap 7	S1	24	QP23P11B1012_P1C7S1Q24
31.	-	Chap 7	S1	27	QP23P11B1012_P1C7S1Q27
32.	-	Chap 7	S1	28	QP23P11B1012_P1C7S1Q28

Section [D] : 4 Marks Questions

No	Ans	Chap	Sec	Que	Universal_Queld
33.	-	Chap 7	S1	12R	QP23P11B1012_P1C7S1Q12R
34.	-	Chap 7	S1	17	QP23P11B1012_P1C7S1Q17
35.	-	Chap 7	S1	22	QP23P11B1012_P1C7S1Q22

OPEN STUDENT FOUNDATION

CHAPTER:7

STD 10 : SCIENCE IMPORTANT QUESTION DAY 7

Date : 24/02/24

Section A

● Write the answer of the following questions. [Each carries 1 Mark] [20]

1. The period during adolescence is called
⇒ Puberty
2. Child sex ratio is at an alarming rate.
⇒ declining
3. DNA possesses information for of features.
⇒ Inheritance
4. In cell division occurs in any plane.
⇒ Amoeba
5. are useful for ensuring the survival of species.
⇒ Variations
6. Gonorrhoea kills resistance / immunity of the body.
⇒ False
7. Stigma is sticky.
⇒ True
8. Budding takes place in Amoeba.
⇒ False
9. RNA has a message of inheritance characters.
⇒ False
10. The tendency for variation during reproduction is the basis for evolution.
⇒ True
11. Which of the following is the disease transmitted sexually (STD) ?
(A) Fever (B) Syphilis (C) Jaundice (D) Typhoid
Ans. (B) Syphilis
12. is included in diseases transmitted by virus.
(A) Syphilis (B) Piles (C) Gonorrhoea (D) Malaria
Ans. (B) Piles
13. regulates the characters of youth in adult males.
(A) Oestrogen (B) Progesterone (C) Testosterone (D) Cholesterol
Ans. (C) Testosterone
14. is not a vector in transfer of pollen grain.
(A) wind (B) water (C) animals (D) flower
Ans. (D) flower
15. The reproductive part located in the centre at a basal part is called
(A) pistil (B) stamen (C) petal (D) sepal
Ans. (A) pistil

16. Give location and function of DNA.
- ➡ DNA is located in nucleus of a cell which transport heredity.
17. When DNA copies created ?
- ➡ At the time of cell division.
18. Give names of Nucleic acids –
- ➡ (a) DNA-Deoxyribo Nucleic Acid
 - (b) RNA-Ribo Nucleic Acid
19. What is important for the survival of species ?
- ➡ Variations are important for the survival of species.
20. On what the reproduction method of living organisms depend ?
- ➡ The method of reproduction of living organism is based on their body design.

Section B

● Write the answer of the following questions. [Each carries 2 Marks]

[16]

21. During which process DNA copy is formed ? Give its effect.
- ➡ The basic event of reproduction is the creation of DNA copy.
 - ➡ In a reproductive cell DNA, cells use various chemical reactions to build copies of their DNA
 - ➡ Other cell designs are created along with DNA copies.
 - ➡ The DNA copies get separated.
 - ➡ After that cell gets divided and two cells are formed.
 - ➡ The consistency of DNA copying during reproduction is important for the maintenance of the body design features that allow the organism to use that particular niche.
22. Variation is beneficial to the species but not necessarily for the individuals why ?
- ➡ Niches of living organisms can change it is beyond the control of the living organisms. E.g. temperatures on earth can go up or down, water levels can vary, meteorite hits.
 - ➡ A population of reproducing organisms are suited to a particular niche and if the niche were drastically altered, the population could be wiped out.
 - ➡ If some variations were to be present in a few individuals in these populations there would be some chance for them to survive because;
 - Large niche of bacteria are found living in cold water. If the water temperature were to be increased by global warming, most of these bacteria would die.
 - But few variants resistant to heat would survive and grow further.
23. Explain fragmentation reproduction.
- ➡ In multicellular organisms with relatively simple body organization simple reproductive method is fragmentation.
 - ➡ It is seen in Spirogyra-algae. Spirogyra simply breaks up into smaller pieces.
 - ➡ These pieces or fragments grow into new individuals and exist independently.
24. Explain transmission of diseases by sexual actions giving an example :
- ➡ In sexual intercourse male and female both are associated. When one of them is affected by a disease his/her partner is also affected because the sexual act is a very intimate connection of bodies.

➡ These include bacterial infections such as gonorrhoea and syphilis and viral infections such as warts and HIV-AIDS.

➡ Thus, reproductive health gets in danger.

25. How are the modes for reproduction different in unicellular and multicellular organisms ?

Mode for reproduction in unicellular organisms	Mode for reproduction in multicellular organisms
(1) Being a unicellular body there is no organ or tissue for reproduction.	(1) In multicellular organisms, special cells are there for reproduction processes or separate reproductive system is formed.
(2) It reproduces by binary fission or budding.	(2) It produces new generation by sexual reproduction.
(3) New generations are like parents only.	(3) New generations are like mother-father and some special characters.
(4) E.g., Amoeba	(4) E.g., Human

26. How is binary fission indifferent from multiple fission ?

Binary fission	Multiple fission
(1) Nucleus is divided into two equal parts.	(1) Nucleus is divided into many small nuclei.
(2) At the end of divisions two new cells are formed from a cell. e.g. Amoeba	(2) A nucleus is divided into many small equal nuclei. e.g. Plasmodium

27. Why is DNA copying an essential part of the process of reproduction ?

➡ It is important for the maintenance of the body design features that allows the organism to use that particular niche.

28. What is the role of seminal vesicles and the prostate gland ?

➡ Prostate gland and the seminal vesicles add their secretions to vas deferens. Due to that

- Sperms are in a fluid which makes their transport easier.
- Sperms also get nutrition from the fluid.

Section C

● Write the answer of the following questions. [Each carries 3 Marks]

[12]

29. What is vegetative propagation ? Explain its advantages.

➡ Vegetative parts of some plants – roots, stem and leaves develop in favourable conditions and can produce a new plant.

➡ Plants can use its ability for a mode of reproduction.

➡ This technique of vegetative propagation is also used in agriculture and rapid production is achieved. E.g., In sugarcane, roses or grapes, flower or fruits can be obtained very fast by layering or grafting.

➡ Advantages of vegetative propagation :

➡ Bananas, oranges, roses, mangoes can be grown successfully.

➡ Seedless fruits are formed.

➡ Genetically similar to parent plant.

Plants raised by vegetative propagation can bear flower and fruits earlier than produced from seeds.

30. Explain : Implantation of embryo in uterus and birth of an infant.

- ➡ Zygote is implanted in uterus and division starts.
- ➡ The embryo gets nutrition from the mother's blood with the help of a special tissue called placenta.
- ➡ Placenta is a disc which is embedded in the uterine wall. It contains villi on the embryo's side of the tissues.
- ➡ On the mother's side are blood spaces, which surround the villi. This provides a large surface area for glucose and oxygen to pass from the mother to embryo.
- ➡ The developing embryo will also generate waste substances which can be removed by transferring them into the mother's blood through the placenta.
- ➡ The development of the child inside the mother's body takes approximately nine months.
- ➡ The child is born as a result of rhythmic contractions of the muscles in the uterus.

31. Mention various methods of contraception.

- ➡ The sexual act always has the potential to lead to pregnancy.
- ➡ But when a female is not mentally ready for it, her health will be adversely affected. At this step it is necessary to avoid pregnancy. There are many methods of contraceptions. They are as follows :
- ➡ Mechanical barrier : Condoms on the penis or similar covering is worn in the vagina, so that sperm does not reach the egg.
- ➡ Contraceptive Tablets : These drugs contains hormones in certain amount which change the hormonal balance of the body. So that eggs are not released and fertilization cannot occur.
- ➡ Limitations : Drugs contain hormones, they change hormonal balances, they can cause side effects.
- ➡ Copper-T or Loop : If a female is using copper-T then this will help to prevent her from sexually transmitted disease.
- ➡ Loop or copper-T are placed in the uterus. It prevents pregnancy.
- ➡ Limitation : By putting Loop or Copper-T, uterus remains artificially irritated so some side effects can be caused.
- ➡ Operation : The vas deferens in the male is blocked, sperm transfer will be prevented by the operation in males.
- ➡ The fallopian tube in the female is blocked, the egg will not be able to reach the uterus.
- ➡ Thus by surgery, fertilization is prevented by creating blocks. This method is very safe.
- ➡ Limitation : Surgery itself can cause infections and other problems if not performed properly.

32. Explain : In our country, child sex ratio is declining at an alarming rate.

- ➡ For a healthy society, the female-male sex ratio must be maintained.
- ➡ Surgery can also be used for removal of unwanted pregnancies. This may be misused by people.
- ➡ Due to of reckless female foeticides, prenatal sex determination has been prohibited by law.
- ➡ Due to the above reasons, child sex ratio is declining at alarming rate in our country.

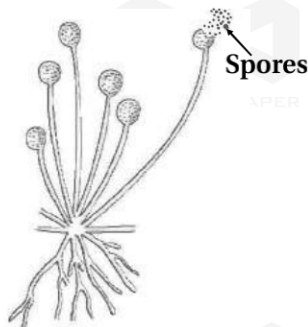
Section D

[12]

● Write the answer of the following questions. [Each carries 4 Marks]

33. Explain spore formation in Rhizopus by drawing a diagram.

➡ In many simple multi cellular organisms specific reproductive parts can be identified.



**Spore formation
in Rhizopus**

➡ But in some multicellular simple organisms such reproduction cultured designs are not found. E.g., Rhizopus fungi.

➡ In Rhizopus fungus, thread like structures are present. Reproduction can not take place by it. But on the upper side tiny blob-on-a-stick like structures are formed in which sporangia is formed and in that spores are formed.

➡ Due to explosion of sporangia, spores which come out, create new organism of Rhizopus under favourable conditions.

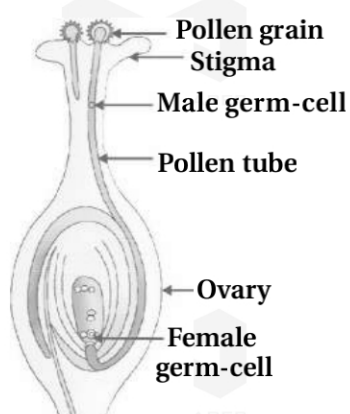
➡ The spores are covered by thick walls that protect seed in unfavourable conditions.

➡ Such seeds when come into contact with another moist surface starts begin to grow.

➡ Thus new organism is formed with the help of spore, however not having a reproductive organ. Self existence is sustained and spread fast.

34. Explain germination of pollen grain on Stigma with the help of a suitable diagram.

➡ Pollen grain is transferred to stigma of pistil by different



Germination of pollen on stigma

vectors. This is called pollination. It has two types.

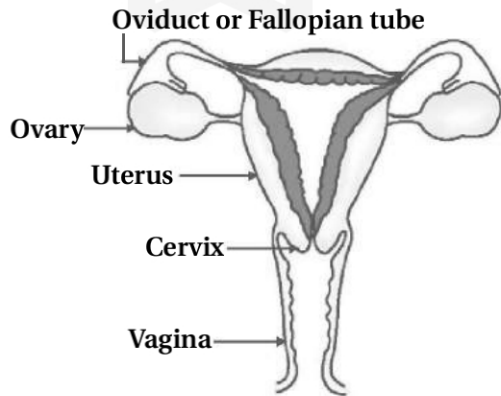
➡ Self Pollination : The pollen needs to be transferred from the stamen to the stigma. If this transfer of pollen occurs in the same flower it is referred to as self pollination.

➡ Cross pollination : If the pollen is transferred from one flower to another it is known as cross pollination.

- ➡ After the pollen lands on a suitable stigma, it has to reach the female germ cells which are in the ovary. For this a tube grows out of the pollen grain and travels through the style to reach the ovary.
- ➡ The male germ cell produced by pollen grain fuses with the female gamete present in the ovule. This fusion of the germ cells or fertilization gives us the zygote which is capable of growing into a new plant.

35. Explain female reproductive system by drawing a diagram.

- ➡ The female germ cells or eggs cells are made in the ovaries. Moreover hormone progesterone is also formed.



**Human - Female
reproductive system**

- ➡ When a girl is born, the ovaries already contain thousands of immature eggs. On reaching puberty some of these start maturing.
- ➡ Oviduct : The egg is carried from the ovary to the womb through a thin oviduct (fallopian tube).
- ➡ Uterus : The two oviducts unite into an elastic bag like structure known as the uterus.
- ➡ Cervix : The uterus opens into the vagina through cervix.