



Summer Vacation Homework CLASS – 12th Foundation

**SURAJ
SCHOOL**
MAHENDERGARH

Dear Students

Please do this in Holiday Homework Notebook and take your parents help to do this task.

Subject		❖ ENGLISH		
✚ Learning	Learn all short question / answer from the following lessons and poems in Flamingo.			
	Lessons ▪ The Last Lesson ▪ Lost Spring ▪ Deep Water ▪ The Rattrap ▪ Indigo	Poems ▪ My Mother at Sixty Six ▪ Keeping Quiet ▪ A Thing of Beauty ▪ A Roadside Stand ▪ Aunt Jennifer’s Tigers		
✚ Writing	Write theme and Message of each poem mentioned below : • My Mother at Sixty Six • Keeping Quiet • A Thing of Beauty • A Roadside Stand • Aunt Jennifer’s Tigers Write Seven notices based on the following:- • Cultural Activities • Academic Activities • Sports, Excursion and Fetes • Lost & Found Write articles having following titles : • Changing trends in education • Role of youth in frightening corruption • Status of women in society • Why is tourism not flourishing in India • Importance of head work and punctuality in a student life			
✚ Activity				
	❖ Cut 10 - 15 different reports from English Newspapers about current global issues and Social Problems and paste them in your notebook.			

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CLASS – 12th Foundation Section

Subject ❖ Music Hind Vocal	
 Learning +  Writing	- ताल परिचय – रूपक ताल, झपताल, धमार ताल, - परिभाषाएं – अंलकार, ग्राम, कण स्वर, वर्ण, आलाप, खटका, मुर्की, मूर्च्छना, गमक, मींड़, तान - ग्रंथ परिचय – ☒ संगीत रत्नाकर ☒ संगीत परिजात - रागो का शास्त्रीय परिचय – ☒ राग भैरव ☒ राग मालकौंस ☒ राग बागेश्री - रागों के समय सिद्धांत के बारे में आप क्या जानते हैं? वर्णन कीजिए।

Subject ❖ Physical Education	
 Learning +  Writing	Unit 1 planning in sports Unit 2 children and women in sports
 Activity	Prepare daily routine exercise for 21 st June

Subject ❖ Mathematics	
 Learning +  Writing	❖ Holiday Homework 12th Foundation Maths - Relation and Functions - Inverse trigonometric functions - Matrices - Determinants - Continuity and Differentiability - Differentiation - Quadratic equation - Sets - Binomial Theorem - Permutation and combination - Sequence and series - Straight Line - Circle - Parabola, Ellipse, Hyperbola - Limit - Trigonometry - Logarithm (For all the above mentioned chapters - complete each and every pyq of jee main and NDA.

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CLASS – 12th Foundation Section

Subject

❖ **Chemistry**

XII F1 (NEET)

1. Concentration term (Theory + exercise of Cengage module + NCERT + NEET PYQ)
2. liquid solution (Theory + exercise of Cengage module + NCERT + NEET PYQ)
3. Electrochemistry (Theory + exercise of Cengage module + NCERT + NEET PYQ)
4. Chemical kinetics (Theory + exercise of Cengage module + NCERT + NEET PYQ)

XII F2 (JEE - MAINS)

1. Concentration term (Theory + Cengage module + NCERT + JEE PYQ)
2. liquid solution (Theory + Cengage module + NCERT + JEE PYQ)
3. Electrochemistry (Theory + Cengage module + NCERT + JEE PYQ)
4. Chemical kinetics (Theory + Cengage module + NCERT + JEE PYQ)

Subject

❖ **Physics**

XII F1 (NEET)

1. Coulomb's law
2. Electric field, potential
3. Gauss law, properties of conductor
4. Capacitor
5. Ohm's Law
6. KCL, KVL
7. Current electricity
8. Moving charge and Magnetism
9. 11th Revision



MCQ from module pyz from 2010 -2026
questions from HC verma

Do all numericals from NCERT, DC PANDEY, HC VERMA on above mentioned topics.
Also practice all previous year questions of NEET

XII F2 (JEE - MAINS)

1. Coulomb's law
2. Electric field, potential
3. Gauss law, properties of conductor
4. Capacitor
5. Ohm's Law
6. KCL, KVL



MCQ from module pyz from 2010 -2026
questions from HC verma

Do all numerical from NCERT, DC PANDEY, HC VERMA, CENGAGE on above mentioned topics.
Also practice all previous year questions of IITJEE MAINS, ADVANCED.

Homework Summer Vacation

CLASS – 12th Foundation Section



BIOLOGY

- Do this Holiday homework in your homework note book.
- All parts are compulsory.
- Submission of both hard copy as well as soft copy of holidays H.W must be necessary to the concerned subject teacher after completion of holidays.
- Make neat and clean properly labeled diagrams.

Part- A:-

(Multiple Choice Questions)

1. _____ is a lytic enzyme released by the sperm.
 - a. Hyaluronidase
 - b. Trypsin
 - c. Helicase
 - d. None of the above
2. How many autosomes does a human primary spermatocyte have?
 - a. 34
 - b. 44
 - c. 54
 - d. 33
3. Where does the ovum receive the sperm?
 - a. Animal pole
 - b. Vegetal pole
 - c. Zonapellucida
 - d. None of the above
4. _____ is an organelle that helps the sperm to penetrate the ovum.
 - a. Acrosome
 - b. Zonapellucida
 - c. Megalis
 - d. None of the above
5. Umbilical cord contains _____.
 - a. Pluripotent stem cells
 - b. Cord blood stem cells
 - c. Blood stem cells
 - d. None of the above
6. How does human sperm locomote?
 - a. Flagella
 - b. Cilia
 - c. Neutrophils
 - d. None of the above
7. Cryptorchidism is a condition where _____.
 - a. One of both testes are not developed
 - b. One or both testes fail to descend into the scrotum
 - c. One or both testes are not formed
 - d. None of the above
8. Bidder's canal receives _____.
 - a. Eggs
 - b. Sperms
 - c. Ammonia
 - d. Oxygenated blood
9. The hormone that is released from the testes is _____.
 - a. Progesterone
 - b. Vasopressin
 - c. Testosterone
 - d. None of the above
10. Wolffian duct is also known as _____.
 - a. Mesonephric duct
 - b. Ejaculatory duct
 - c. Major sublingual duct
 - d. Cystic duct
11. Acrosome is filled with _____.
 - a. Lipids
 - b. Hormones
 - c. Digestive enzymes
 - d. None of the above
12. _____ is an example of a viviparous animal.
 - a. Goat
 - b. Duck
 - c. Crocodile
 - d. None of the above

13. _____ is an example of an oviparous animal.
- Pigeon
 - Elephant
 - Sheep
 - None of the above
14. The _____ is an ovoviviparous animal.
- Basking shark
 - Bonobo
 - Blue shark
 - None of the above
15. The _____ is a temporary organ that connects a mammalian mother to its foetus.
- Placenta
 - Chorion
 - Endometrium
 - None of the above
16. A typical angiosperm anther is
- bilobed and monothecous
 - bilobed and ditheous
 - bilobed and athecous
 - monolobed and ditheous
17. The wall of a typical microsporangium which nourishes the developing pollen grains is
- Tapetum
 - endothecium
 - Middle layers
 - epidermis
18. Somatogenic reproduction is nothing but
- Asexual reproduction
 - Sexual reproduction
 - Parthenogenesis
 - None of these
19. Asexual reproduction takes place in
- Monera
 - Protists
 - Sponges
 - all of these
20. Which one of the following layer of the anther wall helps in its dehiscence?
- Epidermis
 - Middle layer
 - Endothecium
 - Tapetum
21. Product of sexual reproduction generally generates
- Longer viability of seeds
 - Prolonged dormancy
 - New genetic combination leading to variation
 - Large biomass
22. The outer wall and inner wall of the pollen grain are _____ respectively.

- Intine and exine
 - Exine and intine
 - Epidermis and endodermis
 - None of the above
23. When both types of reproductive organs are present in separate parents, such animals are called
- Dioecious
 - Monoecious
 - Hermaphrodite
 - Both (B) and (C)
24. Pollen grain can withstand high temperature, acid and alkaline conditions due to presence of exine made up of
- pectocellulose
 - sporopollenin
 - Cellulose
 - lignocelluloses
25. Select the CORRECT statement from the following.
- Sporogenous tissue is haploid.
 - Endothecium of microsporangium nourishes the developing pollen grains.
 - The outer three wall layers of microsporangium help in dehiscence of anther.
 - Epidermis of microsporangium is followed by sporogenous tissue.
26. In pollen grain, sporopollenin is absent in
- intine
 - exine
 - Germ pores
 - both (A) and (C)
27. Which of the following has proved helpful in preserving pollen as fossils?
- Oil content
 - Cellulosic intine
 - Pollenkitt
 - Sporopollenin
28. Banana is an example of
- parthenocarpy
 - apomixis
 - parthenogenesis
 - polyembryony
29. During embryonic development, the baby starts moving, and hair starts appearing on the head during embryonic development.
- Fourth month
 - Fifth month
 - Eight month
 - Ninth month
30. Which of the following hormones are involved in the process of oogenesis?
- Estrogen

(B) Testosterone

(C) Follicle-stimulating hormones (FSH)

(D) Both (A) and (C)

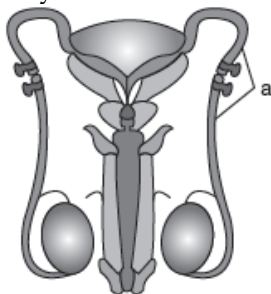
31. The amniocentesis test is based on _____ to determine the sex of developing foetus.

- (a) External genitalia
- (b) Secondary sexual characters
- (c) Chromosomal pattern
- (d) Embryonic enzymes

32. In lactational amenorrhea, which event does not occur in menstrual cycle?

- (a) Menstrual flow
- (b) Ovulation
- (c) Funicular phase
- (d) Luteal phase

33. Which portion of male reproductive system has been cut and ligated in figure?



- (a) Vasa efferentia
- (b) Urethra
- (c) Vas deferens
- (d) Rete testis

34. Surgical method for terminal contraception work on which of the following grounds?

- (a) Block gamete transport
- (b) Block gamete generation
- (c) Alter biochemical nature of gamete
- (d) Destroys gamete permanently

35. An ideal contraceptive should be

- (A) User-friendly
- (B) Easily available
- (C) Effective and reversible
- (D) With nor or least side-effects

- (a) A, B and C only
- (b) A and D only
- (c) B and C only
- (d) All

36. Which of the following viruses is not transferred through semen of an infected male?

- (a) Hepatitis B virus
- (b) Human immunodeficiency virus
- (c) Chikungunya virus
- (d) Ebola virus

37. An injectible form of the hormone based contraceptive is

- (a) Norplant
- (b) Depo-provera
- (c) Mala-D
- (d) Saheli

38. During which phase of the pregnancy MTP is safe?

- (a) 1st trimester
- (b) 2nd trimester
- (c) 3rd trimester
- (d) 4th trimester

39. IVF in which the early zygote with up to 8 blastomeres is transferred to the Fallopian tube is called

- (a) ZIFT
- (b) GIFT
- (c) ICSI
- (d) IUI

40. IUT Stands for

- (a) Inter Uterine Transfer
- (b) Intra Uterine Transfer
- (c) In-Uterus Transfer
- (d) None of these

41. Which of the following is a correct statement?

- (a) IUDs once inserted need not be replaced
- (b) Jellies and cream enable sperms to reach towards ovum speedly
- (c) IUDs increase phagocytosis of sperms in the uterus
- (d) Pills suppress gametogenesis in males

42. Choose the correct matched statements from the following.

- I. IUT – Embryo is transferred into the uterus after *in vitro* fertilisation.
- II. GIFT – Gametes are collected and injected in the Fallopian tube.
- III. AI – Taking semen from donor and transferring it into female genital tract.
- IV. ZIFT – Zygote inserted into the Fallopian tube.
- V. ICSI – One sperm transferred into the ovum.

- (a) I, II and III
- (b) II, III and IV
- (c) III, IV and V
- (d) I, II, III, IV and V

43. Using which contraceptive also provides protection from contracting STDs and AIDs?

- (a) Diaphragms
- (b) Spermicidal foams
- (c) Condoms
- (d) lactational amenorrhoea

44. Mark the incorrect statement

- (a) According to 2001 census our population growth rate was 1.7%
- (b) Marriageable age for male and female is respectively 18 and 21 years
- (c) An ideal contraceptive should be reversible
- (d) The problem of infertility in India lies most often in female partner

45. Amniocentesis can be used to detect all the listed diseases except

- (a) haemophilia
- (b) malaria
- (c) sickle cell anaemia
- (d) Down syndrome

46. Which is the most widely accepted method in India?

- (a) Condom
- (b) LNG – 20

(c) Progesterone (d) IUD's
47. Hormone releasing IUD's are

- (a) Progestasert (b) Lippes loop
(c) Multiload 375 (d) None of above

48. What is the function of pills?

- (a) Inhibit ovulation
(b) Increase phagocytosis of sperm
(c) Inhibit fertilization
(d) None of the above

49. MTPs are considered safe up to how many weeks of pregnancy?

- (a) 10 (b) 12
(c) 8 (d) 4

50. Among the given diseases which of the following are related to STDs

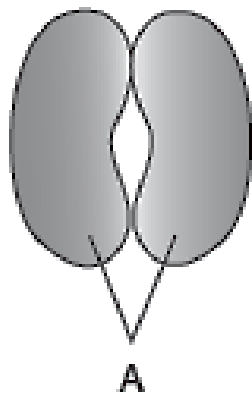
- (A) Pelvic inflammatory disease
(B) Still Birth
(C) Infertility

- (a) Only (A) (b) Only (B)
(c) Only (A) and (C) (d) All (A), (B) and (C)

51. Tetragonal anther consists of

- (a) One microsporangia (b) Two microsporangia
(c) Three microsporangia (d) Four microsporangia

52. What represents 'A' in the following figure?

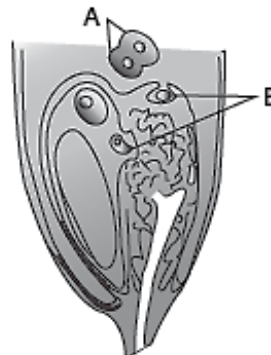


- (a) Cotyledons (b) Scutellum
(c) Shoot apex (d) Radicle

53. How many embryo sacs are present in an ovule?

- (a) One embryo sac
(b) More than one embryo sac
(c) One embryo sac (generally)
(d) Two embryo sacs

54. Identify A and B in this figure.



- (a) A: Polar nuclei, B: Male gametes
(b) A: Female gametes, B: Polar nuclei
(c) A: Synergid, B: Egg cell
(d) A: Male gametes, B: Synergid

55. Amongst the pollinating agent which one is the most dominant?

- (a) Butterflies and flies (b) Bees
(c) Beetles and wasps (d) Moths and birds

56. Persistent nucleus perisperm is found in

- (a) Wheat and maize (b) Pea + ground nut
(c) Barley and castor (d) Black paper + beet

57. Apomixis is seen in

- (a) Asteraceae (b) Grasses
(c) Both (a) and (b) (d) None of these

58. In majority of angiosperms

- (a) There are numerous antipodal cells
(b) Reduction division occurs in the megaspore mother cells
(c) A small central cell is present in the embryo sac
(d) Egg has a filiform apparatus

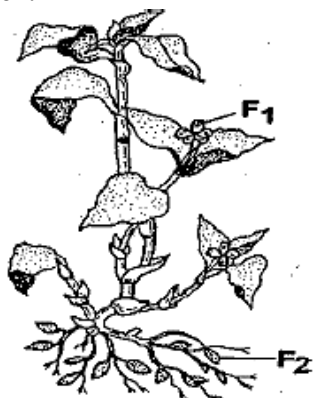
59. Microsporangium is generally surrounded by 4 wall layers. Which of the following 3 wall layers perform the function of protection and help in the dehiscence of anther to release the pollen?

- (a) Epidermis, tapetum, endothecium
(b) Epidermis, aril, endothecium
(c) Epidermis, endodermis, mesocarp
(d) Epidermis, middle layer and endothecium

60. Which of the following plants produces chasmogamous and Cleistogamous flowers?

- (a) Vicia (Common pansy) (b) Oxalis
(c) Commelina (d) AII

61.



The given figure shows the plant of *Commelina* with two types of flowers (F₁ and F₂). The flowers are -

- | F ₁ | F ₂ |
|-------------------|----------------|
| (a) Neutral | Staminate |
| (b) Cleistogamous | Chasmogamous |
| (c) Chasmogamous | Cleistogamous |
| (d) Cryptogamous | Ovulate |

62. In which part of a flower do both meiosis and fertilization occur?

- (a) ovule (b) stigma
(c) anther (d) petal

63. Which is a sesamoid bone?

- (a) Patella (b) Femur
(c) Ulna (d) Pubis

64. An example of merocrine gland is

- (a) Sebaceous gland (b) Pineal gland
(c) Salivary gland (d) Mammary gland

65. Embryo sac represents:

- (a) Megaspore (b) Female gametophyte
(c) Megasporophyll (d) Megagamete

66. Which pollination gives genetically different types of pollen grains?

- (a) Autogamy (b) Geitonogamy
(c) Xenogamy (d) Chasmogamy

67. Coleoptile is present at:

- (a) Shoot apex & few leaf primordia enclosed in solid foliar structure
(b) Shoot apex & all leaf primordia enclosed in solid foliar structure
(c) Root apex & all leaf primordia enclosed in hollow foliar structure
(d) Shoot apex & few leaf primordia enclosed in hollow foliar structure

68. Example of false fruit includes-

- (a) Banana (b) Apple
(c) Strawberry (d) Both (b) & (c)

69. Which of the following floral parts forms pericarp after fertilisation?

- (a) Nucellus (b) Outer integument
(c) Ovary wall (d) Inner integument

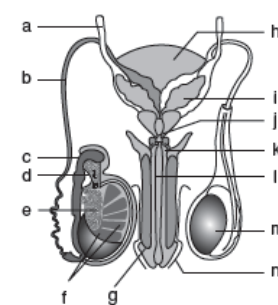
70. Example of apomixis is:

- (a) Leguminosae (b) Asteraceae
(c) Lupine (d) Phoenix dactylifera

71. An adult testes is oval in shape. Its width is about ____ and length is about ____ respectively.

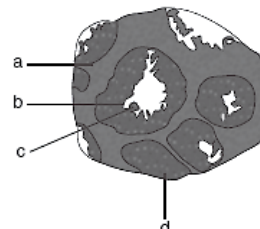
- (a) 4 to 5 cm, 2 to 3 cm (b) 2 to 5 cm, 1 to 3 cm
(c) 2 to 3 cm, 4 to 5 cm (d) 2 to 5 cm, 4 to 7 cm

72. What is indicated by 'l' in the figure?



- (a) Vas deferens (b) Ureter
(c) Urethra (d) Ejaculatory duct

73. What is indicated by 'c' in the figure?

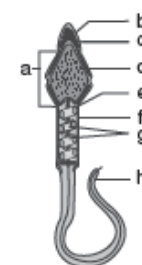


- (a) Spermatozoa (b) Spermatogonia
(c) Interstitial cells (d) Sertoli cells

74. Which layer of uterus undergoes cyclic changes during menstrual cycle?

- (a) Mesoderm (b) Myometrium
(c) Endothelium (d) Endometrium

75. What is indicated by 'c' in the figure?



- (a) Ascosome (b) Acrosome
(c) Nucleosome (d) Hyaluronidase

76. For a normal male fertility, which of the following statements is correct?

- (a) 60 per cent sperm must have normal motility and 40 per cent must have normal shape.
(b) 60 per cent sperm must have normal shape and 40 per cent must have acrosome.

(c) 60 per cent sperm must have normal shape and 40 per cent must have vigorous motility.

(d) None of these

77. Find out the incorrect statement about ovaries.

(a) Each ovary is connected to the pelvic wall and uterus by ligaments.

(b) The ovarian stroma is divided into two zones, i.e., a peripheral cortex and an inner medulla.

(c) Each ovary is covered by thick epithelium which encloses the ovarian stroma.

(d) Ovaries are the primary female sex organs.

78. Menopausal age in human being is

(a) 45 years (b) 55 years

(c) both a and b (d) 60 years

79. What is the correct sequence of sperm formation?

(a) Spermatid, spermatocyte, spermatogonia, spermatozoa

(b) Spermatogonia, spermatocyte, spermatozoa

(c) Spermatogonia, spermatozoa, spermatocyte

(d) Spermatogonia, spermatocyte, spermatid, spermatozoa

80. Seminal plasma, the fluid part of semen, is contributed by

i. Seminal vesicle

ii. Prostate

iii. Urethra

iv. Bulbourethral gland

(a) i and ii (b) i, ii and iv

(c) ii, iii and iv (d) i and iv

81. Fimbriae are associated with which organ?

(a) Fallopian tube (b) Uterus

(c) Vagina (d) Ovary

82. Corpus luteum produces

(a) Estradiol (b) Testosterone

(c) Progesterone (d) None

83. When released from ovary, human egg contains

(a) Only Y chromosome (b) 2 X chromosome

(c) 1 X chromosome (d) XY chromosomes

84. _____ is the process by which a baby is pushed out of the uterus and passes out of the mother's body,

(a) Expulsion (b) Dilation

(c) Birth (d) Labor

85. Which of these is the name for human embryonic development?

(a) a placenta (b) a navel

(c) a blastocyst (d) a contraction

86. The secretion of male accessory glands contain:

(a) Fructose + Calcium + No enzymes

(b) Fructose + Calcium + Certain enzymes

(c) Sucrose + Calcium + Much more enzymes

(d) Sucrose + Calcium + Certain enzymes

87. Fallopian tube is also called

(a) Vas deferens (b) Uterus

(c) Ureter (d) Oviduct

88. Female accessory ducts include

(a) Fallopian tubes and vasa efferentia

(b) Oviducts, uterus and vagina

(c) Oviducts and vas deferens

(d) Fallopian tubes and seminal vesicles

89. At which stage of oogenesis, a haploid egg is fertilized by sperm?

(a) Primary oocyte (b) Secondary oocyte

(c) Oogonium (d) Ovum

90. How many chromosomes are present in the zygote?

(a) 23 (b) 46

(c) 22 (d) 48

91. Which of the following STD is not completely curable?

(a) Gonorrhoea (b) Genital warts

(c) Genital herpes (d) Chlamydia

92. The age group of _____ years is quite vulnerable to STDs.

(a) 10 to 19 (b) 15 to 22

(c) 17 to 27 (d) 15 to 24

93. In India, which gender is generally wrongly blamed for being infertile?

(a) Woman (b) Man

(c) Either man or woman (d) Genetic factors

94. The technique called Gamete Intra Fallopian Transfer (GIFT) is recommended for those females

(a) Who cannot produce an ovum.

(b) Who cannot retain the foetus inside uterus.

(c) Whose cervical canal is too narrow to allow the passage for the sperms.

(d) Who cannot provide suitable environment for fertilization.

95. In context of Amniocentesis, which of the following statements is incorrect?

(a) It is usually done when a woman is between 14–16 weeks pregnant

(b) It is used for prenatal sex determination

(c) It can be used for detection of Down syndrome

(d) It can be used for detection of Cleft palate

96. Embryo with more than 16 blastomeres formed due to in vitro fertilization is transferred into

(a) Fallopian tube (b) Fimbriae

(c) Cervix (d) Uterus

97. Intensely lactating mothers do not generally conceive due to the

- (a) suppression of gonadotropins
- (b) hypersecretion of gonadotropins
- (c) suppression of gametic transport
- (d) suppression of fertilization

98. Gamete Intra-fallopian transfer is -

- (a) injecting embryo into oviduct
- (b) an ART
- (c) injecting egg and sperm into oviduct in case of infertility
- (d) Both b and c

99. Amniocentesis can be used to detect all the listed diseases except

- (a) haemophilia
- (b) malaria
- (c) sickle cell anaemia syndrome
- (d) Down syndrome

100. RCH stands for

- (a) Routine check up of health
- (b) Reproduction cum hygiene
- (c) Reversible contraceptive hazards
- (d) Reproductive and child health care

Part- B

Make a PowerPoint presentation/ small size model according to your roll no/Name on the topic given below:-

General instructions:-

- It should be eco-friendly and light weight.
- No thermocol or polythene should be used.
- Size should be near about 16x20 inches.

Name	Topic
ROLL NO 1-5	T.S OF AN ANTER, MALE GAMETOPHYTE AND 7 CELLED- 8 NUCLEATE CONDITION
ROLL NO 6-15	EMBYROGENY IN DICOTS, MALE REPRODUCTIVE SYSTEM
ROLL NO 16-25	FEMALE REPRODUCTIVE SYSTEM AND GRAPH OF M.C
ROLL NO 26-30	STRUCTURE OF SPERM, EGG AND HUMAN FETUS WITHIN UTERUS
ROLL NO 31-35	GRAPH OF MC, FORMATION OF BILAMINAR AND TRILAMUNAR DISC
ROLL NO 36-45	T.S OF AN ANTER, GRAPH OF MC

Part- C

Learn all the Questions OF Reproduction given in your N.C.E.R.T book and Effectual book from the chapters which had been done till our last class.

Part- D

Answer the following questions:-

1. What is the reason for the absence of menstrual cycles during conception or pregnancy?
2. State the role of the epididymis in male fertility.
3. a. How many spermatozoa does one secondary spermatocyte produce?

b. Where in zygote does the first cleavage division occur?
4. Why does corpus luteum stay active throughout pregnancy and in the absence of fertilization, is active only for 10-12 days?
5. What is foetal ejection reflex? How does it cause parturition?
6. Describe the structure of a seminiferous tubule.
7. What is oogenesis? Give a brief account of oogenesis.
8. Why is breastfeeding recommended during the initial stages of infant growth?
9. Define self-incompatibility. How do self-incompatible plants pollinate?
10. Explain the pollination occurring in the chasmogamous flowers.