

BIOLOGY



Worksheet-4



STP

A PROJECT BY PUNJAB GROUP

Worksheet-4**(Reproduction)**

- Q.1** Repeated division by the cells of the germinal epithelium produce spermatogonia in:
- Sperm duct
 - Seminiferous tubules
 - Ejaculatory duct
 - Epididymis
- Q.2** Primary spermatocytes undergo meiotic division to form:
- Spermatids
 - Secondary spermatocytes
 - Sperms
 - Spermatogonia
- Q.3** Secondary spermatocytes give rise to spermatids through:
- Meiosis-I
 - Meiosis-II
 - Mitosis
 - Repeated division
- Q.4** Secondary spermatocytes originate from:
- Primary spermatocytes
 - Sperms
 - Spermatogonia
 - Spermatids
- Q.5** During spermatogenesis each spermatocyte ultimately gives rise to:
- Four viable sperms
 - Two viable sperms
 - One viable sperm
 - Three viable sperms
- Q.6** Germ cells in the ovary produce many oogonia which divide to give rise to primary oocytes by:
- Meiosis-I
 - Meiosis-II
 - Mitosis
 - Differentiation
- Q.7** Primary oocytes originate mitotically from:
- Oogonia
 - Primary oocytes
 - Secondary oocytes
 - Ova
- Q.8** Primary oocytes divide by _____ into haploid secondary oocytes and first polar body:
- Meiosis-I
 - Meiosis-II
 - Mitosis
 - Differentiation
- Q.9** Haploid secondary oocytes and first polar body are formed meiotically from:
- Ova
 - Oogonia
 - Primary oocytes
 - Follicle cells
- Q.10** The primary oocytes divide meiotically into the haploid:
- Secondary oocyte
 - First polar body
 - Second polar body
 - Secondary oocyte and first polar body
- Q.11** The secondary oocyte divides meiotically into the haploid:
- Secondary oocyte and second polar body
 - Ovum and secondary polar body
 - Secondary oocytes and first polar body
 - Germ cell and first polar body
- Q.12** A _____ is established between uterine and foetal tissue for the exchange of oxygen, carbon dioxide, wastes, nutrients and other material.
- Umbilical cord
 - Placenta
 - Conception
 - Pregnancy
- Q.13** Gametes production is continuous in:
- Human male
 - Human female
 - Ovaries of females
 - Uterus of females
- Q.14** It involves changes in the structure and function of the whole reproductive system:
- Menstrual cycle
 - Menstruation
 - Oogenesis
 - Gametogenesis
- Q.15** Only one follicle continues to grow with its primary oocytes while the rest breakdown by:
- Ovulation
 - Menstruation
 - Follicle degeneration
 - Follicle atresia

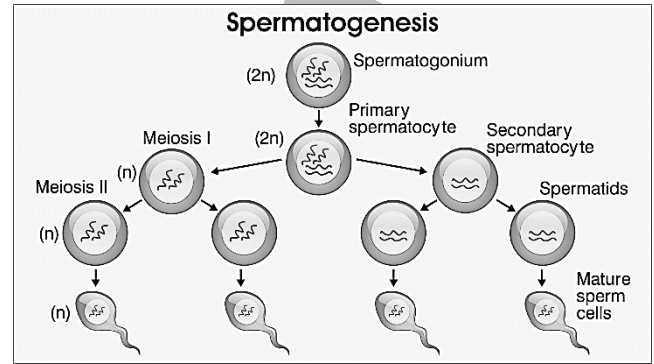
- Q.16 Estrogen stimulates:**
 A) Secretion of FSH
 B) Laying down of endometrium
 C) Secretion of LH
 D) Laying down of endometrium and secretion of LH
- Q.17 Decrease of FSH and increase of estrogen, causes the pituitary gland to secrete:**
 A) Progesterone C) LTH
 B) LH D) Prolactin
- Q.18 Follicle cells, after release of the egg, are modified to form a special structure called:**
 A) Placenta C) Follicle
 B) Corpus luteum D) Endometrium
- Q.19 This hormone develops the endometrium and makes it receptive for the implantation of zygote:**
 A) Estrogen C) FSH
 B) Progesterone D) ICSH
- Q.20 Menstruation usually lasts for:**
 A) 4-8 days C) 2-5 days
 B) 3-7 days D) 5-9 days
- Q.21 The discharge of blood and cell debris from vagina at the end of reproductive cycle is called:**
 A) Gestation C) Menstruation
 B) After birth D) Implantation
- Q.22 The human menstrual cycle generally repeats every _____ days.**
 A) 26 C) 28
 B) 27 D) 29
- Q.23 The uterine cycle in humans involves the preparation of the uterine wall to receive the _____ if fertilization occurs.**
 A) Ovum C) Embryo
 B) Egg D) Zygote
- Q.24 The ovary under the stimulus of _____, also produce _____.**
 A) FSH, LH
 B) FSH, Estrogen
 C) LH, FSH
 D) Estrogen, Progesterone
- Q.25 During luteal phase of menstrual cycle, the hormone at its peak:**
 A) Progesterone
 B) Estrogen
 C) LH
 D) GnRH
- Q.26 On which date is a woman most likely to ovulate if the first day of menstrual cycle was first april?**
 A) 5 april C) 20 april
 B) 14 april D) 28 april
- Q.27 The shedding of portions of the endometrium during a uterine (menstrual) cycle is called:**
 A) Menstruation C) Post ovulation
 B) Proliferation D) Ovulation
- Q.28 Corpus luteum starts secreting a hormone called:**
 A) Oestrogen C) Oxytocin
 B) Progesterone D) Testosterone
- Q.29 In human female, the discharge of blood and cell debris is called:**
 A) Ovulation C) Menstruation
 B) Abortion D) Secretion
- Q.30 The duration of gestation period in human female is usually:**
 A) 250 days C) 270 days
 B) 260 days D) 280 days
- Q.31 In humans, _____ takes place in the seminiferous tubules:**
 A) Oogenesis
 B) Spermatogenesis
 C) Fertilization
 D) Development of embryo
- Q.32 Two primary spermatocytes, in the end gives rise to _____ sperms:**
 A) Two B) Four
 C) Six D) Eight
- Q.33 Each primary oocyte, in the end gives rise to _____ ovum/ ova:**
 A) One C) Three
 B) Two D) Four

- Q.34 Pick up haploid cell:**
 A) Spermatogonium
 B) Primary spermatocyte
 C) Primary oocyte
 D) Spermatid
- Q.35 Its starts before birth in human females:**
 A) Spermatogenesis C) Menstruation
 B) Fertilization D) Oogenesis
- Q.36 How many sperms are formed from two secondary spermatocyte?**
 A) 1 C) 3
 B) 2 D) 4
- Q.37 They give rise to the primary spermatocytes by direct differentiation:**
 A) Secondary spermatocytes
 B) Spermatogonia
 C) Spermatids
 D) Spermatozoa
- Q.38 Primary oocyte divides meiotically to form:**
 A) Secondary oocytes C) Ovum
 B) Primary oocytes D) Egg
- Q.39 Which one of the following phase does not occur between 14 - 27 days of menstrual cycle?**
 A) Luteal C) Proliferative
 B) Secretory D) Ovulation
- Q.40 The follicle cells, after release of the egg, are modified to form a special structure called:**
 A) Follicles
 B) Corona radiata
 C) corpus luteum
 D) Zona pellucid
- Q.41 In human females, the periodic reproductive cycle is completed in approximately _____ days:**
 A) 20 C) 30
 B) 28 D) 40
- Q.42 This hormone develops the endometrium and make it receptive for the implantation of the zygote (placenta formation):**
 A) Androgen C) LH
 B) FSH D) Progesterone
- Q.43 Vascularization of endometrium is induced by:**
 A) LH C) Estrogen
 B) Progesterone D) Testosterone
- Q.44 Pick up the shortest phase of uterine cycle:**
 A) Menstruation phase
 C) Secretory phase
 B) Proliferative phase
 D) Ovulatory phase
- Q.45 The hormone which stimulates and vascularizes the endometrium:**
 A) LH C) Progesterone
 B) FSH D) Estrogen
- Q.46 The hormone, produced by the corpus luteum, that promotes the development of the uterine lining in females is called:**
 A) LH C) Progesterone
 B) FSH D) Estrogen
- Q.47 Pick up the inner lining of uterus:**
 A) Ectometrium C) Endometrium
 B) Myometirum D) Perimetrium
- Q.48 _____ cycle is a reproductive cycle found in all female mammals, EXCEPT human being:**
 A) Menstrual C) Oestrous
 B) Ovarian D) Uterine
- Q.49 The release of a _____ is timed to coincide with the thickening of the lining of the uterus:**
 A) Polar body
 C) Primary oocyte
 B) Ovum
 D) Secondary oocyte
- Q.50 The _____ cycle in humans involves the preparation of the uterine wall to receive the embryo if fertilization occurs:**
 A) Menstrual C) Uterine
 B) Ovarian D) Oestrous

ANSWER KEY (Worksheet-4)					
1	B	19	B	37	B
2	B	20	B	38	A
3	B	21	C	39	C
4	A	22	C	40	C
5	A	23	C	41	B
6	C	24	B	42	D
7	A	25	A	43	C
8	A	26	B	44	A
9	C	27	A	45	D
10	D	28	B	46	C
11	B	29	C	47	C
12	B	30	D	48	C
13	A	31	B	49	D
14	A	32	D	50	C
15	D	33	A		
16	D	34	D		
17	B	35	D		
18	B	36	D		

EXPLANATION

- Q.1** Answer is “Seminiferous tubules”
Explanation: Spermatogenesis occurs in seminiferous tubules.
- Q.2** Answer is “Secondary spermatocytes”
Explanation: Primary spermatocyte undergoes first meiotic division to give rise to two secondary spermatocytes which undergo second meiotic division to give rise to four spermatids which differentiate into four sperms.
- Q.3** Answer is “Meiosis-II”
Explanation: Spermatogonia differentiate into primary spermatocytes which undergo meiotic division to form secondary spermatocytes and spermatids, respectively.
- Q.4** Answer is “Primary spermatocytes”
Explanation: Spermatogonia differentiate into primary spermatocytes which undergo meiotic division to form secondary spermatocytes and spermatids, respectively.



- Q.5** Answer is “Four viable sperms”
Explanation: As all four meiotic products spermatogenesis survive.
- Q.6** Answer is “Mitosis”
Explanation: Primary oocytes are formed from oogonia by mitosis.
- Q.7** Answer is “Oogonia”
Explanation: Germ cells in the ovary produce many oogonia which divide mitotically to form primary oocytes. These are enclosed in groups of follicle cells. The primary oocyte divides meiotically into haploid secondary and first polar body. Second meiotic division in the oocyte proceeds as far as metaphase but is not completed until the oocyte is fertilized with sperm.
- Q.8** Answer is “Meiosis-I”
Explanation: Primary oocyte undergoes meiosis-I to give rise to a secondary oocyte and a polar body. Which undergo meiosis-II to produce an ovum and three polar bodies.
- Q.9** Answer is “Primary oocytes”
Explanation: Primary oocyte undergo meiosis-I to give rise to secondary oocyte and first polar body.
- Q.10** Answer is “Secondary oocyte and first polar body”
Explanation: Secondary oocyte and first polar body are formed by Meiosis-I from primary oocyte.

Q.11 Answer is “Ovum and secondary polar body”

Explanation: Secondary oocyte and first polar body divide by meiosis-II to give rise to an ovum and three polar bodies in the end.

Q.12 Answer is “Placenta”

Explanation: Placenta is a physical connection between maternal uterine wall and foetal tissue. It is source of exchange of material between mother and foetus as well as endocrine role is also performed by it to maintain pregnancy.

Q.13 Answer is “Human male”

Explanation: That is why reproductive life of human male is unlimited.

Q.14 Answer is “Menstrual cycle”

Explanation: Changes in whole reproductive system indicate menstrual cycle i.e. changes in uterus as well as in ovary.

Q.15 Answer is “Follicle atresia”

Explanation: When one follicle starts development rest of the follicles degenerate this is called follicle atresia.

Q.16 Answer is “Laying down of endometrium and secretion of LH”

Explanation: Estrogen hormone initiate thickening of uterine wall and stimulates laying down of endometrium. Moreover it inhibits the secretion of FSH and stimulates the secretion of LH.

Q.17 Answer is “LH”

Explanation: It is luteinizing hormone which induces rupturing of mature follicle and formation of corpus luteum.

Q.18 Answer is “Corpus luteum”

Explanation: Corpus luteum is a yellow colored structure formed by the rupturing of follicle during ovulation. It secretes progesterone.

Q.19 Answer is “Progesterone”

Explanation: Progesterone induces conception and maintains pregnancy.

Q.20 Answer is “3 – 7 days”

Explanation: It is 3-7 day on average.

Q.21 Answer is “Menstruation”

Explanation: However discharge of debris from vagina after parturition is called “after birth”.

Q.22 Answer is “28 days”

Explanation: It is a biorhythm of 28 days.

Q.23 Answer is “Embryo”

Explanation:

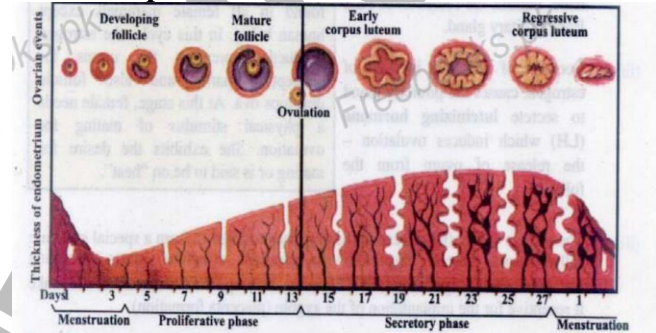


Fig. 18.5 The ovarian and uterine cycles in human female
The release of a secondary oocyte (ovulation) is timed to coincide with the thickening of the lining of the uterus. The uterine cycle in humans involves the preparation of the uterine wall to receive the embryo if fertilization occurs. Knowing how these two cycles compare, it is possible to determine when pregnancy is most likely to occur.

Q.24 Answer is “FSH, Estrogen”

Explanation: Production of estrogen is induced by FSH.

Q.25 Answer is “Progesterone”

Explanation: Rising levels of progesterone from the corpus luteum act on endometrium, causing the arteries to elaborate and converting the functional layer to a glandular secretory layer.

Q.26 Answer is “14th April”

Explanation: Because secretory (Luteal/postovulatory) phase has fixed number of days (15-28). 14th day in a normal menstrual cycle of 28 days.

Q.27 Answer is “Menstruation”

Explanation: The shedding of portions of the endometrium during a uterine (menstrual) cycle is called menstruation.

Q.28 Answer is “Progesterone”

Explanation: Corpus luteum starts secreting a hormone called progesterone.

Q.29 Answer is “Menstruation”

Explanation: In human female, the discharge of blood and cell debris is called Menstruation.

Q.30 Answer is “280 days”

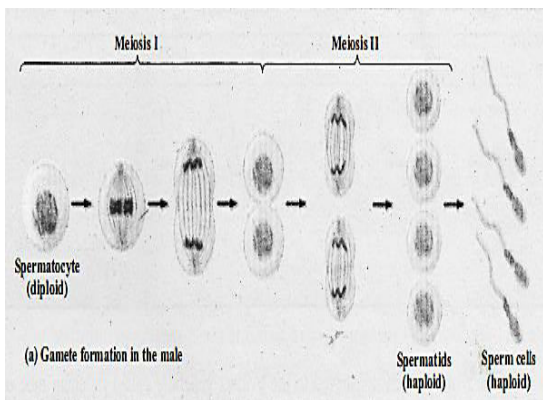
Explanation: The duration of gestation period in human female is usually 280 days (Nine months).

Q.31 Answer is “Spermatogenesis”

Explanation: In humans, spermatogenesis takes place in the seminiferous tubules, which are an intricate system of tubules in the testes where spermatogenesis takes place. The seminiferous tubules of an adult human male can sometimes produce over 100 million sperm per day.

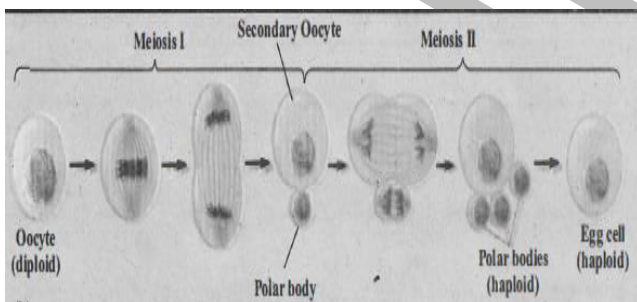
Q.32 Answer is “Eight”

Explanation:



Q.33 Answer is “One”

Explanation:



Q.34 Answer is “Spermatid”

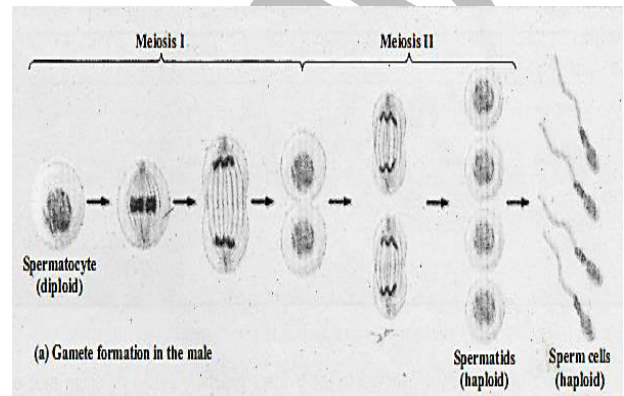
Explanation: Spermatid haploid cell.

Q.35 Answer is “Oogenesis”

Explanation: Oogenesis in human females start before birth.

Q.36 Answer is “4”

Explanation:

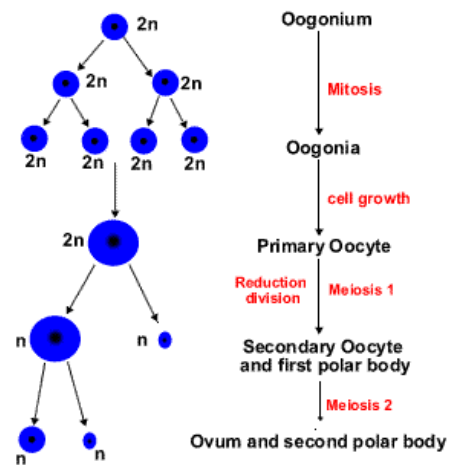


Q.37 Answer is “Spermatogonia”

Explanation: Each testis consists of a highly complex duct system called seminiferous tubules, in which repeated divisions by the cells of the germinal epithelium produce spermatogonia. These increase in size and differentiate into primary spermatocytes.

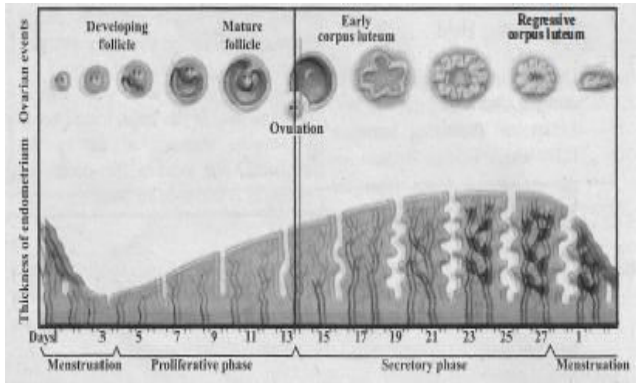
Q.38 Answer is “Secondary oocytes”

Explanation:



Q.39 Answer is “Proliferative”

Explanation:



Q.40 Answer is “Corpus luteum”

Explanation: The follicle cells, after release of the egg, are modified to form a special structure called corpus luteum. This yellowish glandular structure starts secreting hormone called progesterone. This hormone develops the endometrium and make it receptive for the implantation of the zygote (placenta formation).

Q.41 Answer is “28”

Explanation: In human females, the periodic reproductive cycle is completed in approximately 28 days and involves changes in the structure and function of the whole reproductive system.

Q.42 Answer is “Progesterone”

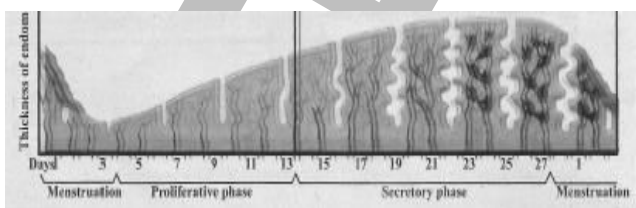
Explanation: Progesterone develops the endometrium and make it receptive for the implantation of the zygote (placenta formation).

Q.43 Answer is “Estrogen”

Explanation: Vascularization of endometrium is induced by estrogen hormone.

Q.44 Answer is “Menstruation phase”

Explanation: Menstruation phase is the shortest phase of uterine cycle.



Q.45 Answer is “Estrogen”

Explanation: Estrogen stimulates the endometrium and vascularizes.

Q.46 Answer is “Progesterone”

Explanation: Glossary page VIII book II.

Q.47 Answer is “Endometrium”

Explanation: Glossary page IV book II.

Q.48 Answer is “Oestrous”

Explanation: Oestrous cycle is a reproductive cycle found in all female mammals except human being.

Q.49 Answer is “Secondary oocyte”

Explanation: The release of a secondary oocyte (ovulation) is timed to coincide with the thickening of the lining of the uterus.

Q.50 Answer is “Uterine”

Explanation: The uterine cycle in humans involves the preparation of the uterine wall to receive the embryo if fertilization occurs.

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