Human Reproduction Review

Name: _____ **Date:** _____

Part A.

1. It was once thought that decaying meat turned into maggots (fly larvae). Careful experimentation by scientists demonstrated that maggots actually come from fly eggs and not meat. These experiments illustrate that new individual result only from

   A. genetic engineering

   B. reproduction and development

   C. nutrition and replication

   D. metabolic homeostasis

2. Which characteristic of sexual reproduction has specifically favored the survival of animals that live on land?

   A. fusion of gametes in the outside environment

   B. male gametes that may be carried by the wind

   C. fertilization within the body of the female

   D. female gametes that develop within ovaries

3. In an environment that undergoes frequent change, species that reproduce sexually may have an advantage over species that reproduce asexually because the sexually reproducing species produce

   A. more offspring in each generation

   B. identical offspring

   C. offspring with more variety

   D. new species of offspring in each generation

4. Meiosis and fertilization are important processes because they may most immediately result in

   A. many body cells B. immune responses

   C. genetic variation D. natural selection

5. Most mammals have adaptations for

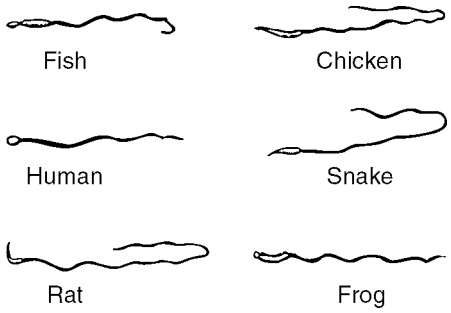
   A. internal fertilization and internal development of the fetus

   B. internal fertilization and external development of the fetus

   C. external fertilization and external development of the fetus

   D. external fertilization and internal development of the fetus

6. The diagrams below represent cells that transport chromosomes.



   These cells are specialized for

   A. oxygen transport

   B. transmitting chemical signals over long distances

   C. sexual reproduction

   D. injecting antibodies into harmful bacteria

7. Which statement describes a function of the human male reproductive system?

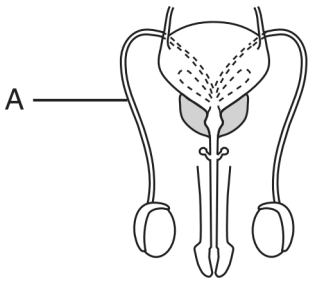
   A. It produces gametes in testes.

   B. It supplies a fluid that protects the fetus.

   C. It provides support for the development of the embryo.

   D. It provides nutrient materials through a placenta.

8. A reproductive system is represented in the diagram below.



If an injury occurred to the structure labeled *A*, the most likely result would be a problem with

A. delivery of sperm

B. production of gametes

C. production of hormones

D. excretion of urine

9. Which situation would be part of the normal reproductive cycle of a human?

A. the presence of testosterone regulating gamete production in a male

B. estrogen in concentrations that would produce sperm in a female

C. a high progesterone level in a male

D. a low insulin level in either a male or a female

10. The human reproductive system is regulated by

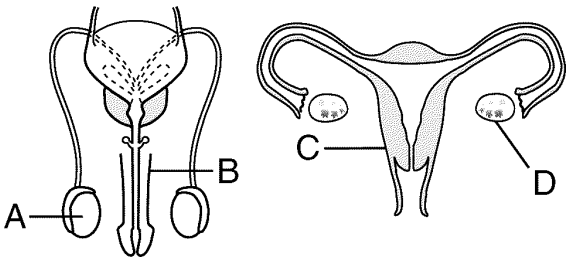
A. restriction enzymes

B. antigens

C. complex carbohydrates

D. hormones

11. The diagram below represents human reproductive systems.



Which statement best describes part of the human reproductive process?

A. Testosterone produced in *A* is transferred to *D*, where it influences embryonic development.

B. Testosterone produced in *D* influences formation of sperm within *B*.

C. Estrogen and progesterone influence the activity of *C*.

D. Progesterone stimulates the division of the egg within *C*.

12. The data in the table below indicate the presence of specific reproductive hormones in blood samples taken from three individuals. An *X* in the hormone column indicates a positive lab test for the appropriate levels necessary for normal reproductive functioning in that individual.

Data Table

Individuals	Hormones Present		
	Testosterone	Progesterone	Estrogen
1		X	X
2			X
3	X		

Which processes could occur in individual 3?

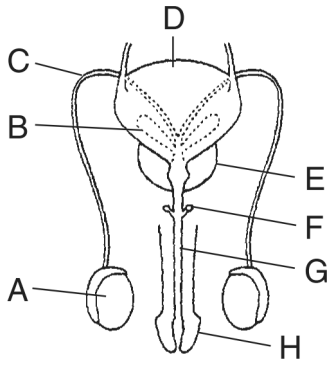
A. production of sperm, only

B. production of sperm and production of eggs

C. production of eggs and embryonic development

D. production of eggs, only

13. Base your answer(s) to the following question(s) on the diagram below, which represents systems in a human male and on your knowledge of biology.



Which sequence represents the path of sperm leaving the body?

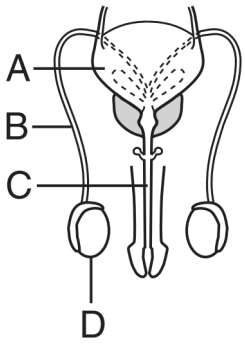
A. A → C → G B. A → C → B

C. E → F → H D. D → F → G

14. Which structure has both reproductive and excretory functions?

A. *A* B. *G* C. *C* D. *D*

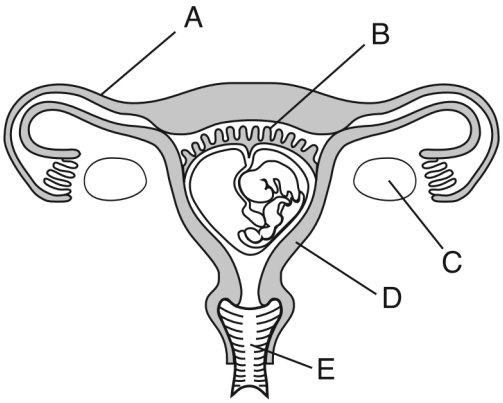
15. The diagram below represents a human reproductive system.



Meiosis occurs within structure

A. *A* B. *B* C. *C* D. *D*

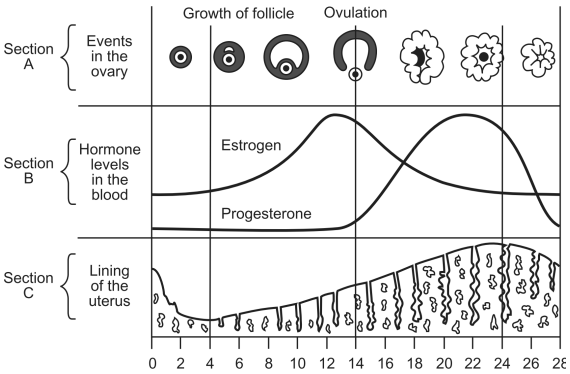
16. The human female reproductive system is represented in the diagram below.



Complete boxes 1 through 4 in the chart below using the information from the diagram.

Name of Structure	Letter on Diagram	Function of Structure
		produces gametes
Uterus	D	
	B	transport oxygen directly to the embryo

17. Base your answers to the following questions on the graph below and on your knowledge of biology. The graph shows some events associated with the reproductive cycle of human females.



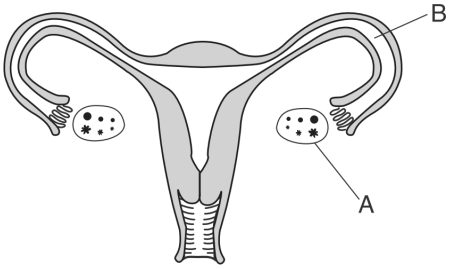
According to the graph, on which day is the egg released from the ovary?

18. Which section of the graph shows the location where the zygote would most likely become implanted and develop?

19. Identify another human reproductive hormone that is *not* shown on this graph.

20. Base your answers to the following questions on the information and diagram below and on your knowledge of biology.

Endometriosis is a condition that occurs in some women, causing multiple cells or layers of cells to grow outside of the uterus. In some cases, these growths can actually cover the entire ovary or cause the tube leading from the ovary to the uterus to be blocked. The diagram below represents the female reproductive system. Two structures, *A* and *B*, are labeled.



Select structure *A* or *B* and indicate your selection on the line below. Describe specifically how the growths that are characteristic of endometriosis at the location you selected could affect the ability of a female to become pregnant.

21. A human zygote is produced from gametes that are usually identical in

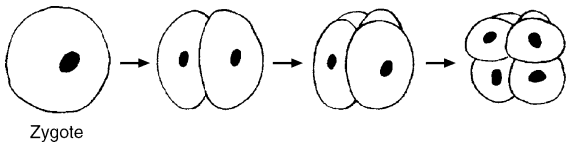
A. the expression of encoded information

B. the number of altered genes present

C. chromosome number

D. cell size

22. The accompanying diagram represents some stages of early embryonic development.

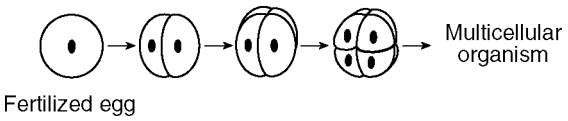


Which process is represented by the arrows in the diagram?

A. meiosis B. fertilization

C. mitosis D. evolution

23. Which phrase best describes a process represented in the diagram below?



A. a zygote dividing by mitosis

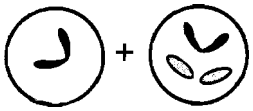
B. a zygote dividing by meiosis

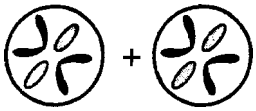
C. a gamete dividing by mitosis

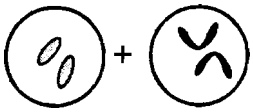
D. a gamete dividing by meiosis

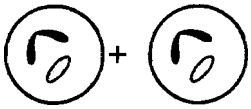
24. The accompanying diagram represents chromosomes in a zygote.

Which diagrams best illustrate the daughter cells that result from normal mitotic cell division of this zygote?

A. 

B. 

C. 

D. 

25. The human brain, kidney, and liver all develop from the same zygote. This fact indicates that cells formed by divisions of the zygote are able to

A. differentiate B. mutate

C. undergo cloning D. be fertilized

26. After the union of sperm and egg, the singlecelled zygote develops into a multicellular organism with specialized cells by the processes of

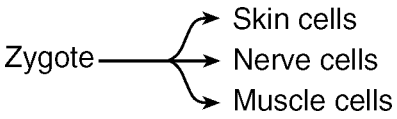
A. meiosis and replication

B. mitosis and differentiation

C. cloning and growth

D. fertilization and gamete production

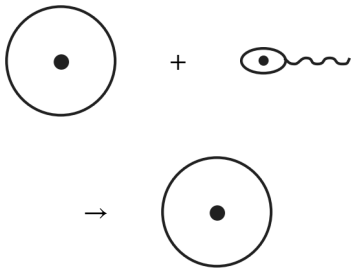
27. Which developmental process is represented by the diagram below?



A. fertilization B. differentiation

C. evolution D. mutation

28. The diagram below represents a process that occurs during human reproduction.



(Not drawn to scale)

The process represented by the arrow will ensure that the

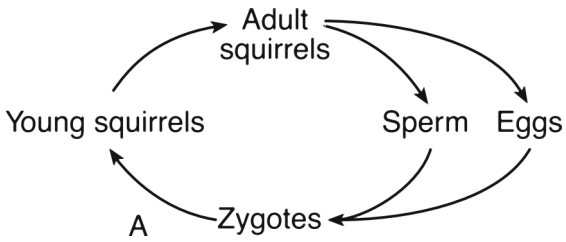
A. zygote contains a complete set of genetic information

B. gametes contain a complete set of genetic information

C. zygote contains half of the genetic information

D. gametes contain half of the genetic information

29. Base your answers to the following questions on the diagram below and on your knowledge of biology. The diagram represents the reproductive cycle of a squirrel species with 40 chromosomes in each zygote.



A liver cell in this species of squirrel would have

A. 20 chromosomes B. 40 chromosomes

C. 60 chromosomes D. 80 chromosomes

30. One function of the placenta in a human is to

A. surround the embryo and protect it from shock

B. allow for mixing of maternal blood with fetal blood

C. act as the heart of the fetus, pumping blood until the fetus is born

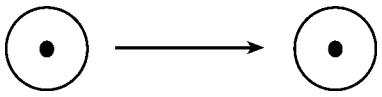
D. permit passage of nutrients and oxygen from the mother to the fetus

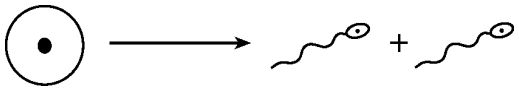
31. The reproductive cycle of a human is usually regulated by

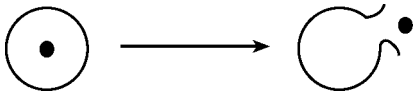
A. gametes B. hormones

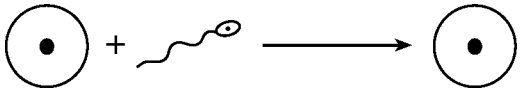
C. natural selection D. immune responses

32. Which diagram best illustrates an event in sexual reproduction that would most directly lead to the formation of a human embryo?

A. 

B. 

C. 

D. 

33. Base your answers to the following questions on the information below and on your knowledge of biology.

Human reproduction is influenced by many different factors.

Identify *one* reproductive hormone and state the role it plays in reproduction.

34. Which diagram correctly represents a step in the normal process of human reproduction?

Key	
(2n)	= total genetic material of a human cell
(n)	= one half of the total genetic material of a human cell

A. (2n) + (2n) → (n)

B. (n) + (n) → (2n)

C. (2n) + (n) → (3n)

D. (2n) + (2n) → (4n)

35. When a pregnant woman ingests toxins such as alcohol and nicotine, the embryo is put at risk because these toxins can

A. diffuse from the mother's blood into the embryo's blood within the placenta

B. enter the embryo when it eats

C. transfer to the embryo since the mother's blood normally mixes with the embryo's blood in the placenta

D. enter the uterus through the mother's navel

36. During the last months of pregnancy, the brain of a human embryo undergoes an essential "growth spurt." Which action by the mother would most likely pose the greatest threat to the normal development of the nervous system of the embryo at this time?

A. spraying pesticides in the garden

B. taking prescribed vitamins on a daily basis

C. maintaining a diet high in fiber and low in fat

D. not exercising

37. Although all the body cells in an animal contain the same hereditary information, they do not all look and function the same way. The cause of this difference is that during differentiation

A. embryonic cells use different portions of their genetic information

B. the number of genes increases as embryonic cells move to new locations

C. embryonic cells delete portions of chromosomes

D. genes in embryonic body cells mutate rapidly

38. Heavy cigarette smoking and the use of alcohol throughout pregnancy usually increase the likelihood of

A. the birth of twins

B. the birth of a male baby

C. a baby being born with a viral infection

D. a baby being born with medical problems

39. Some stages in the development of an individual are listed below.

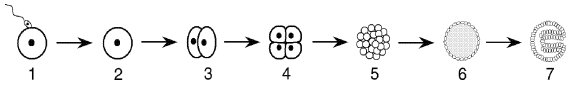
(A) differentiation of cells into tissues
(B) fertilization of egg by sperm
(C) organ development
(D) mitotic cell division of zygote

Which sequence represents the correct order of these stages?

A. *A–B–C–D* B. *B–C–A–D*

C. *D–B–C–A* D. *B–D–A–C*

40. The sequence of diagrams represents some events in a reproductive process.



To regulate similar events in human reproduction, what adaptations are required?

A. the presence of genes and chemicals in each cell in stages 1 to 7

B. an increase in the number of genes in each cell in stages 3 to 5

C. the removal of all enzymes from the cells in stage 7

D. the elimination of mutations from cells after stage 5

41. Toxins can harm a developing fetus. They usually enter the fetus by the process of

A. blood flow from the mother to the fetus

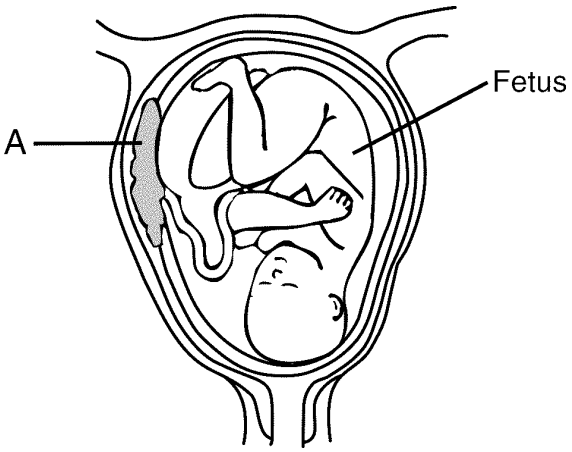
B. active transport from the ovary

C. diffusion across placental membranes

D. recombination of genes from the fetus and mother

42. Base your answer(s) to the following question(s) on the statement and diagram below and on your knowledge of biology.

Women are advised to avoid consuming alcoholic beverages during pregnancy.



Identify the structure labeled *A* and explain how the functioning of structure *A* is essential for the normal development of the fetus.

43. Explain why consumption of alcoholic beverages by a pregnant woman is likely to be more harmful to her fetus than to herself.

44. German measles is a disease that can harm an embryo if the mother is infected in the early stages of pregnancy because the virus that causes German measles is able to

A. be absorbed by the embryo from the mother's milk

B. be transported to the embryo in red blood cells

C. pass across the placenta

D. infect the eggs

45. Which sequence represents the order of some events in human development?

A. zygote → sperm → tissues → egg

B. fetus → tissues → zygote → egg

C. zygote → tissues → organs → fetus

D. sperm → zygote → organs → tissues

46. Essential materials needed for development are transported to a human fetus through the

A. reproductive hormones

B. egg cell

C. placenta

D. ovaries

47. The drinking of alcoholic beverages by a pregnant woman is harmful to the development of her fetus. This is most damaging early in a pregnancy because during this time

A. the lungs of the fetus become functional

B. alcohol can easily enter the mouth of the fetus

C. many of the essential organs of the fetus are forming

D. the fetus cannot excrete wastes

48. Base your answer to the following questions on the information below and on your knowledge of biology.

The Critical Role of the Placenta

The proper functioning of the placenta is critical to the growth and development of a healthy fetus. For example, the placenta appears to act as a nutrient sensor. It regulates the amounts and types of nutrients that are transported from the mother to the fetus.

Improper functioning of the placenta can alter the structure and function of specific cells and organ systems in the developing fetus, putting it at risk for health problems as an adult. For example, in some pregnancies, the placenta develops a resistance to blood flow. This resistance appears to force the heart of the fetus to work harder. This could result in an increased chance of the individual developing heart disease as an adult. A group of hormones known as glucocorticoids affects the development of all the tissues and organ systems. One of the things this group of hormones does is to alter cell function by changing the structure of cell membrane receptors.

Discuss the importance of the placenta in the development of a healthy fetus. In your answer, be sure to:

- identify *two* factors that could influence the nutrients that can pass from the mother to the fetus
- identify the group of hormones that alter cell membrane receptors and explain how this alteration can affect cell function
- state the role of the uterus in the development of the fetus and the placenta

49. Which hormone does *not* directly regulate human reproductive cycles?

A. testosterone B. estrogen

C. insulin D. progesterone

50. Which structure is correctly paired with its function?

A. ovary—provides milk for newborns

B. testis—development of sperm

C. placenta—storage of released eggs

D. uterus—produces estrogen

Problem-Attic format version 4.4.375
© 2011–2018 EducAide Software
Licensed for use by Jami Jones
Terms of Use at www.problem-attic.com

Human Reproduction Review 3/31/2020

1.
Answer: B
Points: 1

2.
Answer: C
Points: 1

3.
Answer: C
Points: 1

4.
Answer: C
Points: 1

5.
Answer: A
Points: 1

6.
Answer: C
Points: 1

7.
Answer: A
Points: 1

8.
Answer: A
Points: 1

9.
Answer: A
Points: 1

10.
Answer: D
Points: 1

11.
Answer: C
Points: 1

12.
Answer: A
Points: 1

13.
Answer: A
Points: 1

14.
Answer: B
Points: 1

15.
Answer: D
Points: 1

16.
Answer: Ovary, C, site of internal development, placenta
Points: 1

17.
Answer: 14
Points: 1

18.
Answer: C
Points: 1

19.
Answer: Example answers: Testosterone, Follicle stimulating hormone, LH
Points: 1

20.
Answer: [answers vary]
Points: 1

21.
Answer: C
Points: 1

22.
Answer: C
Points: 1

23.
Answer: A
Points: 1

24.
Answer: B
Points: 1

25.
Answer: A
Points: 1

26.
Answer: B
Points: 1

27.
Answer: B
Points: 1

28.
Answer: A
Points: 1

29.
Answer: B
Points: 1

30.
Answer: D
Points: 1

31.
Answer: B
Points: 1

32.
Answer: D
Points: 1

33.
Answer: Example answer: Testosterone influences the formation of sperm cells, testosterone influences the formation of gametes
Points: 1

34.
Answer: B
Points: 1

35.
Answer: A
Points: 1

36.
Answer: A
Points: 1

37.
Answer: A
Points: 1

38.
Answer: D
Points: 1

39.
Answer: D
Points: 1

40.
Answer: A
Points: 1

41.
Answer: C
Points: 1

42.
Answer: The placenta, it is the exchange surface for nutrients or wastes or O_2 between mother and fetus
Points: 1

43.
Answer: When the alcohol from the mother's bloodstream enters the fetus, the relative amount is much greater due to the smaller size of the fetus. OR The fetus is still developing.
Points: 1

44.
Answer: C
Points: 1

45.
Answer: C
Points: 1

46.
Answer: C
Points: 1

47.
Answer: C
Points: 1

48.
Answer: [answers vary]
Points: 1

49.
Answer: C
Points: 1

50.
Answer: B
Points: 1