

QUIZ for "MAPPING THE BODY WITH ART" lesson 25

Name/Date _____

- 1) Which is totipotent? a) any blastula cell b) the zygote cell c) any stem cell d) any cell in the morula
- 2) TRUE or FALSE? The development that happens in the first week is essentially the same in any type of animal.
- 3) What do gap junctions do?
 - a) Allow a gap to open between cells so that oxygen can flow in.
 - b) Ensure that the cells will remain pluripotent.
 - c) Allow cells to communicate by the exchange of cytosol.
 - d) Provide an extremely flexible junction that will divide easily.
- 4) TRUE or FALSE? Human and mammal eggs do not go through an hatching process, only bird and reptile eggs do this.
- 5) Where does the first week of development occur?
 - a) in the ovary
 - b) in the fallopian tube
 - c) in the uterus
- 6) TRUE or FALSE? . The "inner cell mass" will grow to become the embryo (baby) and the cells in the outer ring will become the placenta and the outer sac.
- 7) TRUE or FALSE? Totipotent means that the cell's DNA is completely open, so that any part of it can be read and copied.
- 8) The protective layer around the first-week developing cells is called the:
 - a) zona pellucida
 - b) corona radiata
 - c) membrane
 - d) chorion
- 9) What is an ectopic pregnancy?
 - a) When the embryo is flushed out during menstruation.
 - b) When the embryo develops outside the uterus.
 - c) It's the same as a miscarriage, when the body expels the embryo.
- 10) Which stage of development do scientists target for harvesting? (This would apply to experiments using mice, rats, and even sea urchins.)
 - a) zygote
 - b) morula
 - c) blastula
- 11) TRUE or FALSE? It takes an entire day for the zygote to go through its first mitosis.
- 12) TRUE or FALSE? During the first week of development the number of cells increases but the overall size stays the same.
- 13) TRUE or FALSE? The cells in a newborn baby's body are still pluripotent.
- 14) TRUE or FALSE? Blastula and blastocyst mean the same thing.
- 15) "Morula" comes from the Greek word "morus" which means:
 - a) marble
 - b) berry
 - c) grape
 - d) small
 - e) bumpy

QUIZ for "MAPPING THE BODY WITH ART" lesson 26 Name/Date _____

- 1) TRUE or FALSE? During the first week of development, the embryo (or "pre-embryo") was getting its energy from the nutrients that had been stored up inside the ovum.
- 2) The outer layer of the 2-week embryo is called:
a) the blastula b) the chorion c) the plasma membrane d) the zona pellucida
- 3) What is the lining of the uterus called?
a) endometrium b) endoderm c) blastula d) epiblast e) germ layer
- 4) TRUE or FALSE? The baby and mother share a blood supply.
- 5) Which one of these will NOT develop from the inner cell mass?
a) epiblast b) hypoblast c) placenta d) yolk sac e) bilaminar disc
- 6) Which is NOT true about the chorionic villi?
a) Their "villi" (finger-like) structure is found in other places in the body.
b) They destroy some of the cells of the lining of the uterus to make space for the embryo.
c) They are the start of what will become the placenta. d) They are part of the implantation process.
e) They came from cells of the inner mass. f) They secrete HCG which is detected in pregnancy tests.
- 7) What does the hormone progesterone NOT do?
a) Tell the ovaries that a tiny blastula has just implanted. b) Promotes pregnancy.
c) Stops the endometrium from being flushed out.
- 8) TRUE or FALSE? Pregnancy tests detect levels of progesterone.
- 9) TRUE or FALSE? The placenta is made entirely of cells from the developing embryo.
- 10) TRUE or FALSE? Some layers and structures in embryonic development are temporary.
- 11) Cancers that arise from cells of the mesoderm are called:
a) carcinomas b) sarcomas c) melanomas d) tumors
- 12) Which one of these does NOT come from the endoderm?
a) lining of lungs b) lining of digestive system c) liver and pancreas d) heart e) thyroid, thymus, other glands

QUIZ for "MAPPING THE BODY WITH ART" lesson 27 Name/Date _____

- 1) The side of the ectoderm with the primitive streak will become:
a) the side that will develop into legs and feet b) the side that will develop into the head
c) the inside, including the digestive tract d) the brain and nervous system
- 2) Which means "stomach side"? a) ventral b) dorsal
- 3) TRUE or FALSE? The ectoderm will curl around the rest of the germ disc.
- 4) TRUE or FALSE? Blood vessels form with blood cells already inside them.
- 5) Which is NOT true of the notochord?
a) It secretes a chemical called Sonic Hedgehog (SHH). b) It will control the organization of body tissues.
c) It will turn into the spinal cord.
- 6) After the disc curls up, what is the inside called?
a) the neural tube b) the primitive groove c) the gut tube d)
- 7) The heart tubes arise from the:
a) endoderm b) mesoderm c) ectoderm d) yolk sac
- 8) If the neural tube does not close properly, this can lead to a condition called:
a) cerebral palsy b) paralysis c) carcinoma d) spina bifida
- 9) What nutrient should women take before and during pregnancy to help prevent neural tube defects?
a) vitamin A b) vitamin b-12 c) vitamin D d) vitamin D e) folic acid (a B vitamin) f) riboflavin (a B vitamin)
- 10) Which is the correct order?
a) blastulation, implantation, gastrulation, neurulation b) implantation, blastulation, gastrulation, neurulation
c) blastulation, gastrulation, implantation, neurulation d) implantation, gastrulation, blastulation, neurulation
- 11) Neural crest cells will turn into any of these EXCEPT:
a) tissues and bones of the middle ear b) nerves of face and head
c) nerves around heart and spine d) lining of mouth and stomach
e) melanocyte skin cells
- 12) The somites will eventually turn into the tissues that make the:
a) face b) arm and leg bones c) spine d) digestive system
- 13) TRUE or FALSE? The heart begins as 2 tubes.
- 14) TRUE or FALSE? Sonic Hedgehog protein wasn't really named after Sonic the Hedgehog.
- 15) What (primarily) goes on in the yolk sac?
a) tiny blood vessels form b) the lining of the intestines begins to form c) wastes are collected

QUIZ for "MAPPING THE BODY WITH ART" lesson 28

Name/Date _____

- 1) Which type of cross section gives you a lengthwise, top-to-bottom view?
a) saggital b) transverse
- 2) When will the embryo tear free from the lining of the uterus?
a) On day 21 b) When the level of progesterone reaches a high enough level.
c) When the ovary sends a signal to the uterus to shed its lining.
d) When the umbilical cord is developed enough to provide nutrients to the embryo.
- 3) TRUE or FALSE? The embryo's blood never mixes with the mother's blood.
- 4) Week 4 will see the development of a new structure called the allantois. Which of these describes its function?
a) food pantry b) garbage bag c) storage facility d) water bottle e) air pocket
- 5) TRUE or FALSE? The somites will turn into all the tissues of the back-- the vertebrae, muscles and skin.
- 6) The mesoderm produces all of these EXCEPT:
a) heart b) blood vessels c) kidneys d) muscles e) skin f) bags around the organs
- 7) Which Greek word means "guts"?
a) peritonea b) viscera c) ventra d) placenta e) stoma
- 8) Which of these is NOT a function of the visceral or peritoneal membranes?
a) Give the organs an air-tight, waterproof covering. b) Provide a "platform" for blood vessels going to organs.
c) Keep the intestines from getting twisted up as you move. d) Keep the organs in place.
- 9) About how big is the embryo during week 4?
a) about 2 centimeters b) about 2 centimeters c) about 2 millimeters
- 10) TRUE or FALSE? The cells that will eventually make the heart begin to contract in rhythm before the heart is fully formed.

QUIZ for "MAPPING THE BODY WITH ART" lesson 29

Name/Date _____

- 1) Which of the following will the endoderm NOT become?
a) part of the digestive system b) inside of the lungs c) liver d) pancreas e) brain

- 2) An opening through which both urine and feces exit is called a _____.
a) anus b) colon c) cloaca d) allantois e) rectum

- 3) What is the name of the flap that covers the trachea (wind pipe) during the process of swallowing?
a) epiglottis b) uvula c) tonsil d) cloaca e) frenulum

- 4) What ultimately happens to the allantois?
a) It shrinks and disappears. b) It grows and turns into the bladder. c) It shrinks and ends up on top of the bladder.

- 5) Which developmental part will become the wrinkly cerebrum?
a) hindbrain b) forebrain c) neural tube d) primitive pit

- 6) TRUE or FALSE? The embryo's heart cells are joined by gap junctions.

- 7) What collects the embryo's wastes before the kidney, liver and bladder are formed?
a) yolk sack b) chorion c) allantois d) placenta

- 8) TRUE or FALSE? The early embryo has a tail.

- 9) TRUE or FALSE? The embryo's heart cells begin to contract before the heart forms.

- 10) TRUE OR FALSE? In general, the endoderm forms the interior of all the internal organs and the mesoderm forms the outer part.

28
1-a
2-d
3-T
4-b
5-T
6-e
7-b
8-a
9-c
10-T

29
1-e
2-c
3-a
4-c
5-b
6-T
7-c
8-F
9-T
10-T

ANSWERS FOR MODULE 2 Embryology

ANSWERS FOR QUIZ 25

1) b 2) T 3) c 4) F 5) b 6) F 7) T 8) a 9) b 10) c
11) T 12) T 13) F 14) T 15) b

ANSWERS FOR QUIZ 26

1) T 2) b 3) a 4) F 5) c 6) e 7) a 8) F 9) F 10) T
11) b 12) d

ANSWERS FOR QUIZ 27

1) a 2) a 3) T 4) T 5) c 6) c 7) b 8) d 9) d 10) b
11) e 12) c 13) T 14) F 15) a

ANSWERS FOR QUIZ 28

1) a 2) d 3) T 4) b 5) T 6) e 7) b 8) a 9) c 10) T

ANSWERS FOR QUIZ 29

1) e 2) c 3) a 4) c 5) b 6) T 7) c 8) F 9) T 10) T