Exam Review

1) All of the following hormones are released from placenta except

a) hCG

b) LH

c) Progesterone

d) estrogen

2) Correct pathway of spermatogenesis

a) primary spermatocyte—spermatids—spermatozoa—spermatogonia

b) secondary spermatocyte—spermatids—spermatozoa—spermatogonia

c) primary spermatocyte—secondary spermatocyte—spermatids—spermatozoa

d)2n—n—2n—n + n

3) Upon ovulation, the oocyte is released into the

 A) fallopian tube

 B) Abdominal cavity

 C) follicle

 D) uterus

4) Fertilization occurs in the

 A) Oviduct

 B) fallopian tube

 C) Abdominal cavity

 D) Uterus

5) At ovulation the cell has completed and is now a .

 A) Mitosis, primary oocyte

 B) meiosis II, primary oocyte

 C) meiosis II, secondary oocyte

 D) meiosis I, secondary oocyte

6) Animals that are known to go into “heat” have a

A) estrous cycle and reabsorb the endometrium.

B) estrous cycle and shed the endometrium.

C) menstrual cycle and reabsorb the endometrium.

D) menstrual cycle and shed the endometrium.

E) really good time.

7) The following are all examples of asexual reproduction, except\_\_\_\_\_\_\_\_\_\_\_.

A) budding

B) fragmentation

C) fertilization

D) fission

E) parthogenesis

8) The chromosome # of an offspring produced via parthenogenesis would be

 A) diploid

 B) haploid

 C) 2n

 D) A & C are correct

9) During fertilization, the acrosomal contents

A) block polyspermy.

B) help propel more sperm toward the egg.

C) digest the protective coat on the surface of the egg.

D) nourish the mitochondria of the sperm.

E) trigger the completion of meiosis by the sperm.

10) Oxytocin inducing the uterus to contract during labor is an example of positive feedback mechanism; therefore

A) increased secretion of oxytocin would decrease uterine contractions.

B) increased secretion of oxytocin would increase uterine contractions.

C) decreased secretion of oxytocin would increase uterine contractions.

D) decreased secretion of oxytocin would stimulate labor.

E) increased secretion of oxytocin would inhibit labor.

11) Which process in the nephron is *least* selective?

A) filtration of plasma into Bowman’s capsule

B) reabsorption

C) active transport

D) secretion of materials into filtrate for excretion

E) salt pumping by the loop of Henle

12) A man has been told that he is not synthesizing enough FSH, and for this reason he may be unable to father a child. Which of the following best explains the problem? (Dr. Bernard, 2011)

 A) FSH stimulates estrogen secretion by ovarian cells; therefore it is not synthesized by males.

 B) The physician is wrong – a hormone made in adenohypophysis could not influence fertility

 C) FSH stimulates sperm production in the testes.

 D) The man must be producing progesterone, which inhibits the synthesis of FSH.

13) Which of the following are **NOT** most likely reabsorbed by the proximal convoluted tubule?

 A) Glucose

 B) Proteins

 C) Amino acids

 D) Some vitamins

 E) B & C only

14) The entire system under which the kidneys operate is based on membrane transport and gradients. What type (s) of transport is (are) used by the nephron of the kidney?

 A) Active transport

 B) Passive transport

 C) Filtered transport

 D) A & C only

 E) A & B only

15) The proximal tubule helps maintain constant……………………………level in body fluids.

 A) Water

 B) pH

 C) Salt

 D) Urea

16) In mammalian eggs, the receptors for sperm are found in the

A) fertilization membrane.

B) zona pellucida.

C) cytosol of the egg.

D) nucleus of the egg.

E) mitochondria of the egg.

17) Mature human sperm and ova are similar in that

A) they both have the same number of chromosomes.

B) they are approximately the same size.

C) they each have a flagellum that provides motility.

D) they are produced from puberty until death.

E) they are formed before birth.

18) Which of the following statements about hormones is correct?

A) Steroid & peptide hormones produce different effects but use the same biochemical pathways (mechanisms).

B) Steroid & peptide hormones produce the same effects but differ in the mechanisms that produce the effects.

C) Steroid hormones affect the synthesis of proteins, whereas peptide hormones affect the activity of proteins already present in the cell.

D) Steroid hormones affect the activity of certain proteins within the cell, whereas peptide hormones directly affect the processing of mRNA.

E) Steroid hormones affect the synthesis of proteins to be exported from the cell, whereas peptide hormones affect the synthesis of proteins that remain in the cell.

19) When steroid hormones bind to their receptors;

 A) adenylyl cyclase is activated

 B) G proteins are inhibited

 C) Cyclic nucleotides are formed

 D) Gene transcription may start or stop

20) Which hormone is incorrectly paired with its function

 A) Insulin – lower blood sugar

 B) PTH – increase blood calcium

 C) T4 – lower blood calcium

 D) GH – stimulate growth of bones & tissues

21) Symptoms of hypothyroidism

 A) weight loss, high temperature, intolerance to cold

 B) weight gain, Intolerance to cold, lethargy

 C) weight loss, high blood pressure, intolerance to heat

 D) weight gain, low temperature, intolerance to heat

22) Controls release of glucocorticoids

 A) CRH

 B) ACTH

 C) Lutenizing hormone

 D) Aldosterone

 E) Follicle stimulating hormone

23) Stimulates testosterone secretion in the testes

 A) CRH

 B) ACTH

 C) Lutenizing hormone

 D) Aldosterone

 E) Follicle stimulating hormone

24) Causes kidneys to reabsorb water by retaining sodium

 A) ADH

 B) ACTH

 C) Lutenizing hormone

 D) Aldosterone

 E) Renin

25) The \_\_\_\_\_\_\_ functions in gas exchange.

A) chorion.

B) amnion.

C) endoderm.

D) ectoderm.

E) yolk sac.

26) In animals, nitrogenous wastes are produced mostly from the catabolism of

A) starch and cellulose.

B) triglycerides and steroids.

C) proteins and nucleic acids.

D) phospholipids and glycolipids.

E) fatty acids and glycerol.

27) Which of the following endocrine disorders is not correctly matched with the malfunctioning gland?

A) diabetes and pancreas

B) giantism and pituitary

C) goiter and adrenal medulla

D) tetany and parathyroid

E) dwarfism and pituitary

28) Which of the following endocrine disorders is not correctly matched with the malfunctioning gland?

A) diabetes and pancreas

B) cretinism and thyroid

C) Graves disease and pineal

D) tetany and parathyroid

E) dwarfism and pituitary

29) Upon fertilization (in mammals) the first cell division occurs

 A) 72 hrs

 B) 48 hrs

 C) 2-9 hrs

 D) 12-36 hrs

30) Which of the following is true about monozygotic siblings

 A) Have the same behavior

 B) Are phenotypically different

 C) Are genotypically equal

 D) From two eggs release during the same cycle

31) The advantage of excreting wastes as urea rather than as ammonia is that

A) urea can be exchanged for Na+.

B) urea is less toxic than ammonia.

C) urea requires more water for excretion than ammonia.

D) urea does not affect the osmolar gradient.

E) less nitrogen is removed from the body.

32) The outer-to-inner sequence of tissue layers in a post-gastrulation vertebrate embryo is

A) endoderm → ectoderm → mesoderm.

B) mesoderm → endoderm → ectoderm.

C) ectoderm → mesoderm → endoderm.

D) ectoderm → endoderm → mesoderm.

E) endoderm → mesoderm → ectoderm.

33) Which hormone exerts antagonistic action to PTH (parathyroid hormone)?

A) thyroxine

B) epinephrine

C) growth hormone

D) calcitonin

E) glucagon

34) Which hormone exerts antagonistic action to ADH?

A) Aldosterone

B) epinephrine

C) growth hormone

D) renin

E) None of the above

35) Cells move to new positions as an embryo establishes its three germ tissue layers during

A) determination.

B) cleavage.

C) fertilization.

D) organogenesis.

E) gastrulation.