

1) 3    2) 2    3) 3    4) 4    5) 1

6) 3    7) 4    8) 1    9) 4    10) 1

11) 2    12) 1    13) 3    14) 4    15) 2

16) 2    17) 3    18) 4    19) 2    20) 3

21) 1    22) 3

23) SAMPLE ANSWER: The nuclei of cells in mold *B* are genetically identical to the nuclei of cells in mold *A*.

24) SAMPLE ANSWERS: Offspring receive only half their genes (*or* DNA *or* chromosomes *or* genetic information) from each parent.  
OR They receive some genes from each parent.

25) 4    26) 1    27) 2    28) 4    29) 3

30) 1    31) 1    32) 4    33) 2    34) 4

35) 1    36) 3    37) 2    38) 2    39) 3

40) 2    41) 3    42) 4    43) 2    44) 4

45) 4    46) 2    47) 1    48) 1    49) 3

50) 2    51) 4    52) 3    53) 4    54) 2

55) 1    56) 3    57) 2

58) SAMPLE ANSWERS: Testosterone influences the formation of sperm cells. OR Testosterone influences the formation of gametes. OR estrogen regulates female reproductive cycles OR Estrogen builds up the uterine lining for implantation and development of the embryo. OR progesterone maintains uterine lining during pregnancy

59) SAMPLE ANSWERS: estrogen OR progesterone OR FSH OR LH

60) SAMPLE ANSWERS: The cells that respond have appropriate receptors. OR Cells that don't respond do not have appropriate receptors. OR The shape of the hormone molecule is recognized by cells in the reproductive system. OR Some cells recognize the reproductive hormones and respond to them. OR Specific reproductive hormones target specific cells.

61) 1    62) 2    63) 4    64) 1    65) 2

66) 1    67) 4    68) 3    69) 1    70) 2

71) 1    72) 4    73) 3    74) 3    75) 4

76) 1    77) 2    78) 3    79) 1    80) 4

81) 3    82) 1    83) 2

84) SAMPLE ANSWER:

Eggs are produced in the ovaries. Fertilization occurs when a sperm unites with an egg. An embryo forms and is implanted into the uterus. A placenta develops and helps provide nutrients for the embryo. (The placenta also provides oxygen for the embryo and it helps to remove wastes from the embryo.)

85) SAMPLE ANSWERS: Materials can diffuse out of the mothers capillaries into the baby's capillaries. OR Harmful substances can diffuse/pass through the walls of capillaries. OR Molecules pass through the placenta.

- 86) SAMPLE ANSWERS: interfere with development OR cause low birth weight OR cause death of the fetus OR cause Fetal Alcohol Syndrome
- 87) (a) placenta;  
(b) SAMPLE ANSWERS: drugs fetal addiction OR alcohol low birth weight or premature birth or brain damage or fetal alcohol syndrome OR nicotine brain damage or low birth weight OR Viruses, such as HIV, can cross the placenta putting the fetus at risk of disease or defects.
- 88) Structure A = placenta  
SAMPLE ANSWER: exchange surface for nutrients, wastes, or O<sub>2</sub> between mother and fetus
- 89) SAMPLE ANSWERS: 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.