Grade 6

MCQs on Cell Cycle

Work Sheet

1. Cell division of mitosis is considered as means of
   A. budding
   B. binary fission
   C. sexual reproduction
   D. asexual reproduction

2. Process by which haploid daughter cells are formed by division of diploid cells is called
   A. binary fission
   B. meiosis
   C. mitosis
   D. cell regeneration

3. Process of cell division in prokaryotic cells which is similar to mitosis is called
   A. diffusion
   B. primary fission
   C. binary fission
   D. active transport

4. Phases of mitosis does not includes
   A. division of cytoplasm
   B. division of mitochondria
   C. division of vacuoles
   D. division of nucleus

5. What is the process of removing a section from the stem of a plant and planting it to produce a new plant?
   A. tuber   B. runner   C. propagation   D. pollination
6. Reproduction from a leaf cutting is an example of what kind of reproduction?
   A. reproduction by runners          B. sexual reproduction
   C. reproduction by bulbs           D. asexual reproduction

7. What do we call a stem that grows along the ground or in the air, and forms a new plant at its tip?
   A. bud         B. tuber           C. bulb           D. runner

8. Some simple invertebrates can actually reproduce by budding. What is budding?
   A. When an animal develops from a part of its parent.
   B. When a bud forms on the adult’s body and develops into a new animal.
   C. When a leaf buds into a flower.
   D. When an animal decomposes.

9. How many parents are involved in budding?
   A. one          B. two             C. three          D. zero

10. What kind of reproduction uses male and female cells?
    A. fission      B. asexual        C. sexual         D. budding

11. What kind of reproduction involves only one parent plant?
    A. pollination       B. fertilization
    C. sexual            D. asexual

13. What is an underground root or stem that is swollen with food called?
    A. a bud        B. a spore        C. a tuber        D. a seed

14. What kind of reproduction forms new plants that are not identical to their parents?
    A. asexual       B. sexual        C. runners        D. rhizomes

15. Which of the following may happen during asexual reproduction?
    A. A plant produces seeds.
    B. An embryo develops inside an egg.
    C. A fruit develops around the plant’s ovary.
    D. A new organism begins to form on a parent organism.
16. Which of these is not an example of asexual reproduction?
   A. a spider plant   B. a potato   C. an orange tree   D. a mushroom

17. Which structure is the direct RESULT of sexual reproduction?
   A. cone   B. flower   C. seed   D. spore

18. Which of these describes the reproduction of the bamboo plant?
   A. asexual   B. fruiting   C. propagation   D. sexual

19. Which of these does not reproduce asexually?
   A. pine trees   B. mold   C. bacteria   D. strawberry plants

20. Which of these is true about asexual reproduction?
   A. Only plants use asexual reproduction.
   B. All organisms use asexual reproduction.
   C. There are at least two parent organisms in asexual reproduction.
   D. There is only one parent organism in asexual reproduction.

21. Which of the following occurs only during sexual reproduction?
   A. fertilization   B. spore production
   C. fruiting bodies   D. budding

22. A single bacteria cell can copy its DNA and divide into two identical cells. This is an example of which type of asexual reproduction?
   a. Fragmentation
   b. Binary Fission
   c. Budding
   d. Vegetative Propagation

23. If you cut a starfish into pieces, each piece can develop into a new starfish. This is an example of which type of asexual reproduction?
   a. Binary Fission
   b. Fragmentation
   c. Budding
   d. Vegetative Propagation
24. Gregor Mendel was born in  
   a. the United States. 
   b. Austria.  
   c. Germany.  
   d. Italy.  

25. Gregor Mendel did his research  
   a. in a laboratory.  
   b. at a university.  
   c. at a monastery.  
   d. on a farm.  

26. In Mendel’s work, first and second generation mean  
   a. parents and offspring.  
   b. plants and animals.  
   c. peas and peapods.  
   d. one kind of organism.  

27. What results did Mendel get when he allowed the first-generation plants to self-pollinate?  
   a. half purple and half white offspring  
   b. every fourth plant had white flowers  
   c. every fourth plant had purple flowers  
   d. offspring with all purple flowers  

28. When a relationship between two different things is shown in a fraction, it is  
   a. a ratio.  
   b. a problem.  
   c. a dominant trait  
   d. a recessive trait.  

29. Gregor Mendel realized the only explanation for his results was that  
   a. the traits were appearing at random.  
   b. the male traits were always the dominant ones.  
   c. each trait had two sets of instructions, one from each parent.  
   d. his important research would open the door to modern genetics.  

30. Mendel was recognized for his discovery  
   a. five years after he finished his work.  
   b. in 1865 when he published his work.  
   c. about ten years ago.  
   d. more than 30 years later.
31. What is heredity?
   a. traits passing from offspring to parents
   b. traits passing from parents to offspring
   c. offspring with no genotypes
   d. traits disappearing in offspring

32. Where did Gregor Mendel do his research?
   a. in a lab
   b. at a college
   c. at a monastery
   d. on a farm

33. What happened in the second generation, when Mendel allowed the first-generation plants to self-pollinate?
   a. The dominant trait disappeared.
   b. The recessive trait disappeared.
   c. The dominant trait showed up.
   d. The recessive trait showed up.

34. What is the ratio that Mendel found for dominant to recessive traits?
   a. 1 to 1
   b. 2 to 1
   c. 3 to 1
   d. 4 to 1

35. What do scientists call instructions for an inherited trait?
   a. alleles
   b. phenotype
   c. albinism
   d. genes

36. What are the two forms of a gene called?
   a. alleles
   b. phenotype
   c. albinism
   d. genes
37. What is a phenotype?
   a. an inherited problem
   b. a group of 10 alleles
   c. a recessive gene
   d. the way an organism looks

38. What are both inherited alleles together called?
   a. an organism
   b. a genotype
   c. homozygous
   d. heterozygous

39. What kind of plant has two dominant genes OR two recessive genes?
   a. an organism
   b. a genotype
   c. homozygous
   d. heterozygous

40. What kind of plant has one dominant gene AND one recessive gene?
   a. an organism
   b. a genotype
   c. homozygous
   d. heterozygous

41. When does the cell cycle begin?
   a. when the cell is formed
   b. when the cell divides
   c. when the cell uses energy
   d. when the cell takes in oxygen

42. When does the cell cycle end?
   a. when the cell is formed
   b. when the cell divides and makes new cells
   c. when the cell uses energy
   d. when the cell takes in oxygen
which describe the phases of the cell cycle. Write the correct phase in each blank, using “Interphase,” “Mitosis Phase 1,” “Mitosis Phase 2,” “Mitosis Phase 3,” “Mitosis Phase 4,” or “Cytokinesis.”

43. Chromatids separate and move to opposite sides of the cell.

44. The chromosomes line up along the equator of the cell. Homologous chromosomes pair up.

45. Before mitosis begins, chromosomes are copied.

46. A nuclear membrane forms around the two sets of chromosomes, and the chromosomes unwind. Mitosis is complete.

47. Mitosis begins. The nuclear membrane dissolves. Chromosomes condense into rod like structures.

48. In cells that lack a cell wall, the cell pinches in two.

49. What is it called when the cytoplasm of a cell divides?
   a. mitosis
   b. interphase
   c. cytokinesis
   d. cell plates

50. What does the cell membrane do during cytokinesis in an animal cell?
   a. pinches in two
   b. forms a cell plate
   c. makes copies of its DNA
   d. shrivels up

WITH MY BEST WISHES