

21. Which of the following means "mating thread" ?  
a) Leptotene b) Zygotene c) Pachytene d) Diakinesis
22. Which of the following stages is longest in mammalian spermatogenesis ?  
a) Leptotene b) Zygotene c) Pachytene d) Diplotene
23. Which of the following are organised into structures called synaptonemal complexes ?  
a) Pachytene bivalents b) Leptotene bivalents  
c) Zygotene and pachytene bivalents  
d) Pachytene and diplotene bivalents
24. Chiasmata formed along the lengths of chromosomes are called  
a) Terminal chiasmata b) Longitudinal chiasmata  
c) Interstitial chiasmata d) Achromasms
25. Which of the following statements is false ?  
a) When there is a single chiasma, the arms of the bivalent rotate through 360°.  
b) The synaptonemal complexes mostly disappear during diplotene.  
c) During diplotene the cytoplasm shows an increase in the number of endoplasmic vesicles.  
d) The nuclear membrane disappears in prometaphase I.
26. Mitosis was first studied by \_\_\_\_\_ in 1879 in ~~earthworm~~ erythroblasts and large epithelial cells of the Salamander.  
a) W. Flemming b) Robert Remak c) J.B. Farmer  
d) J.E. Moore

27. Which of the following statements is incorrect?

- a) Interphase is a phase of high metabolic activity, and includes  $G_1$ , S and  $G_2$  stages of the mitotic cycle.
- b) Growth of the body is not affected by the growth of the individual cells.
- c)  Interphase is the resting stage.
- d) Cell division is triggered by the action of some enzymes, provided by the lysosomes.

28. Which of the following stages of mitosis is also called as reorganization phase or reconstruction phase?

- a) Prophase
- b) Metaphase
- c) Anaphase
- d)  Telophase

29. In which of the following mitotic phases cytokinesis begins?

- a)  Late metaphase
- b) ~~Late anaphase~~
- c) ~~Early telophase~~
- d) ~~Late telophase~~ telophase

30. The synaptonemal complexes first appear during.

- a) ~~Leptotene~~
- b)  Zygotene
- c) Pachytene
- d) Diplotene