



X ICSE GMA MOCK 1

40 Questions

NAME : _____

CLASS : _____

DATE : _____

1. Replication of centriole occurs during

- a) interphase
- b) prophase
- c) early telophase
- d) late telophase

2. The end of meiosis results in _____ to each other.

- a) 2 cells that are identical
- b) 4 cells that are identical
- c) 2 cells that are not identical
- d) 4 cells that are not identical

3. Law of segregation

- a) The two members of a pair of factors join during the formation of gametes.
- b) The two members of a pair of factors separate during the formation of gametes
- c) The two chromosomes of a pair of factors separate during the formation of gametes.
- d) The two members of a pair of factors separate during the process of germination.

4. Garreau's potometer demonstrates

- a) Suction force created in the vascular bundles
- b) Rate of transpiration from the dorsal surface of a dorsiventral leaf
- c) Rate of water intake by a dorsiventral leaf
- d) Unequal transpiration from the two surfaces of a dorsiventral leaf

5. Cell in G_0 phase :

~~a)~~ exit the cell cycle

b) enter the cell cycle

c) suspend the cell cycle

d) terminate the cell cycle

6. The solvent used to dissolve the chlorophyll pigment while testing a leaf for starch

a) Soda lime

b) Carbolic acid

~~c)~~ Methylated spirit

d) Water

Hh Hh

7. Huntington's disease affects the brain and nervous system. It is caused by a dominant allele, H. Two parents are heterozygous for Huntington's disease. What is the probability of them producing a child that will also have Huntington's disease?

Hh Hh
Hh hh

a) 25%

b) 50%

~~c)~~ 75%

d) 100%

8. Root hair

a) Extension of the cortex

b) Extension of epithelium

~~c)~~ Extension of epidermis

d) Extension of endodermis

9. Which two reactions occur during photophosphorylation?

a) ATP is hydrolysed and NADP is reduced

b) ATP is hydrolysed and NADPH is oxidised

~~c)~~ ATP is synthesised and NADP is reduced

d) ATP is synthesised and NADPH is oxidised

10. Oxygen evolved during photosynthesis comes from

a) CO_2

~~b)~~ H_2O

c) CO_2 and H_2O

d) Salts

11. Photolysis

~~a) Splitting of water molecules into hydrogen ions and oxygen in the presence of light in grana.~~

~~b) Splitting of water molecules into hydrogen ions and oxygen in the presence of light in the stroma.~~

~~c) Splitting of water molecules into hydrogen ions and oxygen in the absence of light in grana.~~

~~d) Splitting of water molecules into hydrogen ions and oxygen in the absent of light in stoma.~~

12. In which phase of mitosis does the nucleus disappear, centrioles move to the poles, and chromosomes condense into sister chromatids?

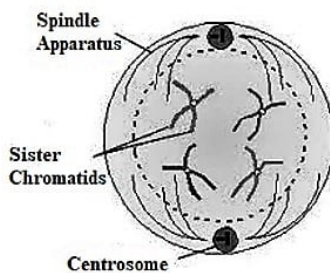
~~a) Prophase~~

b) Metaphase

c) Anaphase

d) Telophase

13.



Identify the stage

a) Telophase

~~b) Prophase~~

c) Metaphase

d) Anaphase

14. In which case would a cell most likely shrink?

~~a) when placed in a solution containing a high salt concentration~~

b) when placed in a isotonic solution

c) when placed in a solution containing a low pH

d) when placed in a solution containing distilled water

A-T
G-C

15. A strand of DNA contains the following bases AGCTATAC. What would be the bases on the complementary strand?

- a) AGCTATAC
- b) ~~TCGATATG~~
- c) TGCTTATG
- d) CTAGCGCT

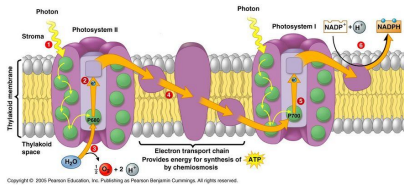
16. Accumulation of K^+ ions leads to

- a) ~~Increased turgidity~~
- b) Closing of stomata
- c) Exosmosis of water
- d) Increased water potential

17. Which is the action spectrum of photosynthesis in higher plants?

- a) Green and yellow
- b) Orange and red
- c) Blue and far red
- d) ~~Blue and red~~

18.



What supplies the electrons during photolysis?

- a) oxygen
- b) ~~water~~
- c) glucose
- d) rubisco

19. The process in which the exudate is mainly plant sap and sugars

- a) ~~Guttation~~
- b) Transpiration
- c) Bleeding
- d) Both a and c

20. Adaptations in plant to reduce transpiration are -

- a) No of stomata
- b) Thickness of cuticle
- c) Loss of leaves
- d) ~~All of the above~~

21. Mineral ions are transported by

a) diffusion

b) osmosis

~~c) active transport~~

d) none of the above

22. X - linked recessive gene is

~~a) always expressed in male~~

b) always expressed in female

c) lethal

d) sub lethal

23. The rate of transpiration decreases with

a) high temperature

b) high water content of leaf

~~c) closure of stomata~~

d) intensity of sunlight

24. Most of the chloroplast cells are found in the

a) upper epidermis

~~b) pallisade mesophyll layer~~

c) lower epidermis

d) stomata

25. Point of Non-sister chromatids where crossing over takes place

a) Nucleosome

b) Centrosome

c) Centromere

~~d) Chiasmata~~

26. The 'girdling experiment' shows that

~~a) water is transported by xylem~~

b) food is transported by phloem

c) transport is unidirectional

d) transport is bi directional

27. The complex molecule consisting of a DNA strand and a core of histones.

- a) Centrosome
- ~~c) Nucleosome~~
- b) Nucleotide
- d) Chromosome

28. A haemophilic man marries a normal homozygous woman. What is the probability that their son will be haemophilic?

- a) 100%
- c) 50%
- b) 75%
- ~~d) 0%~~

29.

Animal	# of Chromosomes in Body Cells
Ferret	40
Giraffe	62
Gorilla	48
African hedgehog	90
Kangaroo	12
Spotted skunk	64

A giraffe sex cell divides by meiosis. The daughter cells produced each have _____ chromosomes.

- a) 62
- c) 93
- b) 15
- ~~d) 31~~

30. What are alleles?

- ~~a) a pair of chromosomes~~
- ~~b) different versions of the same gene~~
- c) the total number of genes on one chromosome
- d) two genes side by side on the same chromosome

31. G1 is associated with what event?

- ~~a) doubling of cell content~~
- c) The beginning of mitosis
- b) DNA replication
- d) breakdown of the nuclear membrane

32. Where does dark reaction or light independent specifically occur?

- a) thylakoid membrane
- ~~b) Stroma of the chloroplast~~
- c) Grana
- d) nuclear membrane

33. Which statement about the human sex chromosomes is correct?

- a) All boys have two Y chromosomes.
- ~~b) Everybody has at least one X chromosome.~~
- c) Girls have a Y chromosome and an X chromosome.
- d) Nobody has two X chromosomes.

34. what is responsible for guttation?

- a) osmotic pressure
- ~~b) root pressure~~
- c) suction pressure
- d) capillarity

35. A chromatid is attached to a spindle fiber by the

- a) nucleolus
- b) deep furrow
- ~~c) centromere~~
- d) centriole

36. The first step of photosynthesis is

- a) Photolysis of water
- b) Fixation of CO₂
- ~~c) Absorption of light by chlorophyll~~
- d) Formation of ATP

37. In chloroplasts, chlorophyll is present in

- a) Outer membrane
- b) Inner membrane
- ~~c) Thylakoids~~
- d) Stroma

38. What results from meiosis of a diploid cell?

- a) genetically different diploid cells
- ~~b) genetically different haploid cells~~
- c) genetically identical diploid cells
- d) genetically identical haploid cells

39. How many cells will be produced if a cell divides mitotically 6 times?

- a) 12
- b) 24
- c) 32
- ~~d) 64~~

40. A normal woman whose father was colour blind marries a normal man. Her sons would be

- a) 75% colour blind
- b) 50% colour blind
- ~~c) all normal~~
- d) all colour blind