

Final Exam of General Biology (Bio 110)

Semester 1433 \ 1434

This quiz contains 40 multiple choice questions. Each question has one only one correct answer :

asexual → binary fission → For Prokaryotes like bacteria (Dividing into half)
budding
Fragmentation

→ like Bacteria

1. Prokaryotes reproduce by a type of cell division called binary fission which means _____

- a) Split via budding.
- b) Dividing in half.
- c) Fragment of the cell.
- d) Two gonads in one organism.
- e) None of the above.

2. The somatic cells in human male have chromosomes of the type _____

- a) 22 + X. → sperm or egg
- b) 22 + Y. → sperm cell
- c) 23 + Y.
- d) 44 + XX.
- e) 44 + XY.

← somatic for female

3. The process by which the sperms are produced is known as _____

- a) Ovulation.
- b) Spermatogenesis.
- c) Oogenesis.
- d) Gestation.
- e) Embryogenesis.

4. What is the correct order for the 3 stages of interphase of cell cycle?

- x a) S, G1, G2
- b) S, G2, G1
- c) G1, G2, S
- d) G1, S, G2.
- x e) there is no certain order

5. During _____ rib cage expands, diaphragm moves down pressure and lung decreases, air is drawn into the respiratory tract.

- a) Exhalation
- b) inhalation
- c) respiration
- d) passive diffusion
- e) active diffusion

6. Nucleosomes are formed when DNA is wrapped around _____ proteins.

- a) histone.
- b) chromatin
- c) protosome
- d) nucleosome
- e) None of the above

7. The uterus opens into the _____ through the _____

- a) penis --- tests
- b) ovary --- oviduct
- c) vagina --- cervix.
- d) follicles --- embryos
- e) birth canal --- penis

4 عوطف لارتفاعها أنت كروت Transcription ل DNA لا بد أن يتم فلا يتم ذلك
 ربط فردس وبالتالي ف DNA Packing يمنع (Prevent) Gene expression
 Transcription into mRNA → then translation into Protein

← الخلية الذكرية

← الضغط يقل



← vagina

8. Homeostasis is the :

البيزان الحيوي

التعريف العام

- a) ability to regulate internal environment. →
- b) maintenance of steady internal conditions despite fluctuations in the external environment. → ظروف داخلية مستقرة
- c) maintenance of internal temperature within narrow limits. → thermoregulation
- d) control of the gain and loss of water and solutes. → osmoregulation
- e) all of the above.

9. Most of carbon dioxide in the blood is transported as bicarbonate ions in the

- a) Plasma
- b) Red blood cells
- c) White blood cells
- d) Platelets
- e) Macrophages

10. In grasshoppers and roaches sex is determined by:

- a) X-Y system.
- b) Z-W system.
- c) Number of chromosomes
- d) Size of the sex chromosomes.
- e) X-O system.

11. Atherosclerosis is due to _____

- a) plaques narrowed blood vessels (تضييق)
- b) blood flow is reduced
- c) plaques develop inside walls of blood vessels
- d) blood flow is doubled (تضاعف)
- e) a+b+c are correct choices

12. The O₂ that diffuses into blood attaches to _____ in red blood cells.

- a) Plasma → CO₂
- b) white blood cells
- c) hemoglobin
- d) platelets
- e) all of the above choices are correct.

13. In mammals, air enters through the nostrils to the _____ where it is filtered by hairs and mucus, warmed or moisturized and sampled for odor.

- a) pharynx
- b) nasal cavity
- c) mouth
- d) larynx
- e) esophagus

14. Smoking can cause _____.

- a) lung cancer
- b) heart attacks and strokes
- c) emphysema and increases harmful cholesterol
- d) raises blood pressure
- e) all of the above choices are correct

15. Translation of mRNA produces a:

- a) DNA
- b) RNA
- c) protein.
- d) glycogen
- e) lipid

16. Asexual reproduction can proceed via :

- a) Budding
- b) Fission
- c) Fragmentation
- d) all of the above
- e) none of the above

17. _____ wastes are toxic breakdown products of protein.

- a) Nitrogenous
- b) Acidic
- c) Basic
- d) Hydrogen
- e) CO₂

طبعا المخلوقات الحيوية تتبرج من صحتها وتكسر البروتين أو الأحماض النيتروجينية

صمامات القلب

18. The main functions of heart valves is to prevent the _____ of blood
a) overflow ^{زيادة} b) intermittent flow ^{متقطع} c) back-flow ^{التي تذهب الى العكس}
d) vigorous flow ^{شديد} e) slow flow

19. The sinoatrial node (SA node) in the pacemaker which sets the rate of heart _____ and generates electrical signals in atria _____
a) rhythm b) contractions c) relaxations d) resting
e) a+b are correct choices

20. The two sister chromatids are joined together tightly at the _____, a narrow region.
a) Nuclear envelope b) Spindle c) Microtubules
d) Centromere. ^{Centromere} e) Nucleolus

21. In kidney, Reabsorption means that water and valuable solutes are returned to the _____ from the filtrate _____
a) glomerulus b) renal pelvis c) renal cortex ^{تعود الي secretion}
d) blood e) Renal medulla ^{blood to Filtrate}

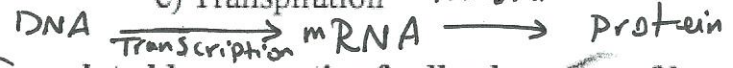
22. Gas exchange in fish is enhanced by ventilation of the gills and by the _____ flow of water and blood.

a) Exact ^{نفس} b) Different ^{تختلف} c) Analogous ^{مماثل}
d) Countercurrent e) Negative ^{سلبي}

blood & water flow are in opposite directions

23. mRNA is produced in the process called: _____
a) Respiration. b) Translation. c) Replication.
d) Transcription. e) Transpiration ^{Transpirational}

= mRNA
= RNA

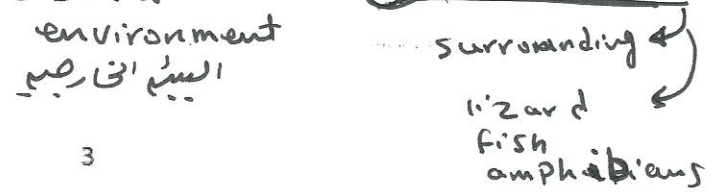


24. Sperm production is regulated by a negative feedback system of hormones and involves the _____, pituitary, and testes.
a) Hypothalamus b) Thyroid ^{Anterior الغدة} c) Thalamus
d) Cerebrum e) Ovaries

25. Gastrulation produces: hollow gastrula from hollow blastula.
a) A two-layered embryo. b) A primary oocyte.
c) A large number of sperm. d) Mature ova. e) A three-layered embryo.

26. Each amino acid in a protein synthesis is specified by:
a) several genes b) a promoter c) tRNA molecule d) a codon. e) exon

27. Ectothermic animals: ^{mRNA Codon تسمى نيكليوتيدان} ^{Amino Acid}
a) derive body heat mainly from their metabolism \rightarrow endothermic
b) absorb heat from their surroundings ^{المحيطيات} c) include lizards
d) include birds \rightarrow outer environment e) b and c are correct.



28. The blood clotting process includes _____.

- a) platelets adhere to connective tissue
- b) platelet form plug
- c) fibrin clot traps blood cells
- d) the platelet plug is temporary clot
- e) All of the above choices are correct

which is Temporary (علاقته)

29. The kidney's filtrate consists of _____

- a) solutes
- b) urea
- c) water
- d) vitamins
- e) all of the above choices are correct

ان شجار الكلى الجسم

30. Blood pressure is _____

- a) Highest in arteries
- b) Decreases as blood moves away from the heart
- c) Lowest in veins
- d) Reduced during too much exercise
- e) a+b+c are correct choices

(↑ B.P) - توجد بعد القلب

تقل عند ما يتحرك بعد أعين القلب
مثل ان وعين الدعوى خرا القدم

because exercise & emotion
↑ blood . press. الانفعالات والجهود

31. Marine animals that have body fluids with a solute concentration equal to that of the surrounding seawater are:

- a) osmoregulators
- b) osmoconformers
- c) hypertonic
- d) hypotonic.
- e) a and c are correct.

(متوافقة اوسموتيا)

osmoregulation لا تحتاج

32. _____ involves inheritance of unique combination of genes from two parents.

- a) Regeneration.
- b) Fragmentation.
- c) Budding.
- d) Sexual reproduction.
- e) Binary fission.

33. Which of the following is true ?

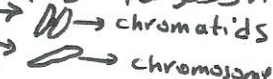
- a) Chromosomes are located on genes.
- b) Genes are located on chromosomes.
- c) Genes are polymer of amino acids.
- d) Chromosomes are part of a chromatid.
- e) Prokaryotes have paired chromosomes



عندما يكون الكروموسوم مقرونين

Single circular small

الكروموسوم هو تفرع الكروموسايم
عندما يكون مقرونين



34. A _____ is a change in the nucleotide sequence of DNA.

- a) transcription
- b) translation
- c) modification
- d) mutation.
- e) gene expression.

المطفرات
mutagen

substitution (استبدال)

Deletion or insertion (حذف أو إضافة) change in mRNA frame

الطفرة

35. Meiosis:

- a) occurs in the sex organs.
- b) produces sperm.
- c) produces eggs
- d) produce haploid cell.
- e) all of the above.

egg & sperm = gametes (الجاميتات)

36. In Mendel's F2 generation, one out of four plants had white flowers because _____

- a) The trait is sex-linked
- b) Both parents were heterozygous purple
- c) One parent was homozygous recessive
- d) Both parents were heterozygous white
- e) One parent was heterozygous purple

Pp → heterozygous purple (Dominant)

	P	p
P	PP	Pp
p	Pp	pp

→ Recessive white

Parent كوالدين (2 Pp) → زنتا به انا ب

37. The correct sequence of the stages of mitosis is _____

- a) prophase, anaphase, metaphase, telophase
- b) prophase, metaphase, anaphase, telophase
- c) metaphase, anaphase, telophase, prophase
- d) metaphase, prophase, anaphase, telophase
- e) telophase, prophase, anaphase, metaphase.

38. Mendel showed that parents pass heritable factors to offspring, These heritable factors are now called:

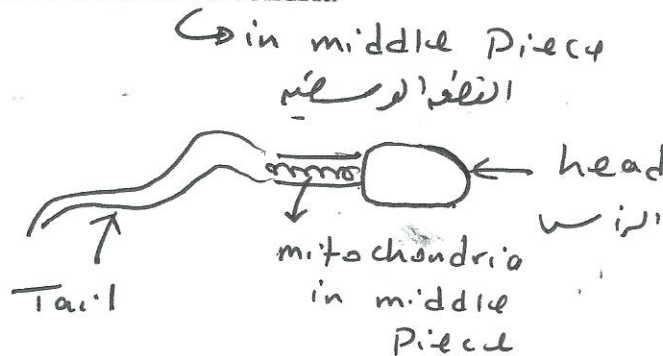
- a) Chromosomes.
- b) Chromatids.
- c) RNA.
- d) DNA.
- e) Genes.

39. Cytokinesis in animal cells is accomplished by:

- a) Cleavage furrow made by contractile ring of intermediate filaments.
- b) Cleavage furrow made by contractile ring of microfilaments.
- c) Cleavage ring made by microtubules.
- d) Binary fission.
- e) Cell plate formation → in plant cell

40. The movement of the sperm tail is due to the:

- a) fertilization
- b) primary spermatogenesis
- c) the large number of sperm
- d) spermatids
- e) ATP released from mitochondria



GOOD LUCK