BSC 1005 3rd Exam
Summer 2016
MDC IAC/Hialeah
Professor: Dr. Victor Okoh

Student Name_____

Date:_____

Instruction: Read the following questions carefully and circle the most correct answers.

1. A codon codes for 3 amino acids?
   a. True
   b. False
   c. Both a and b are correct
   d. Both a and b are incorrect
   e. None of the above is true

2. The machinery needed for protein translation includes all of the following except?
   a. Transfer RNA (tRNA)
   b. Messenger RNA (mRNA)
   c. Ribosomal RNA (rRNA)
   d. No exception, all of the above are correct
   e. None of the above

3. Your tooth is an example of a gene product
   a) True
   b) False
   c) Both a and b are correct
   d) Both a and b are incorrect
   e) None of the above is true

4. Mendel is known for the discovery of DNA in human population studies
   a. True
   b. False
   c. They are both correct
   d. None is correct

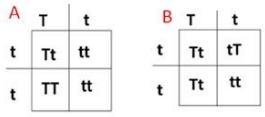
5. Dominant traits are features only expressed due to chromosomal damage
   a. True
   b. False
   c. They are both correct
   d. None is correct

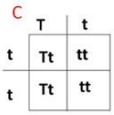
6. Were you to want to review your ancestral tree, you would probable want to construct a punnett square (Not reviewed)
   a. Very True
   b. Very false
   c. I must have missed this lecture
   d. Time to review my lecture notes

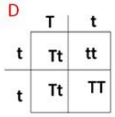
7. The sequence of protein translation is?
   a. Termination-initiation-elongation
   b. Initiation-Termination-elongation
   c. Initiation-elongation-termination
   d. Initiation-transcription-translation
   e. None of the above is true

8. Which is correct if you crossbreed F2?

   a)
   b)
   c)
   d)
   e) I missed this class







9. Chromosomal rearrangement occurs via meiosis I and meiosis II
   a. True
   b. False
   c. They are both correct
   d. None is correct

10. The daughter cells from meiosis I and II cell divisions are 2 and 4 respectively
    a) True
    b) False
    c) They are both correct
    d) None is correct

11. During gametogenesis of the egg, one diploid cell divides into four functional haploid eggs (not reviewed)
    a. True
    b. False
    c. They are both correct
    d. None is correct

12. The start codon for ALL protein is what?
    a. AUG
    b. GAU
    c. GUA
    d. AGU
    e. None of the above is true

13. During protein translation, which of the following have the P and A slot (not reviewed)
    a) The transfer RNA (tRNA)
    b) The messenger RNA (mRNA)
    c) The ribosomal RNA (rRNA)
    d) The intron and exon
    e) I missed this lecture again

14. Mitosis is a process of cell division where one cell divides into four daughter cells
    a) True
    b) False
    c) They are both correct
    d) None is correct

15. X-linked inheritance are inheritances encoded in chromosome 22, the female sex chromosomes (not reviewed)
    a) True
    b) False
    c) They are both correct
    d) None is correct

16. Protein translation occurs in the cytoplasm
    a. True
    b. False
    c. Both a and b are correct
    d. Both a and b are incorrect
    e. None of the above is true

17. The most consequential nucleotide in an amino acid codon is the last nucleotide
    a. True
    b. False
    c. Both a and b are correct
    d. Both a and b are incorrect
    e. None of the above is true

18. Which of the following is NOT a gene product?
    a) Fruits
    b) Vegetable
    c) Meat and poultry
    d) Hair
    e) All are gene products

19. A codon consist of 3 nucleotide sequence?
    a. True
    b. False
    c. Both a and b are correct
    d. Both a and b are incorrect
    e. None of the above is true

20. The Y chromosome contains more genetic information than the X chromosome (not reviewed)
    a. This is true statement as the Y determines the sex of the child
    b. This is false statement as they both are equal size and equal genes
    c. This is true as the share size of Y over X make this point obvious
    d. This is false as the share size of X over Y contradicts the statement
    e. I have no clue as I was absent from lecture on the day this was discussed.

21. Messenger RNA (mRNA) must have *one* termination sequence to end protein synthesis (not reviewed)
    a) True
    b) False
    c) Both a and b are correct
    d) Both a and b are incorrect
    e) None of the above is true

22. Another difference between RNA and DNA is?
    a. RNA has a Thymine (T) nucleotide while DNA has Uracil (U)
    b. DNA has Thymine (T) nucleotide while RNA has Uracil (U)
    c. Both a and b answer are wrong
    d. Both a and b could be correct
    e. None of the above is true

23. Bacteria, whale and human have the same protein *start* codon (Not reviewed)
    a. True Statement for all life forms have same similar protein start codon
    b. False statement; these are three different species so they can't have similar start codon for protein translation
    c. Not really sure of the answer but I believe that (a) & (b) above are somewhat correct
    d. This must be the day I missed class or wasn't paying attention
    e. Trick question, none of the above are correct (snide!)

24. Garbage gene code would lead to garbage proteins synthesis (not reviewed)
    a. True
    b. False
    c. Not in my lecture ppt
    d. Google didn't help
    e. Common sense didn't help either

25. The nucleotide sequence of RNA is?
    a. A-U-T-C
    b. G-C-U-T
    c. A-C-T-X (this CANNOT BE CORRECT!)
    d. A-U-G-C
    e. None of the above is true

26. Sickle cell hemoglobin is an example of chromosomal deletion (not reviewed)
    a) Absolutely true statement
    b) Absolutely false statement
    c) Sickled cells carry oxygen in full capacity
    d) I am confused with these choices
    e) I will just google for the answer since it's a take home exam

27. Junk regions of your DNA (introns) codes for…(not reviewed)
    a. Most genes needed for all biological activities
    b. They act as protective spacers between coding (exon) regions of genes
    c. Trick question, none of these choices is true
    d. A and B could be correct and I can prove it!

28. When your wound heals, mitotic cell division is what is responsible
    a. True
    b. False
    c. They are both correct
    d. None is correct

29. Mitosis occurs only in gametic cells
    a. True
    b. False
    c. They are both correct
    d. None is correct

30. Haploid cells have 2x23 chromosomes while diploid cells have 1x23 chromosomes
    a. True
    b. False
    c. They are both correct
    d. None is correct

31. Punette square is used to study futuristic inheritance
    a. True
    b. False
    c. They are both correct
    d. None is correct

32. Recessive traits are gene present but is not expressed in cells
    a. True
    b. False
    c. They are both correct
    d. None is correct

33. A codon codes for one amino acid?
    a. True
    b. False
    c. Both a and b are correct
    d. Both a and b are incorrect
    e. None of the above is true

34. In protein translation, AUG sequence on the A slot in the ribosome initiate protein synthesis (not reviewed-look at your lecture ppt)
    a. What are you talking about sir?
    b. I know, the answer 'true' and the amino acid made is methionine
    c. Let me read this question carefully again
    d. None of these options are correct

35. Grande guava must have been adulterated (genetically modified) because normal guavas are not that big. The reason for this huge size is probably due to what? (not reviewed)
    a. The fertilizer used to grow the guava is very rich in growth nutrients
    b. Scientist must have removed 'short chromosomes' that makes guavas normal size
    c. Scientist must have added extra chromosomes (polyploidy) to make guavas big
    d. I think A and B is most correct
    e. I think A and C is most correct

36. Phenotype is the features generally expressed by dominant allele
    a. True
    b. False
    c. They are both correct
    d. None is correct

37. Allele are alternate form of a gene on homologous chromosome
    a. True
    b. False
    c. They are both correct
    d. None is correct

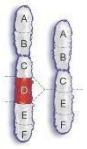
38. Trait that are present on the x-chromosome but are not expressed are dominant trait
    a. True
    b. False
    c. They are both correct
    d. None is correct

39. "Particle" is the unit of inheritance in Mendel's work with animals (not reviewed)
    a. Absolutely true statement
    b. Absolutely false statement
    c. I am confused with these choices
    d. I will just google the answer since it's a take home exam

40. Methionine is stop amino acid for ALL proteins (not reviewed)
    a. True
    b. False
    c. They are both correct
    d. None is correct

41. The allele that controls colorblindness is found on the X chromosome and is recessive
    a. True
    b. False
    c. They are both correct
    d. None is correct

42. This is an example of translocated chromosome
    a. True
    b. False
    c. They are both correct
    d. None is correct



43. Down Syndrome is an example of an aneuploidy; specifically monosomic condition (not reviewed)
    a. True
    b. False
    c. Will review my lecture notes
    d. Don't know and don't care

44. DNA is biological molecule that codes for all genes
    a. Absolutely True
    b. Absolutely False
    c. Largely false but somewhat true
    d. Largely true but somewhat false

45. XXY aneuploidic condition is characterized by what features (not reviewed)?
    a. Excessive menstrual bleeding (menorrhagia) in men
    b. Absence of menstrual flow (Amenorrhe) in men
    c. Abnormal ovarian functions in men
    d. Enlarged breast in men
    e. None of the above is true, XXY are only seen in women

46. Meiosis starts off with diploid # of chromosomes and end with hapliod # of chromosomes
    a. True
    b. False
    c. Will review my lecture notes
    d. Don't know and don't care

47. Breast cancer is an example of unregulated meiotic cell division (not reviewed)
    a. True
    b. False
    c. Will review my lecture notes
    d. Don't know and don't care

48. Which of the following pioneers is not related to genetic studies (not reviewed)
    a. Watson and Crick
    b. Wilkins and Franklins
    c. Louis Pasteur
    d. Gregory Mendel
    e. Chargaff

49. Spermatogenesis is an example of mitotic cell division
    f) True
    g) False
    h) They are both correct
    i) None is correct

50. Mutations in mitotic cells can be inheritable
    a) True
    b) False
    c) They are both correct
    d) None is correct