

Pre Evaluation Ag-Bio 2005

Directions For Numbers 1-25 : Read each of the following multiple-choice items and the possible answers carefully. Mark the letter of the correct answer on your answer sheet or as instructed by your teacher. Remember: Make no marks on this test.

1 The invention of the cotton gin led to:

- A More use of slave labor.
- B Less use of slave labor.
- C The industrialization of the South.
- D The ending of the Civil War.

2 In the nineteenth century, the center of the American textile industry was in:

- A San Francisco, California.
- B New York, New York.
- C Chicago, Illinois.
- D Lowell, Massachusetts.

3 Rachel Carson is credited with starting:

- A The green revolution.
- B The environmental movement.
- C Modern biotechnology.
- D The development of genetically modified foods.

4 One early use of biotechnology occurred in the Middle East. This involved:

- A Growing crops.
- B Brewing beer.
- C Burial mummification.
- D Manufacturing linen.

5 A substance that can be broken down into organic molecules by microorganisms is said to be:

- A Transgenic.
- B Biodegradable.
- C Arable.
- D Recombinant.

6 The entire genetic content of an organism is called its:

- A Genetic fingerprint.
- B Sugar-Phosphate matrix.
- C Genome.
- D Nucleotide index.

7 The person referred to as the father of the Green Revolution is:

- A Norman Borlaug.
- B Rachel Carson.
- C Gregory Mendel.
- D Ingo Potrykus.

8 Integrated Crop Management (ICM) is a system whose approach maintains that:

- A Pests should be completely eradicated.
- B The complete eradication of pests is undesirable.
- C Biotech foods will make fertilizer and pesticides obsolete.
- D No agricultural method can be sustained for long periods.

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9 What was the first approved genetically modified food?

- A Banana
- B Peach
- C Cucumber
- D Tomato

10 A possible consequence of fertilizer runoff is:

- A Acid rain.
- B Unwanted algae growth.
- C Increased insect population.
- D Decreased nitrogen content in surface water.

11 Recombinant Bovine Growth Hormone (rBGH) has the purpose of:

- A Making livestock grow faster.
- B Increasing the nutritional value of beef.
- C Eliminating the need for antibiotics.
- D Causing cows to produce more milk.

12 The **MOST** important tools used to control the outbreak of SARS have been:

- A Quarantines and infection control.
- B Genetically engineered vaccines and free inoculations.
- C Spraying for mosquitoes and draining standing water.
- D Sex education campaigns and free distribution of condoms.

13 Bio-manufactured products include which of the following?

- A Microscopes.
- B Milk with longer shelf-life.
- C Monoclonal antibodies.
- D Seedless cotton.

14 Which inventor developed the seed drill?

- A Gregory Mendel
- B Jethro Tull
- C James Watson
- D John Deere

15 Bt Cotton is identified with:

- A Where it is grown.
- B The color of the lint.
- C Its genetic modification.
- D The type of the fiber.

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For Numbers 16-18, use the following Punnett square.

A capital **P** indicates a dominant allele for purple flowers. A lower case **p** indicates a recessive allele for white flowers.

Second Generation

This row and column show all the alleles from two parents	P	P	p	p
P	PP Purple Flower	PP Purple Flower	Pp Purple Flower	Pp Purple Flower
P	PP Purple Flower	PP Purple Flower	Pp Purple Flower	Pp Purple Flower
p	Pp Purple Flower	Pp Purple Flower	pp White Flower	pp White Flower
p	Pp Purple Flower	Pp Purple Flower	pp White Flower	pp White Flower

- 16** A Punnett square is useful for:
- A** Predicting with certainty the color of the next flower that blooms.
 - B** Approximating the number of times that a specific trait will appear when given the number of occurrences.
 - C** Predicting the rate of pollination.
 - D** Determining the total yield of the harvest.

- 17** The Punnett square shown indicates that, in this generation, the probability of a plant having white flowers is:
- A** One in eight.
 - B** One in six.
 - C** One in four.
 - D** One in two.

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18 If the garden represented by the Punnett square shown has 600 plants, approximately how many will have purple flowers?

- A 300
- B 350
- C 400
- D 450

19 In the period between 1790 and 1808 about 80,000 Africans were brought to America as slaves. The total population of America in the early 1800s was about 5 million people. About what percentage of the total population was the result of this historical event?

- A 0.625 %
- B 1.60 %
- C 6.25 %
- D 16.0 %

20 Which statement reflects the prediction of Thomas Malthus?

- A An arithmetic progression will increase faster than a geometric progression.
- B War and disease will tend to put limits on the world food supply.
- C In time, the growth in human population will exceed the available food supply.
- D In time, humans will have greater and greater food surpluses.

21 The banana must be liquefied in a blender before extracting its DNA in order to:

- A Break down the cell membrane.
- B Improve its viscosity.
- C Release the nitrogen and phosphates.
- D Break down the cell wall.

22 The individuals credited with discovering the structure of DNA were:

- A Mendel and Darwin.
- B Watson and Crick.
- C Whitney and Potrykus.
- D Borlaug and Carson.

23 Organisms that are modified by transferring traits from one species to another are called:

- A Transgenic.
- B Clones.
- C Domesticated.
- D Inbred.

24 Before extracting DNA from plant matter, lysis solution is added to the mixture in order to break down the:

- A Cell membrane.
- B Cell wall.
- C Chlorophyll.
- D Cellulose.

25 The chemicals Guanine, Cytosine, Thymine and Adenine are known as:

- A Genes.
- B Chromosomes.
- C Nucleotides.
- D Isotopes.

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?	⊙	Answer/ Scale	Objective	?	⊙	Answer/ Scale	Objective
1	1	A	AB11.03 Technology	14	14	B	AB11.03 Technology
2	2	D	AB11.03 Technology	15	15	C	AB11.03 Technology
3	3	B	AB11.03 Technology	16	16	B	AB11.01 Math
4	4	A	AB11.03 Technology	17	17	C	AB11.01 Math
5	5	B	AB11.03 Technology	18	18	D	AB11.01 Math
6	6	C	AB11.03 Technology	19	19	B	AB11.01 Math
7	7	A	AB11.03 Technology	20	20	C	AB11.01 Math
8	8	B	AB11.03 Technology	21	21	D	AB11.02 Science
9	9	D	AB11.03 Technology	22	22	B	AB11.02 Science
10	10	B	AB11.03 Technology	23	23	A	AB11.02 Science
11	11	D	AB11.03 Technology	24	24	A	AB11.02 Science
12	12	A	AB11.03 Technology	25	25	C	AB11.02 Science
13	13	C	AB11.03 Technology				

Total questions on test: 25

Minimum points
required to achieve
mastery category

Objectives measured: 3	Items	Points	●	◐	Questions measuring this objective
AB11.03 Technology	15	15	11	10	1 2 3 4 5 6 7 8 9 10 11
AB11.03 Technology					12 13 14 15
AB11.01 Math	5	5	4	3	16 17 18 19 20
AB11.02 Science	5	5	4	3	21 22 23 24 25
Totals		25	19	16	

AB11

? = Test Question Number ⊙ = line on GP Form

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Items used in test

?	Item name	?	Item name	?	Item name
1	AB11.03.00.02	10	AB11.03.00.07	18	AB11.01.00.03
2	AB11.03.00.06	11	AB11.03.00.09	19	AB11.01.00.04
3	AB11.03.00.01	12	AB11.03.00.04	20	AB11.01.00.05
4	AB11.03.00.13	13	AB11.03.00.15	21	AB11.02.00.05
5	AB11.03.00.05	14	AB11.03.00.14	22	AB11.02.00.02
6	AB11.03.00.08	15	AB11.03.00.12	23	AB11.02.00.03
7	AB11.03.00.10	16	AB11.01.00.01	24	AB11.02.00.04
8	AB11.03.00.11	17	AB11.01.00.02	25	AB11.02.00.01
9	AB11.03.00.03				

AB11

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