NOVA SCOTIA BIOLOGY 12 · FINAL EXAM

Final Exam — Practice Test

Nova Scotia Biology 12 • 50 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A heart beats 180 times in 120 seconds. The heart rate, in beats per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **A species has 78 chromosomes in each body cell. The number of chromosomes in each gamete is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **In a cross, 200 offspring are produced and one quarter are expected to show the recessive trait. The expected number with the recessive trait is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **A population of 500 organisms grows by 20 percent in one year. The new population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A person takes 36 breaths in 120 seconds. The breathing rate, in breaths per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **One cell divides by mitosis 5 times. The number of cells produced is**

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **In a dihybrid cross 3200 offspring are produced. One sixteenth are expected to show both recessive traits. The expected number is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **In a gene pool of 400 alleles, 100 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **A nerve impulse travels 100 metres in 1 seconds. The speed of the impulse, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **A menstrual cycle lasts 30 days. In a simplified model ovulation occurs 14 days before the end of the cycle. The day of ovulation is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **In a DNA sample adenine makes up 40 percent of the bases. The percent that is guanine is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **A fossil sample starts with 80 grams of a radioactive isotope. After 1 half lives the mass remaining, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **A kidney filters 200 litres of fluid in a day and reabsorbs 99 percent of it. The volume of urine produced, in litres, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **An egg cell has 39 chromosomes and the sperm cell has 39 chromosomes. The fertilised egg has, in chromosomes**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A messenger RNA molecule has 60 bases. The number of codons it contains is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A population of 500 bacteria is treated with an antibiotic that kills 90 percent. The number that survive is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A hormone sample starts at 160 units. After 3 half lives the amount remaining, in units, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **A person releases 1 egg per menstrual cycle and has about 12 cycles per year. In 10 years the number of eggs released is about**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **In a population 16 percent show a recessive trait. The percent expected to be heterozygous carriers is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **An area has 200 species in total and 20 of them are mammals. The percent that are mammals is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **A plant sample has a mass of 40 grams. After absorbing water its mass is 48 grams. The percent increase in mass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

22 **A pregnancy lasts 38 weeks. The length in days is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **The observable trait of an organism is its**

- A phenotype
- B genotype
- C allele
- D chromosome

Understand It with Pulse | Flag a mistake

24 **Natural selection acts on**

- A variation already present in a population
- B variation created by need
- C identical individuals
- D acquired traits only

Understand It with Pulse | Flag a mistake

25 **In a reflex arc the correct order of structures is**

- A effector then motor neuron then sensory neuron then receptor
- B receptor then motor neuron then sensory neuron then effector
- C receptor then sensory neuron then motor neuron then effector
- D sensory neuron then receptor then effector then motor neuron

Understand It with Pulse | Flag a mistake

26 **In humans fertilisation usually occurs in the**

- A uterus
- B ovary
- C oviduct
- D cervix

Understand It with Pulse | Flag a mistake

27 **Transcription copies DNA into**

A a protein

B a new DNA strand

C a ribosome

D messenger RNA

Understand It with Pulse | Flag a mistake

28 **A vestigial structure is a structure that**

A is newly evolved

B is found only in fossils

C controls behaviour

D has lost most of its original function

Understand It with Pulse | Flag a mistake

29 **The structure in a neuron that receives signals from other cells is**

A dendrite

B axon

C nucleus

D myelin sheath

Understand It with Pulse | Flag a mistake

30 **Implantation is the attachment of the embryo to the**

A ovary wall

B uterine wall

C placenta only

D cervix

Understand It with Pulse | Flag a mistake

31 **In a cross, 120 offspring are produced and one quarter are expected to show the recessive trait. The expected number with the recessive trait is**

ANSWER _____

Understand It with Pulse | Flag a mistake

32 **A population of 400 organisms grows by 25 percent in one year. The new population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

33 **A heart beats 130 times in 120 seconds. The heart rate, in beats per minute, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

34 **A species has 38 chromosomes in each body cell. The number of chromosomes in each gamete is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **In a dihybrid cross 160 offspring are produced. One sixteenth are expected to show both recessive traits. The expected number is**

ANSWER _____

Understand It with Pulse | Flag a mistake

36 **In a gene pool of 500 alleles, 200 are the A allele. The percent of A alleles is**

ANSWER _____

Understand It with Pulse | Flag a mistake

37 **A nerve impulse travels 50 metres in 0.5 seconds. The speed of the impulse, in metres per second, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

38 **A menstrual cycle lasts 32 days. In a simplified model ovulation occurs 14 days before the end of the cycle. The day of ovulation is**

ANSWER _____

Understand It with Pulse | Flag a mistake

39 **A messenger RNA molecule has 150 bases. The number of codons it contains is**

ANSWER

Understand It with Pulse | Flag a mistake

40 **A population of 1000 bacteria is treated with an antibiotic that kills 90 percent. The number that survive is**

ANSWER

Understand It with Pulse | Flag a mistake

41 **A kidney filters 180 litres of fluid in a day and reabsorbs 98 percent of it. The volume of urine produced, in litres, is**

ANSWER

Understand It with Pulse | Flag a mistake

42 **An egg cell has 19 chromosomes and the sperm cell has 19 chromosomes. The fertilised egg has, in chromosomes**

ANSWER

Understand It with Pulse | Flag a mistake

43 **In a population 9 percent show a recessive trait. The percent expected to be heterozygous carriers is**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **An area has 400 species in total and 80 of them are mammals. The percent that are mammals is**

ANSWER _____

Understand It with Pulse | Flag a mistake

45 **A plant sample has a mass of 60 grams. After absorbing water its mass is 75 grams. The percent increase in mass is**

ANSWER _____

Understand It with Pulse | Flag a mistake

46 **A pregnancy lasts 39 weeks. The length in days is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **A test cross is used to find the**

A phenotype only

B genotype of an organism showing a dominant trait

C chromosome number

D mutation rate

Understand It with Pulse | Flag a mistake

48 **The main source of new genetic variation is**

A migration only

B mutation

C natural selection

D extinction

Understand It with Pulse | Flag a mistake

49 **Negative feedback in body temperature control works by**

- A increasing every change
- B stopping all hormone release
- C reversing a change from the set point
- D ignoring the set point

Understand It with Pulse | Flag a mistake

50 **Sperm are produced in the**

- A ovaries
- B testes
- C prostate only
- D uterus

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	90	**18.**	120	**35.**	10
2.	39	**19.**	48	**36.**	40
3.	50	**20.**	10	**37.**	100
4.	600	**21.**	20	**38.**	18
5.	18	**22.**	266	**39.**	50
6.	32	**23.**	A	**40.**	100
7.	200	**24.**	A	**41.**	3.6
8.	25	**25.**	C	**42.**	38
9.	100	**26.**	C	**43.**	42
10.	16	**27.**	D	**44.**	20
11.	10	**28.**	D	**45.**	25
12.	40	**29.**	A	**46.**	273
13.	2	**30.**	B	**47.**	B
14.	78	**31.**	30	**48.**	B
15.	20	**32.**	500	**49.**	C
16.	50	**33.**	65	**50.**	B
17.	20	**34.**	19		

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