

**SECTION A: ANSWER KEY**

Q. No.	a	b	c	d	Q. No.	a	b	c	d
1.				✓	11.			✓	
2.	✓				12.			✓	
3.				✓	13.			✓	
4.				✓	14.		✓		
5.				✓	15.		✓		
6.				✓	16.	✓			
7.		✓			17.	✓			
8.		✓			18.		✓		
9.				✓	19.				✓
10.				✓	20.			✓	

	X	Y	Not attempted	
<b>SECTION A</b>				<b><math>3X - Y =</math></b>

**SECTION B: ANSWER KEY****CELL BIOLOGY (14 points)**

21. (2 points)

- A. \_\_\_ F
- B. \_\_\_ T
- C. \_\_\_ F
- D. \_\_\_ T

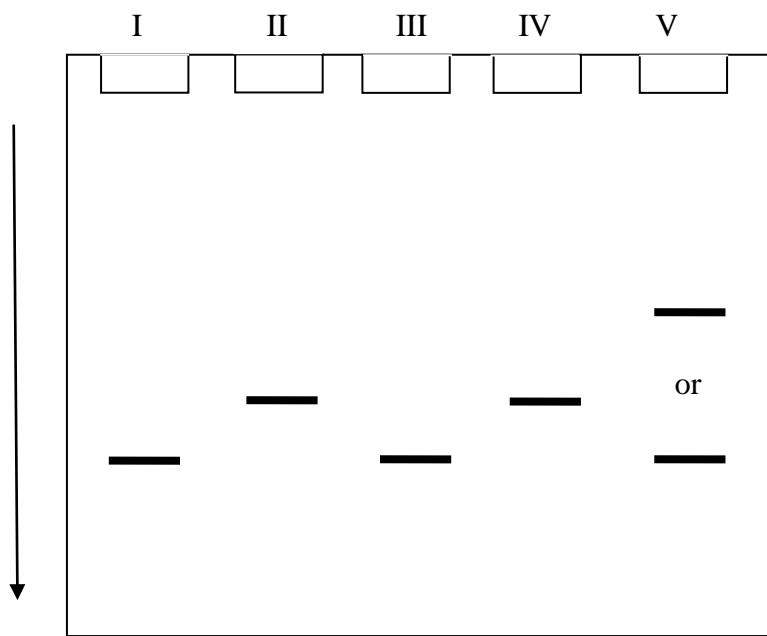
22. (2 points)

- a. \_\_\_ T
- b. \_\_\_ F
- c. \_\_\_ T
- d. \_\_\_ F

23. (2 points)

- a. \_\_\_\_ IV
- b. \_\_\_\_ II
- c. \_\_\_\_ III
- d. \_\_\_\_ I

24. (4 points)



25. (2 points)

Answer: \_\_\_\_\_ 6

26. (2 points)

- a. \_\_\_ F
- b. \_\_\_ T
- c. \_\_\_ T
- d. \_\_\_ F

**PLANT SCIENCES (10 points)**

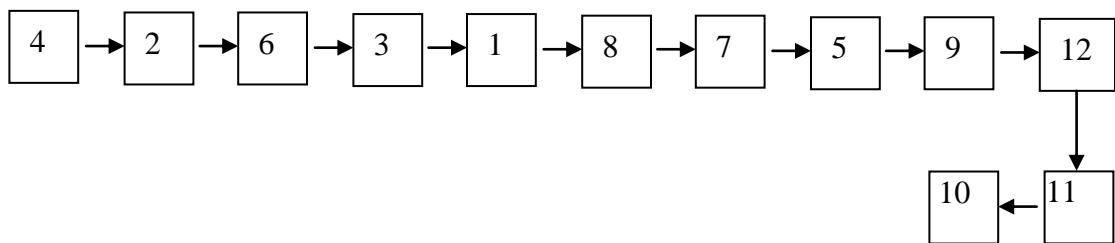
27. (2 points)

A.	B.	C.	D.
✓			

28. (2 points)

- A. \_\_\_ T
- B. \_\_\_ T
- C. \_\_\_ T
- D. \_\_\_ T

29. (4 points)



30. (2 points)

- a.  ✓
- b.  X
- c.  ✓
- d.  ✓

**ANIMAL SCIENCES (11.5 points)**

31. (2 points)

- a.  T
- b.  F
- c.  F
- d.  T

32. (5 points)

(A).

- a. \_\_\_\_\_ IV, V \_\_\_\_\_
- b. \_\_\_\_\_ II, III \_\_\_\_\_
- c. \_\_\_\_\_ I, II \_\_\_\_\_

(B).

- a.  10 \_\_\_\_\_ mm
- b.  -8 \_\_\_\_\_ mm

33. (2.5 points)

- a.  F
- b.  F
- c.  T
- d.  T
- e.  F

34. (2 points)

- a.  F
- b.  F
- c.  T
- d.  F

**GENETICS & EVOLUTION (17 points)**

35. (2 points)

Answer:  12.5 %

36. (2 points)

- a.  F
- b.  T
- c.  F
- d.  T

37. (2 points)

- I.  X
- II.  ✓
- III.  X
- IV.  ✓

38. (2 points)

Answer:  0.0121 or 0.012

39. (2 points)

- a. F
- b. T
- c. F
- d. F

40. (2 points)

Answer: \_\_\_\_\_ 3/8 or 0.375

41. (3 points)

- a. F
- b. F
- c. T
- d. F
- e. F
- f. F

42. (2 points)

- a. T
- b. T
- c. F
- d. T

**ECOLOGY (15 points)**

43. (2 points)

- a. F
- b. F
- c. F
- d. T

44. (4 points)

(A)

a.	b.	c.	d.
	✓		

(B)

- a. \_\_\_\_F
- b. \_\_\_\_F
- c. \_\_\_\_T
- d. \_\_\_\_T

45. (2 points)

a.	b.	c.	d.
	✓		

46. (3 points)

- A) \_\_\_\_F
- B) \_\_\_\_T
- C) \_\_\_\_T

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47. (4 points)

Statement	Hypothesis	Graph
a.	2	Q
b.	1	P
c.	3	S
d.	4	R

**ETHOLOGY (4 points)**

48. (2 points)

- a. \_\_\_F
- b. \_\_\_F
- c. \_\_\_T
- d. \_\_\_F

49. (2 points)

- a. \_\_\_T
- b. \_\_\_F
- c. \_\_\_F
- d. \_\_\_T

**BIOSYSTEMATICS (8.5 points)**

50. (2 points)

Statements	Possible Explanation	True	False
a.	Pre-existing genes were silenced during early stages of evolution in Cnidaria.		✓
c.	Cnidaria are most probably the degenerative forms of Acoelomates with knockdown of mesoderm genes.		✓
d.	The Cnidarian genes possibly duplicated, mutated and later were switched on for new functions in Bilateria.		✓
e.	The genes pre-existed in Cnidaria-Acoela ancestor but, the expression was delayed till evolution of mesoderm.		✓

51. (3 points)

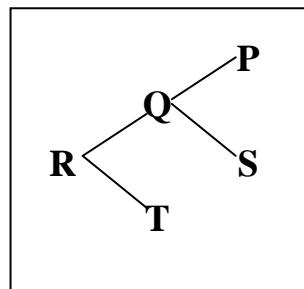
Cladogram	Correct	Incorrect
P		✓
Q		✓
R		✓

52. (2 points)

Cladogram	Correct	Incorrect
P		✓
Q	✓	
R		✓
S		✓

53. (1.5 points)

Answer:



\*\*\*\*\* END OF SECTION B \*\*\*\*\*