

**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>				$3X - Y =$

**SECTION B: ANSWER KEY**

**CELL BIOLOGY (14 points)**

21. (2 points)

- A. \_\_\_F
- B. \_\_\_T
- C. \_\_\_F
- D. \_\_\_T

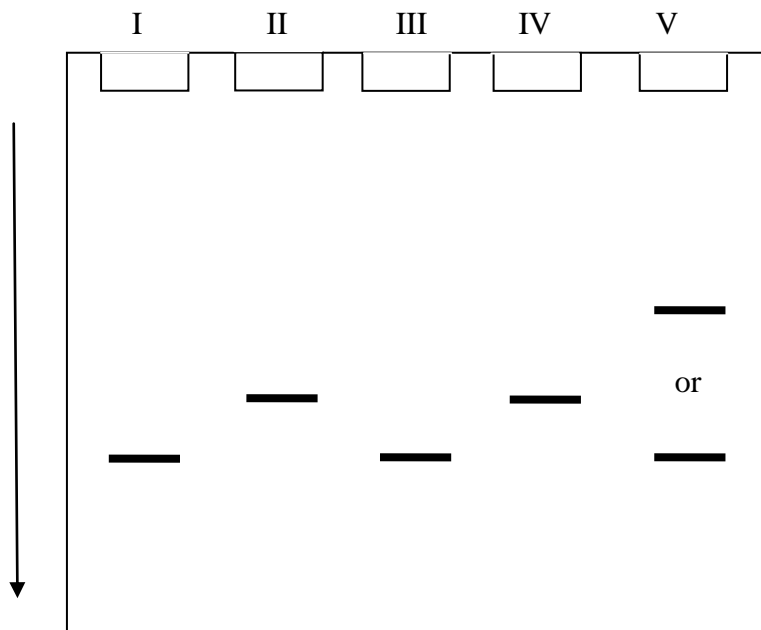
22. (2 points)

- 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: \_\_\_\_\_12

26. (2 points)

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

**PLANT SCIENCES (10 points)**

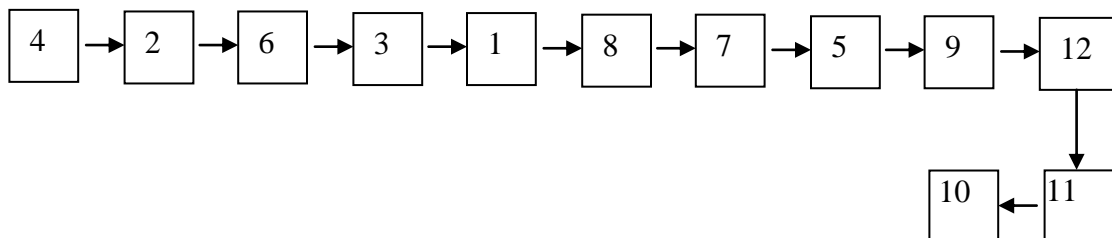
27. (2 points)

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

39. (2 points)

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

40. (2 points)

Answer: \_\_\_\_\_ 3/8

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

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)

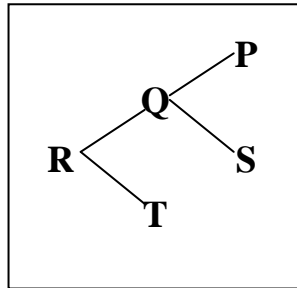
Cladogram	Correct	Incorrect
P	✓	
Q		✓
R		✓

52. (2 points)

Cladogram	Correct	Incorrect
P		✓
Q	✓	
R		✓
S		✓

53. (1.5 points)

Answer:



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