SAUSYS

05 DEC 2013

F. SRI LANKA

ME - LEVEL 04 - 2012/2013

## THE OPEN UNIVERSITY OF SRI LANKA

B. Sc. DEGREE PROGRAMME - LEVEL 04 - 2012/2013

Botany - BOU 2101 - Genetics and Evolution

ASSESSMENT TEST 1 – OPEN BOOK TEST (OBT)

	HOUR (11.00a.m. to	12.00noon)		
ANSWER ALL QU (This paper contains	ESTIONS four (04) questions and	l four (04) page	s)	
1.				
a) What is the d	ifference between follo	owing?		
ii) He	ster and Non-sister chr omologous and Non-ho	omologous chro		
				40 Apr 404 Min Min The cent 404 CPR 100 MIN
		al hair and read hair find find find find find and and also day also also find day. Also find find find find f		

- b) In human beings 2n=46. How many chromosomes would you find in a
  - i) Brain cell?
  - ii) Red Blood cell?
  - iii) Sperm?

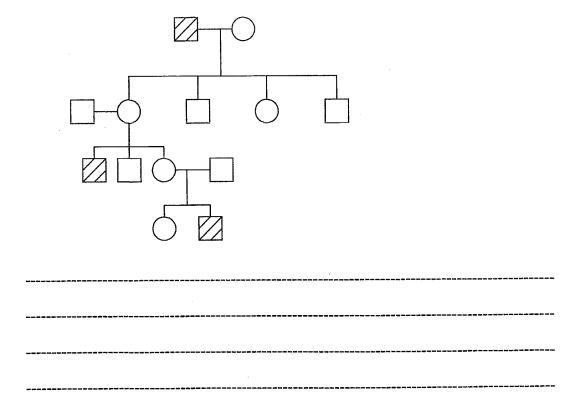
	iv) Pollen grain? v) Ovule?
c)	If a male honeybee is haploid (arising from unfertilized eggs) and a queen (female) is diploid, draw a testcross between a dihybrid queen and a male honeybee.
d)	How many different kinds of sons and daughters result from this cross?
a	In the ABO blood-group system in humans, A and B alleles are codominant and both are dominant to O. In a paternity dispute, a type AB woman claimed that one of four men was the father of her type A child.
	Which of the following men could be the father of the child on the basis of the evidence given?
	i) Type A ii) Type B iii) Type O iv) Type AB
	Give your evidence diagrammatically (showing crosses).

2.

·		
54 - 74 - 74 - 74 - 74 - 74 - 74 - 74 -	. <u> </u>	
The full and a short and		
The following three recessive $a = albinism$ ; $b = bent tail$ ; $c = bent tail$		rais:
A trihybrid of unknown origin		ring the following offspring
A timyond of diknown origin	is testerossed, produc	ang the following offspring
Albino, bent, crossed	357	
Albino, bent	74	
Crossed	66	
Bent	79	
Wild-type	343	
Albino, crossed	61	
Bent, crossed	11	
Albino	9	
	1000	
	1000	
a) If the genes are linked, de	etermina tha relative (	order and the map distance l
them.	Morning the relative (	order and the map distance t
·		
	پور غ <b>يوا چون حان حان حان حان الله پا</b> ن خان خان جان چين پور پيم لين <u>چين اين پيرا اخا</u> احا احان احان احان احان	
		**************************************

b) What was the cis-trans allele arrangement in the trihybrid parent?

4. What is/are the possible modes of inheritance in the following pedigree?



- Copyrights reserved -