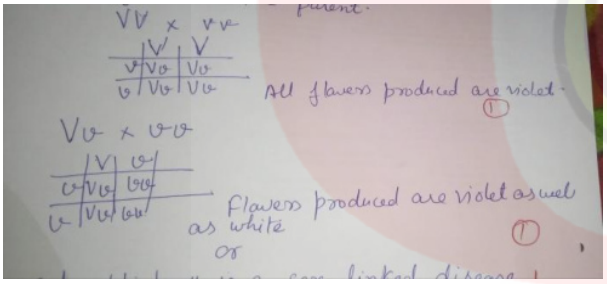
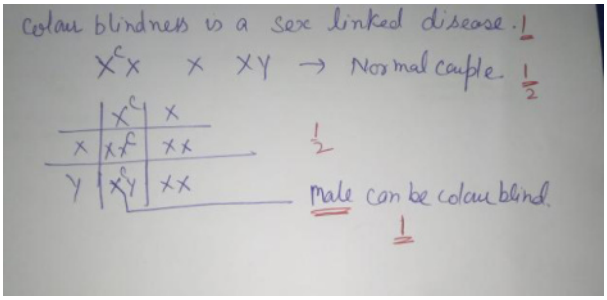
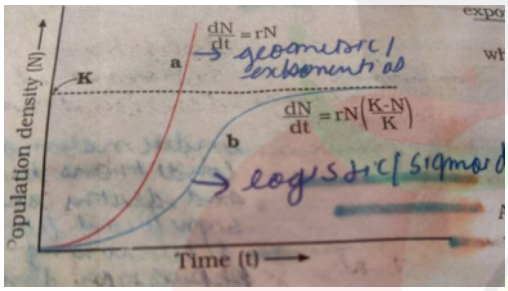
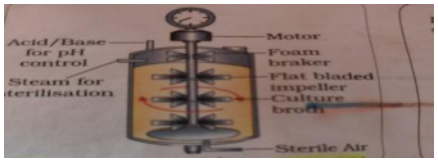
	Key for set B - 12 BIOLOGY		
Sr.No	Value Point		Marks
1	B) Endosperm		1
2	A) Spcropollenin		1
3	C)FSH , Estrogen, Progesterone		1
4	B)Decreases the movement of sperms		1
5	C)Meischer		1
6	D) Both sons and Daughters		1
7	D) 50% bands similar to father and rest similar to mother		1
8	B)		1
9	A) Moth		1
10	A) Population genetics		1
11	D)Detrivore		1
12	C)Defence		1
13	A)Amensalism		1
14	C) Loss of diversity		1
15	C)		1
16	C)		1
17	C)		1
18	C)		1
	Section-B		
19	Passive immunity This type of immunity is required when antibodies are required instantly		1 1
20	Saccharomycescerevisiae Fermentation (in making idli, alcohol etc)		1 1
21	➢ The problem of pollution has been controlled due to use biofertilizerusers. ➢ Economic to use biofertilizer as compared to chemical fertilizers.		1 1
22	Enzyme linked Immuno sorbent assay. Principle: Antigen antibody association .		1 1
23	Male Heterogamy : When the gametes produced by male are of different Types for e.g in human being two kind of sperms are there e.g X and Y type of sperms. Female Heterogamy : When the gametes produced by female are of different types for e.g in birds it eggs produced are of two one containiy "Z" chromosome and the containiny "W" chromosome .		1 1
	OR		
	Turner's syndrome	Down's syndrome	
1)	Genotype is XO	Genotype is having trisomy of 21 chromosome .	1
2)	Chromosome number is less than normal Indian dual e.g 45.	Chromosome number is more than normal indiab dual e.g 47.	1
24	DNA is better genetic material because 1) It is chemically and structurally stable . 2) It is undergoing slow changes that is required for evolution		1 1

25	Convergent Evolution	Divergent Evolution	
1)	Structure of analogous organs show convergent evolution.	Structure of homologous organs show dinergentevolution .	1
2)	e.g Wings of birds Insects and Bat.	e.gVertebrate fore- limbs.	1
	Section-C		
26	The process of formation megaspores from the megaspore mother cell is called as megasporogenesis. The megaspore mother cell divide by meoisis result in formation of four cells .Out of these four cells one transforms into embryo sac . Its nuclei divide by mitosis by free nuclear division and after that cell wall formation takes place resulting in formation of mature embryo sac		1 1 1
	OR		
1)	Pollen grains are non sticky numerous .		1
2)	Well exposed stamens .		1
3)	Large feathery stigma .		1
4)	Numerous flowen packed into an inflorescence .		
27	By test cross VV & Vv both are violet coloured flowers in Pea plant as violet colour is dominating over white . So to find out it genotype it is crossed with homozygous recessive parent.  OR  		1 1 1
28	Plasmids are extra nucleoid circular DNA present in bacteria which are useful in genetic engineering . ❖ Having or site for starting replication.		1

	❖ Cloning site for attachment of tereign DNA ❖ Selectable marker sites for distinguishing b/w Recombinants and non recombinants .	1 1
29	Pyramids are of three types (a) Pyramid of number- Always upright (b) Pyramid of Biommass- can be upright & inverted (c) Pyramid of energy – upright	1 1 1 1
30	❖ For direct economic benefits: Food,firewoodfibre etc. ❖ For Broadly Utilitarian ground : For production of oxygen ,pollination. ❖ Ethical : Moral duty to pass the biodiversity to future generations for their well being .	1 1 1
	Section-D	
31.	(1) Natality and Mortality (2) The shape of logistic growth curve is S shaped  OR The causes of population explosion are (1) Increased birth rate (2) Decrease in Mortality (3) Immigration	1 1 2
32.	(1) No , Ravi is not suffering genetic disease (2) Rajesh's friends suffered from diseases because Rajesh was suffering from communicable disease (3)Communicable disease is that which can be transmitted from sufferer to healthy person For example Tuberculosis Non-communicable disease which cannot be transmitted from sufferer to a healthy person For example Cancer OR Ravi may be suffering from communicable disease like Tuberculosis or Covid or any other communicable disease .	1 1 2
	Section-E	
33.	Agrobacteriuntumefaciens is a natural pathogen of several dicot plants It deliver a piece of DNA to transform a normal plant cell into tumor The tumor inducing plasmid of Agrobacterium tumefaciens has been modified into a cloning vector which is no more pathogenic to the plants but is still able to	1 1 3

use the Mechanisms to deliver genes of our interest into a variety of plants .

OR



3+2

34. The process of DNA fingerprinting involves the following steps 4+1

(1) isolation of DNA
(2) Digestion of DNA by restriction Endonucleases
(3) Sparation of DNA fragments by electrophoresis
(4) Treatment of DNA to spilit the double stranded DNA into single stranded DNA
(5) Transferring of separated DNA fragments to synthetic membranes such as nitrocellulose or nylon
(6) Hybridisation using labeled VNTR probe
(7) Detection of Hybridised DNA fragments by auto radio graphy

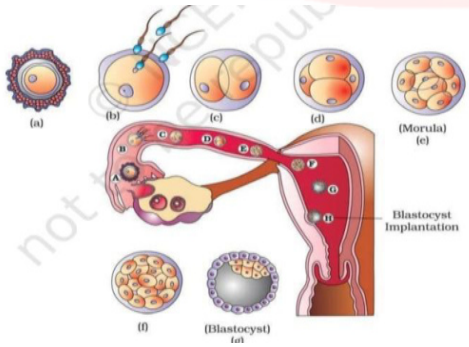
This technique is used in forensic science , in determining population and genetic diversities

OR

The process of formation of protein as per the information on mRNA is called as translation 1*5

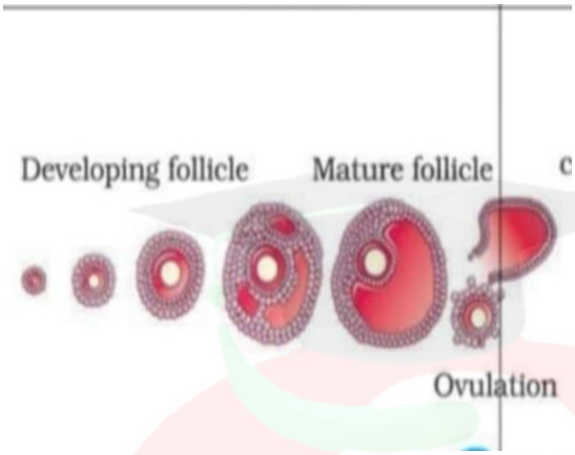
The steps is translation are
(1) Activation of amino acids
(2) Transfer of activated amino acids to tRNA
(3) Initiation of polypeptide chain from starting codons
(4) Elongation of the peptide chain by bonding in the adjacent amino acid
(5) Chain termination due to stop codons

35.



1*5

OR



1*5