

# INDIAN SCHOOL AL WADI AL KABIR

## UNIT TEST -1

### MARKING SCHEME BIOLOGY SET 1

SECTION A		
Q.NO.	QUESTIONS	MKS
1	d. The tertiary follicle develops.	1
2	c. Wind	1
3	b. In implantation	1
4	a. HCG	1
5	b. Multicarpellary, syncarpous	1
6	a. D-sporogenous tissues, E-Tapetum	1
7	A) Both assertion and reason are true, and the reason is the correct explanation of the assertion.	1
8	C) Assertion is true but reason is false	1
SECTION B		
9	i) autosomal recessive	0.5
	ii) genotype of the parents – Aa + diseased off-springs-aa	1
	iii) No. of Hb strand produced depends on the no. of alleles mutated.	0.5
10	Phenylketonuria- autosomal recessive	0.5
	Pleiotropy- brief explanation and relating it to Phenylketonuria	1.5
	OR	
	a) Haemophilia – sex linked recessive disease +cause of the disease- mutation of a single gene and hence absence of a protein required for clotting.	1
	b) female becoming Haemophilic- father has to be diseased and the mother a carrier, possibility of a diseased male not possible in the adult life.	1
SECTION C		
11	a) Chromosomal disorder-Klinefelter's Syndrome + reason XXY (47 chromosome)	1
	b) Trisomy of the sex chromosomes.	1
	c) any two identifying features	1
12	a) diagrammatic illustrations	2
	b) Seeds produced by apomixis don't segregate for characters and therefore can be used every year, financially benefiting the farmers.	1
	OR	
	a) diagrammatic illustrations	2
	b) (i)20 male gametes (ii) 5 female gametes	0.5+0.5
13	a) A- Primary follicle + phase-birth to puberty	1
	b) D- Corpus luteum +hormone- progesterone	1
	c) B-Tertiary follicle+ any two pts.	1
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14	1. b) i, ii, iii	1
	2.a) A-iv B-iii C-i D-ii	1
	3. flow chart illustration	2
OR		
	pathway illustration of the sperms journey	
SECTION E		
15	a) Design of Mendel's test cross	2
	b) i) Violet flower+ pink flower	1
	ii) phenotypic and genotypic expression of F2 generation.	
	flower colour in garden pea-3:1+ snapdragon-1:2:1-for pea plant.	1
	Snapdragon-1:2:1for both	
	iii)The conclusion -pea: Complete dominance + snapdragon: Incomplete	1
	OR	
	a) Linkage -T.H Morgan + his discovery	2
	b) Gene mapping for study of Human Genome	1
	c) Grasshopper-XO and Drosophila-XY	2