

MARKING SCHEME SET 3

CLASS XII (2020-21)

BIOLOGY

Ans no.	Value points	Marks
1.	When sperm enters its cytoplasm	1
2.	To see chromosomal abnormalities and developmental disorder of foetus	1
3.	Pleiotrophy	1
4.	Codes for methionine, acts as initiator codon	1
5.	It contains antibodies IgA which provides immunity against diseases	1
6	Pectinase and protease are used for clarifying the bottled juice.	1
7	Genetic Engineering Approval Committee	1
8	Ethidium bromide stained gel exposed to UV light	1
9	i) Genetic diversity ii) Ecological diversity	1
10	Poisonous cardiac glycosides present in plant	1
11	B	1
12	A	1
13	a or a	1
14	C	1
15	i) b ii) c iii) d iv) c v) b (Any four)	4
16	i) b ii) a iii) a iv) d v) d (Any four)	4
SECTION B		
17	a) filled with enzymes that help in fertilization of the ovum b) secrete androgens	1 1
18	a) GIFT b) Uterus	1 1
19	a) As exine is made of sporopollenin which is non degradable at very high temp or by acids,alkali,enzyme b) Rich in nutrients	1 1
	OR	OR

	Perisperm is persistent nucellus of ovule in seed ex. black pepper Endosperm is developed PEN	1 1
20	Explanation of nucleosome	2
21	Blood group: A and B Alleles : I ^A , I ^B , i	1 1
22	Correct reason Active immunity	1 1
23	B lymphocytes produce antibodies T lymphocytes help B lym to produce antibodies	1 1
24	A: statins B: blood cholesterol lowering agent C: streptokinase D: clot buster	½*4
25	a) Vector DNA, foreign DNA b) 5'GAATTC3' 3'CTTAAG5' c) DNA ligase	1 1 1
SECTION C		
26	Turner's syndrome 45 with XO Any two suitable symptoms	1/2 ½ 1+1
27	3 Suitable justification	1+1+1
28	a) Heroin (smack), papaver somniferum (poppy plant) b) Depressant and slows down body function c) Sedative and pain killer and for patients who have under gone surgery OR a) Retro virus ,as viral RNA is replicated to form viral DNA b) Reverse transcriptase c) Any two suitable ways	1/2 ½ 1+1
29	a: conformers, b: regulators conformers cannot maintain a constant internal environment and change according to the ambient atmosphere; whereas regulators maintains a constant internal environment despite changes in environment	2 1
30	Suitable explanation with one example of each	1.5 1.5
SECTION D		
31	a) f,LH surge b) g,luteal phase c) Produces hormones : hCG, hPL, estrogen, progesterone (any two), in	1 1 3

	<p>case of fertilization corpus luteum maintains endometrium and in absence of fertilization it regresses and endometrium regenerate.</p> <p style="text-align: center;">OR</p> <p>Figure 2.8 (c) pg 26 NCERT Polar nuclei forms PEC and develops into endosperm and egg cell forms zygote that develops into embryo</p>	<p>1.5</p> <p>1</p> <p>2</p> <p>2</p>	OR
32	<p>i) i, as it codes for repressor which regulates the further transcription</p> <p>ii) Lactose, suitable role</p> <p>iii) Z: beta gal, suitable role, y: permease</p> <p style="text-align: center;">OR</p> <p>a) Template strand</p> <p>b) DNA dependent RNA polymerase</p> <p>c) Sigma is initiation factor, rho factor is termination factor</p> <p>d) To remove introns</p> <p>e) At 5' end adding of mG_{ppp}</p>	<p>1.5</p> <p>1</p> <p>.5</p> <p>1</p> <p>1</p> <p>.5</p> <p>.5</p> <p>2</p> <p>1</p> <p>1</p>	OR
33	<p>a) Denaturation</p> <p>b) RNA primer, polymerase extends the primers using nucleotides</p> <p>c) Thermus aquaticus, thermostable DNA polymerase</p> <p>d) HIV diagnosis in AIDS patients, detect mutation in genes in cancer patients</p> <p style="text-align: center;">OR</p> <p>a) Page 211figure 12.3 ncert book</p> <p>b) Correct method</p> <p>c) Correct reason</p>	<p>1</p> <p>1</p> <p>1</p> <p>2</p> <p>2</p> <p>2</p> <p>1</p>	OR