

PRELIMINARY EXAMINATION I (2022-2023)
SET 2-MARKING SCHEME

CLASS: XII

SECTION A		
Sl. No.	QUESTION	MARKS
1	a. Geitonogamy	1
2	c. negative and positive, respectively	1
3	a. Cyclosporine – A	1
4	c. Checks disease causing microbes	1
5	c. Tapetum nourishes the developing pollen.	1
6	a) Genetic fingerprinting	1
7	b. No growth, growth	1
8	a. Filarial worms	1
9	d. Both (A) and (C)	1
10	b. Conserving endangered and rare species.	1
11	b. Commensalism.	1
12	b. Catabolism	1
13	D	1
14	A	1
15	A	1
16	C	1
SECTION B		
17	Ori-segment of DNA where replication begins significance -controls the copy no.	1+1
18	a. Why -DNA polymerase works in 5-3 direction + the result -fragments on discontinuous strand b. DNA ligase	1+0.5 0.5
19	Vallisneria + Sea grasses	1+1

20	a) humoral immune response – B lymphocytes + cell-mediated immunity-T lymphocytes b) chemical nature of antibodies- proteins + organ rejection - cell-mediated immunity	1 1
21	- inhibit the ovulation and implantation. -They are taken by females in the form of injections or as implants below the epidermal layer. - These are equally effective as the pills but induce longer effects. OR Saheli preferred method -once a week pill non-steroidal little side effect	1 0.5 0.5 0.5 1.5
SECTION C		
22	a. A -spermatids & C-Sertoli b. spermiogenesis and spermiation. c. Male germ cells & Sertoli cells OR (a) C-Fimbriae & D-Infundibulum (b) Any one role of A in mensuration and implantation. c) fertilization – ampullary isthmic junction+ F- birth canal	0.5+0.5 0.5+0.5 0.5+0.5 0.5+0.5 0.5+0.5 0.5+0.5
23	a) Explanation b) Illustrations	1.5 1.5
24	a) Sundarbans-ecologically sensitive (hot spot) b) biocontrol agents – kills specific insects only as against the action of chemical pesticides which also cause pollution c) Life cycle, feeding habits, habitat (any 2)	1 1 1
25	Explanation with 3 bullet pts.	1+1+1
26	incomplete dominance + codominance + polygenic inheritance + an example of each.	1+1+1
27	a) A-unlimited + B- limited b) A + A-exponential + B- logistic c) dotted line – carrying capacity + significance.	1 1 1
28	meaning of transgenic animals + eg of any 2 biological products	1+1+1
SECTION D		
29	a) A and B- habitat loss & fragmentation +alien species invasion b) habitat loss & fragmentation c) explain coevolution with an example OR c) two eggs	0.5+0.5 1 1+1 1+1

30	<p>a) BOD- Biochemical oxygen Demand + high BOD more polluting capacity b) More pollution at point A & B c) Sewage treatment plant-brief explanation</p> <p style="text-align: center;">OR</p> <p>c) organic content-high BOD-high pollution + inorganic pollutants & pathogens causing water borne disease.</p>	<p>1 1 1 +1 1+1</p>
SECTION E		
31	<p>ART- assisted reproductive technology different methods used</p> <p style="text-align: center;">OR</p> <p>a) pathway of the sperm travels before it is released through the urethra. b) Name the male accessory glands and also state their functions.</p>	<p>1 4 2.5 2.5</p>
32	<p>a) polarity of x to x' – 5-3 + amino acids - zero b) codon-GCA and anticodon -CGU c) State any two functions</p> <p style="text-align: center;">OR</p> <p>a) Capping + tailing + splicing with brief explanation b) RNA dominance + split gene arrangement c) contribution</p>	<p>1+1 0.5+0.5 1+1 2 1 2</p>
33	<p>a) PCR-Polymerase Chain Reaction+ principle b) 3 steps of the process.</p> <p style="text-align: center;">OR</p> <p>a) mechanism- RNA interference + silencing of RNA as cellular defense mechanism used by eukaryotes. b) Description</p>	<p>2 3 1+1 3</p>