



CBSE

Additional Practice Questions- Marking Scheme

Subject: Biology (044)

Class: XII 2023-24

Max. marks: 70

Time: 3 hours

General Instructions:

Q.No.	Answers	Mark s
Section A		
1	(a) n	1
2	(d) only P, Q and R	1
3	(b) Yes, as the genetic code is degenerate.	1
4	(d) Sperms that have an O chromosome will give rise to a male cricket.	1
5	(c) disruptive	1
6	(d) <i>Australopithecines</i>	1
7	(d) S	1
8	(b) 50%	1
9	(c) distillation	1
10	(b) It is the first enzyme isolated from strain S2 of the bacterium.	1
11	(a) only Sumi	1
12	(a) No, because every level still gets 10% of the energy from the lower level.	1
13	(a) Both A and R are true, and R is the correct explanation for A.	1
14	(a) Both A and R are true, and R is the correct explanation for A.	1
15	(d) A is false, but R is true.	1
16	(c) A is true, but R is false.	1
Section B		
17	(a) 0.5 marks each for the following: - No she is not correct. - Relaxin is produced by the ovaries and not the placenta.	1.0
	(b) 0.5 marks each for any two of the following: - human chorionic gonadotropin (hCG) - human placental lactogen (hPL) - estrogens - progestogens	1.0



	<p>- R: X^oX - S: XY</p> <p>OR</p> <p>(a) TYR ALA SER GLU HIS [1 mark]</p> <p>(b) Correct drawing with anticodon 3' -AGA - 5' [1 mark] Reason: The mRNA sequence is translated in the 5' to 3' direction so the anticodon has to be in the 3' to 5' direction [1 mark]</p> <p>(c) point mutation [0.5 marks]</p> <p>(d) 0.5 marks each for the following: - mRNA will be formed - protein will not be formed - The first codon is a stop codon due to which translation will not happen</p>	<p>1.0</p> <p>2.0</p> <p>0.5</p> <p>1.5</p>
33	<p>(a) 0.5 marks each for mentioning the type of immunity and 0.5 marks each for the reason:</p> <p>(i) Passive immunity Pre-formed antibodies are being transferred from the mother to the fetus as the fetus does not make its own antibodies.</p> <p>(ii) Active immunity A tetanus shot, which contains inactivated tetanus toxin, will stimulate the person's immune system to produce his own specific antibodies against tetanus.</p> <p>(iii) Passive immunity The person receiving the blood transfusion is passively acquiring antibodies from the vaccinated donor that were made by the donor's body and not the recipient's body.</p> <p>(b) - Zaheer is not likely/less likely get malaria. [1 mark]</p> <p>- Since Zoya has been bitten by an infected mosquito and the process of infection of the liver cells and red blood cells takes more than 5 days, the non-infected second mosquito is not likely/ less likely to get infected by biting Zoya, and thus cannot/less likely to transfer the <i>Plasmodium</i> to Zaheer. [1 mark]</p> <p>OR</p>	<p>3.0</p> <p>2.0</p> <p>1.0</p>



<p>(a) Malignant tumour/ Cancer</p> <p>(b) 0.5 marks each for any four causes such as:</p> <ul style="list-style-type: none">- genetic factors/family history- carcinogens- high energy ionising radiations (e.g. X-rays, gamma rays, etc.)- non-ionizing radiations (e.g., UV)- infection by oncogenic viruses	2.0
<p>0.5 marks each for any four diagnosis techniques such as:</p> <ul style="list-style-type: none">- X-rays- CT scans- MRI scans- Blood tests- Biopsies <p><i>[Accept any other valid answer]</i></p>	2.0