Marking Scheme for First Pre-Board Question Paper

Class – XII Biology

Q.NO.	ANSWERS	SPLITS OF MARKS
1	**SECTION – A (1*5=5)** Prenatal diagnostic technique in which a sample of amniotic fluid is taken to study early development of foetus.	1 MARK
2	(a)Autosomal dominant – Myotoxic dystrophy. (b)Autosomal Recessive – Sickel cell anaemia.	½+1/2 MARK
3	(a)Pollute water. (b)Detoriate O2 content in water.	½+1/2 MARK
4	(i)Physical Barrier (ii)Physiological Barrier (iii)Cellular Barrier (iv)Cytokine Barrier	½+1/2 MARK
5	By taking juicy leaves and fruits.	1 MARK
6	**SECTION – B(2*5=10)** Farmers should apply biofertilisers to his crop as biofertilisers contains living organisms which promtes the growth of crop without harming its quality.	2 MARK
7	(i)Pistil rejects the pollen by preventing pollen germination on stigma. (ii) Prevent pollen tube growth in the style. This is mediated by chemical components. OR (i)Both of them release mature gametes. (ii)Both of them release large no gametes in water.	1+1 MARK
8	Neat and well labelled diagram in three or four Steps (plasmodium) Diagram – 1 mark Labelling – 1 mark	1+1 MARK
9	Genetic Engineering Approval Committee	1+1 MARK

	Objectives of GEAC (i)To examine the validity of GMO. (ii)Inspection for the safety of introduction of GMO.	
10	(i) Analogy – Organs are functionally similar but are anatomically different. (ii) Homology – Organs are structurally similar but are functionally different.	1+1MARK
11	**SECTION – C (3*12=36)** The child with blood group O will have homozygous Recessive allele. In this case both the parents should be heterozygous. i.e. Genotype of father IAi and Genotype of mother IBi On being crossing between them. In F1 generations possible genotype of other Off springs will be –AB , A ,B ,and O	1+1+1 MARK
12	Reasons for increase in population (any three). Steps taken to check population explosion (any three).	1.5+1.5 MARK
13	A neat and well labelled diagram showing different features. With well matured embryo (maize grains - LS). Diagram – 1 ½ mark Labelling – 1 ½ mark	1.5+1.5 MARK
14	(i) Because they obtain simple and digested food from the Host body therefore they have reduced certain organs. (ii) As the sea anemone has stinging tentacles .The clownFish gets protection from its predators. (iii) To minimize water loss through transpiration.	1+1+1 MARK
16	At least five steps starting from bare rocks to climax Forest community is achieved	3 MARK
17	(a)Tropical environments are less seasonal, more Constrant and predictable than the temperate ones. That promotes greater species biodiversity.	1.5+1.5 MARK

	(b)Availability of solar energy is much more in the tropics Promotes higher productivity that leads greater diversity.	
18	Diagram – Replication fork of DNA – Enzymes involved in it with action (a)DNA Dependent DNA Polymerase – Catalyse polymmerisationOf deoxyribo nucleotide. (b) DNA Helicase – It helps to unwind DNA strand. (c) DNA Ligase – Synthesize DNA fragment.	1.5+1.5 MARK
19	(a) Biopsy of the piece of tissue (b)Blood and bone marrowtest. (c)Radiography by x-rays (d)Resonance imaging to detect Pathological change In living tissue. (e) Computed tomography using x-rays.	1+1+1 MARK
20	(i)GIFT – Gamete Intra Fallopian Transfer. (ii)ICST – Intra Cytoplasmic Sperm Injection (iii)AIT – Artificial InseminationTechnique. (Any Three in detail)	1+1+1 MARK
21	(i) Over production (ii) Struggle for existence (iii) Survival of the fittest (iv)Natural Selection (v)Variation (vi) Origin of new species (sum up the answer)	1.5*6 MARK
22	Cultural Importance Biodiversity Inspire poets,writers, thinkers to write and to think. It gives a cultural identity in terms of festivals Andrituals. Religious Importance - Some plants are considered to be sacred as Tulsi, Peeple, Amla etc. Some animals like Kamdhenu and Monkey are considered as representative of	1.5+1.5 MARK

	Hanuman and are worshipped.	
23	**SECTION – D(4*1=4)** Purify air , water perpcolation, cause rain , prevent soil Erosion, prevent flood,prevent drought , provide shelter and Protection to wild life, pollinate crop, medicinalvalue, Asytheticvalue, cultural and spiritual importance. Hence it is not good to cut tree.	4 MARK
24	**SECTION – E (5*3=15)** (i)Well labelled diagram of the development of an Embryosac of an angiospermic plant. (ii)Well labelled diagram of stages of development of an Embryo in a dicot plant. OR Digrammatic sectional view of ovary showing Different follicles with proper labelling. (ii)Morula is formed in upper portion of oviduct. Process of development from zygote in detail.	2.5+2.5 MARK
25	MOET technology is commonly used to improve The herd. Ex.as a livestocks. Steps are – (i)Administration of FSH hormone inducing the maturation of follicle and process of ovulation in cow. (ii)The cow is allow to mate with selected bull or Artificially inseminated. (iii)Fertilized egg at 8 – 32 stages are recovered and transferred to the surrovate mother. (iv)Development of embryo occur.	1+1*4 MARK
26	[i] CFCs released from refrigerators, ACs, and other Industrial emission. It leads to more exposure of UV radiation. Harmful Effect – Cause mutation,cataract, agine, skin cancer. [ii] EL Nino effect is an abnormal warming of surface ocean water in E.P ocean.	5 MARK

	It causes bleaching and death of coral reefs Migratory fishes , birds , whales changes its routes and face increasing risk. Cause sudden change in rainfall pattern and drought	