HIGHER SECONDARY ONAM EXAMINATION - 2nd YEAR

SCHEME FOR VALUATION

PART III – BOTANY – SFE 26 **MAXIMUM SCORE: 30**

Qn. No.	Sub Qn	Answer Key	Splitted Score	Total Score
I. Answer any 3 questions from 1-5. Each carries 1 Score (3x1 = 3)				
1		(A) Ligase	1	1
2		Exine: Sporopollenin	1	1
3		Monocot Seed	1	1
4		(B) Pitcher	1	1
5		Wheat	1	1
II. Answerany 9 questions from 6- 16. Each carries 2 scores (9x2 = 18)				
6		**Wind Pollinated Flowers** *Pollen grains are dry and non sticky *Feathery Stigma **Insect Pollinated Flowers** *Flowers are colourful and rich in nectar *Pollen grains are sticky	 1 1 	2
7		Explant: Any part of the plant used for tissue culture – bud, leaf etc. Totipotency: The capacity of a cell/explant to grow into a whole plant.	1 1	2
8	a b c d	Human Beings / Man 12 34 8	½ ½ ½ ½	2
9		1. First letter of the name is taken from the genus name of the bacteria from which they are isolated. 2. Second two letters are taken from the first two letters of the name of the species 3. Fourth letter is the first letter of the name of the strain of bacteria. 4. Last roman number indicates the order in which the enzyme is isolated from that strain of bacteria.	½ ½ ½ ½	2
10		Microsporogenesis: The process of formation of microspore from a pollen mother cell by meiosis is called microsporogenesis. Microspores are haploid	1 1	2
11	a b c d	Funicle Mass of cells inside the integuments/Cells with abundant reserve food Integuments Hilum	½ ½ ½ ½	2
12		Embryogenesis the development of embryo from the zygote to a mature embryo is known as embryogenesis	1 1	2
13		Perisperm Black Pepper / Beet	1 1	2
14		Interspecific hybridisation / Out breeding Interspecific hybridisation is the cross between male and female animals of two different species.	1 1	2

15		Polyembryony Citrus / Mango/ Orange (any one example)		1 1	2
16	a b	Single Cell Protein Spirulina are grown easily on materials like waste water from potato processing industry, Straw, Molasses, animal manure, sewage etc.		1 1	2
III. Answer any 3 questions from 17-20. Each carries 3 scores. (3x3 = 9)					
17	a b	Apiculture Knowledge of 1. The nature and habits of bees 2. Selection of suitable location for keeping the bee hives 3. Catching and hiving of swarms (groups of bees) 4. Management of bee hives during different seasons. 5. Handling and collection of honey and beeswax. (any four points)		1 ½x4=2	3
18	a b	A. Zygote (2n) – Syngamy: One of the male gamete fuses with the egg cell and forms the diploid Zygote. B. PEN (3n) – Tripple Fusion: The second male gamete fuses with the polar nuclei at the centre to produce a triploid PEN – Primary Endosperm Nucleus. Primary Endosperm Cell		1 1 1	3
19	a b c	<u>External Fertilisation</u> * Fertilisation occurs outside the body of the organism in an external medium (water) * Gametes are released into the external medium * Large number of gametes are produced * They show great synchrony between the sexes. * Large number of offsprings are produced	<u>Internal Fertilisation</u> * Fertilisation occurs inside the body of the organism * Gamete(egg) is formed inside the female body where it is fused with the male gamete * Female gamete(egg) is very less in number * large number of male gametes are produced * Male gametes are motile * Number of offsprings produced is less.	1½ 1 ½	3
		(any two differences)			
		The offsprings are extremely vulnerable to predators, threatening their survival uptoadulthood. Bony fishes / frog (any one)			
20		1. Pollen release and stigma receptivity are not synchronised. (either pollen is released before the stigma become receptive or stigma become receptive much before the release of pollen). 2. Anther and stigma are placed at different positions. 3. Self incompatibility 4.Unisexuality. (Monoecious – unisexual flowers in the same plant and Dioecious – unisexual flowers in different plant). (any three devices)		1x3=3	3

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