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G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI –628 502.



UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., BOTANY

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
III	PART - III	CORE	U21BO305	DEVELOPMENTAL BOTANY AND EMBRYOLOGY OF ANGIOSPERMS

Date &amp; Session: 09.11.2024/AN

Time : 3 hours

Maximum: 75 Marks

Course Outcome	Bloom's K-level	Qn. No.	SECTION – A (10 X 1 = 10 Marks) Answer <u>ALL</u> Questions.
CO1	K1	1.	Identify the male reproductive part of a flower. a) Androecium b) Gynoecium c) Stigma d) Ovary
CO1	K1	2.	Male gametes are produced by _____. a) vegetative cell b) generative cell c) terminal cell d) stalk cell
CO2	K2	3.	The ovule is surrounded by _____. a) Integument b) Xylem c) Epidermis d) Parenchyma
CO2	K2	4.	Orthotropous ovule is a _____ ovule. a) inverted b) curved c) transverse d) upright
CO3	K3	5.	Fertilization in plants was first discovered by _____. a) Hofmeister b) Leeuwenhock c) Strasburger d) Hooke
CO3	K3	6.	After fertilization, the ovules develop into the _____. a) Fruit b) Flower c) Seeds d) Ovary
CO4	K4	7.	A typical dicotyledonous embryo consists of an embryonal axis and _____. a) One cotyledon b) Two cotyledons c) Three cotyledons d) Four cotyledons
CO4	K4	8.	Formation of individuals without fusion is called _____. a) fertilization b) pollination c) apomixes d) amphimixis
CO5	K5	9.	Pick out the scientists who first developed the anther culture. a) Murashige and Skoog b) Guha and Maheshwari c) Watson and Crick d) M.S.Swaminathan
CO5	K5	10.	Embryo is a _____ structure. a) monopolar b) tripolar c) bipolar d) tetra polar

Course Outcome	Bloom's K-level	Qn. No.	<b>SECTION - B (5 X 5 = 25 Marks)</b> <b>Answer <u>ALL</u> Questions Choosing either (a) or (b)</b>
CO1	K1	11a.	Recall the history and scope of Embryology. <b>(OR)</b>
CO1	K1	11b.	Describe the structure of the anther.
CO2	K2	12a.	Explain the role of megesporogenesis. <b>(OR)</b>
CO2	K2	12b.	Illustrate the types of ovules.
CO3	K3	13a.	How will you identify the importance and types of pollination? <b>(OR)</b>
CO3	K3	13b.	Make use of ruminant endosperm you can produce a hybrid plant.
CO4	K4	14a.	Formation of the plant from a seed without fertilization – Analyze. <b>(OR)</b>
CO4	K4	14b.	Illustrate the types of Polyembryony.
CO5	K5	15a.	Can you assess the role of palynology in several fields? <b>(OR)</b>
CO5	K5	15b.	Interpret the pollen culture and its applications.

Course Outcome	Bloom's K-level	Qn. No	<b>SECTION - C (5 X 8 = 40 Marks)</b> <b>Answer <u>ALL</u> Questions choosing either (a) or (b)</b>
CO1	K1	16a.	Describe the structure of the typical flower. <b>(OR)</b>
CO1	K1	16b.	Examine the development of male gametophytes.
CO2	K2	17a.	Discuss the type of Ovules and draw a neat diagram. <b>(OR)</b>
CO2	K2	17b.	Explain the development of female gametophytes.
CO3	K3	18a.	Elucidate the post-fertilization changes in the flower. <b>(OR)</b>
CO3	K3	18b.	Classify the types of endosperm in detail.
CO4	K4	19a.	Illustrate and explain the structure and development of the embryo. <b>(OR)</b>
CO4	K4	19b.	Give a detailed study on polyembryony.
CO5	K5	20a.	Briefly explain the anther culture techniques. <b>(OR)</b>
CO5	K5	20b.	Construct the embryo culture techniques in detail.