Program: Biotechnology Engineering

Curriculum Scheme: Revised 2016

Examination: Fourth Year Semester VII

Course Code: BTC703 and Course Name: Agriculture Biotechnology

Time: 1 hour Max. Marks: 50

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Note to the students :- All the Questions are compulsory and carry equal marks .

Q1.	What is the biosynthetic source of all steroid hormones?
Option A:	Ketone bodies
Option B:	Protein
Option C:	Cholesterol
Option D:	Carbohydrate
Q2.	Which one of the following is commonly used in transfer of foreign DNA into crop plants?
Option A:	Penicillium expansum
Option B:	Trichoderma harzianum
Option C:	Meloidogyne incognita
Option D:	Agrobacterium tumefaciens
Q3.	_____ is a process in which transgenes are successively stacked by conventional crosses between different transgenic lines.
Option A:	Sucessive stacking
Option B:	Pyramiding
Option C:	Stacking
Option D:	Conventional stacking
Q4.	identify an antioxidant amongst the given compounds
Option A:	Choline *O*-sulphate
Option B:	Pinitol

Option C:	Ascorbic acid
Option D:	Chlorophyl
Q5.	_____ is the precursor of the phenolic and indole rings of the aromatic amino acids.
Option A:	Shikimate
Option B:	Erythrose 4-phosphate
Option C:	Chorismate
Option D:	Glyphosate
Q6.	Selection media for transgenic identification contains
Option A:	herbicide related to marker gene
Option B:	insecticide
Option C:	fungicide
Option D:	transgenic protein
Q7.	A scientist wants to study the viral effects on plants. which parts of the plant should be excluded?
Option A:	pith
Option B:	shoot apex
Option C:	phloem
Option D:	cortex
Q8.	Which is the effector molecule released by plants in response to biotic stress
Option A:	Plant hormones
Option B:	Phytoalexins
Option C:	Plant growth regulators
Option D:	Ethylene
Q9.	Pure line breed refers to

Option A:	heterozygosity only
Option B:	homozygosity only
Option C:	homozygosity and self assortment
Option D:	heterozygosity and linkage
Q10.	_____ is the number of times a transgene is inserted into the plant genome
Option A:	haploidy
Option B:	diploidy
Option C:	heterozygosity
Option D:	copy number
Q11.	Function of α-subunit of anthranilate synthase is to
Option A:	Catalyze the phosphorylation of chorismate
Option B:	Catalyze the amination of chorismate
Option C:	Catalyze the amination of shikimate
Option D:	Catalyze the phosphorylation of shikimate
Q12.	_____ exists as monomer & is bound to one of the HSP70 proteins.
Option A:	Heat-soluble factor
Option B:	Heat-susceptible factor
Option C:	Heat-stable Factor
Option D:	Heat-shock Factor
Q13.	Alongside *Bt* genes, the other genes explored as insecticides are
Option A:	Vegetative Insecticidal protein family
Option B:	Glyphosate blocking protein family
Option C:	*Ostrinia nubilalis* protein cluster
Option D:	Bollgard cotton approach

Q14.	Breeding crops with higher levels of minerals, vitamins or higher protein and healthier fats is called
Option A:	Micropropagation
Option B:	Biofortification
Option C:	Somatic hybridization
Option D:	Biomagnification
Q15.	Triacylglycerol packed with the apolipoprotein and cholesterol in lipoprotein aggregate is called
Option A:	VLDL
Option B:	Chylomicrons
Option C:	HDL
Option D:	LDL
Q16.	Which of the following does not justify the statement - Compost microbes sanitise the compost
Option A:	antagonism by compost microorganisms
Option B:	antibiotic production
Option C:	addition of chemical agents
Option D:	biological heat generated by compost microorganisms
Q17.	Which plant breeding method requires a lot of time and resources to keep records about material
Option A:	Pedigree breeding
Option B:	Single seed descent
Option C:	F1 crossing
Option D:	Backcrossing
Q18.	Transcription analysis of transgene expression can be analysed by
Option A:	ELISA
Option B:	PCR

Option C:	Southern Blotting
Option D:	Northern blotting
Q19.	The conversion of bialaphos to phosphinothricin involves removal of the two alanine residues by peptidase. Phosphinothricin further acts as competitive inhibitor of _____.
Option A:	Glutamine synthase
Option B:	Glycogen synthase
Option C:	Glutamate synthase
Option D:	N-Acetylphosphinothricin
Q20.	_____are small organic molecules with neutral charge and low toxicity at high concentrations that act as osmolytes and help organisms survive extreme osmotic stress.
Option A:	Heat-stable Factor
Option B:	Osmoprotectants
Option C:	Osmotic adjustment
Option D:	Osmoregulators
Q21.	_____ is an alternative philosophy to the *Bt* magic bullet approach
Option A:	Refuge strategy
Option B:	Symbiotic Strategy
Option C:	Gene transfusion method
Option D:	Copy Number
Q22.	A transgenic food crap which may help in solving the problem of night blindness in developing countries is
Option A:	Golden rice
Option B:	Flavr Savr tomatoes
Option C:	Starlink maize
Option D:	Bt Soybean

Q23.	Which of the following is the genetically engineered insulin?
Option A:	Humulin
Option B:	Rumulin
Option C:	H-insulin
Option D:	R-insulin
Q24.	Mark the correct order of composting process
Option A:	mesophilic, thermophilic, curing, cooling
Option B:	mesophilic, thermophilic, cooling, curing
Option C:	mesophilic, curing, thermophilic, cooling
Option D:	thermophilic, mesophilic, curing, cooling
Q25.	Matings between different plants often produce offspring that are more fit than the parents, a concept called
Option A:	F1 progeny
Option B:	Mutant species
Option C:	Hybrid vigor
Option D:	Pure line

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Question	Correct Option (Enter either 'A' or 'B' or 'C' or 'D')
Q1.	C
Q2.	D
Q3.	B
Q4	D
Q5	C
Q6	A
Q7	B
Q8.	B
Q9.	B
Q10.	D
Q11.	B
Q12.	D

Q13.	A
Q14.	B
Q15.	B
Q16.	C
Q17.	A
Q18.	D
Q19.	A
Q20.	B
Q21.	D
Q22.	A
Q23.	A
Q24.	B
Q25.	C