

Program: BE Biotechnology Engineering

Curriculum Scheme: Revised 2016

Examination: Third Year Semester VI

Course Code: BTC602 and Course Name: Cell and Tissue Culture

Time: 1 hour

Max. Marks: 50

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

Q1.	Stain commonly used in Chromosome banding is _____
Option A:	Phenol red
Option B:	Giemsa
Option C:	Crystal violet
Option D:	Iodine
Q2.	In Suspension culture _____ is required
Option A:	Continuous Stirring
Option B:	Decantation
Option C:	Agar
Option D:	Nurse Callus
Q3.	Out of the following, which one is NOT the basic component of culture media used for plant cultivation?
Option A:	Complex mixture of salts
Option B:	Vitamins
Option C:	Amino acids
Option D:	Serum Albumin
Q4.	Which of the following is not a Plant Growth Hormone?
Option A:	Auxin
Option B:	Insulin
Option C:	Gibberellin
Option D:	Cytokinin
Q5.	Why are artificial seeds produced?
Option A:	To make exact copies of mother plant available in the form of seeds
Option B:	Easy to transport than normal seeds
Option C:	Stay viable for long time
Option D:	Cheaper than normal seeds
Q6.	Air pressure is maintained inside a cell culture lab.
Option A:	Positive

Option B:	Negative
Option C:	Neutral
Option D:	Atmospheric
Q7.	Q banding uses _____stain
Option A:	Quinacrine
Option B:	Quercitin
Option C:	Quaternary
Option D:	Quenching
Q8.	Scale up of Plant Tissue Culture is Commonly Employed in _____
Option A:	Artificial Seeds preparation
Option B:	Organogenesis
Option C:	Organ Culture
Option D:	Single Cell culture
Q9.	Organogenesis is the method to produce new _____.
Option A:	Plantlets
Option B:	Organs
Option C:	Organelles
Option D:	Embryo
Q10.	Without genetic engineering technique INF production can be achieved in animal cell cultures by
Option A:	optimizing media
Option B:	infecting the cell line with virus
Option C:	varying pH
Option D:	varying temperature of incubation
Q11.	Which of the following is an Auxin?
Option A:	6-Benzylaminopurine
Option B:	Kinetin
Option C:	2,4 Dichlorophenoxyacetic acid
Option D:	Zeatin
Q12.	Hemophilia is caused by the lack of blood clotting factor
Option A:	VIII
Option B:	XI
Option C:	IX
Option D:	VII
Q13.	Which of the following method is NOT a part of Single Cell Culture technique?
Option A:	The Paper Raft Nurse Technique
Option B:	The Micro-chamber Technique
Option C:	The Micro-droplet Technique
Option D:	The Shake Culture Technique

Q14.	What is the benefit of Protoplast Culture?
Option A:	Quick germination
Option B:	Easy for genetic modifications
Option C:	Disease resistant
Option D:	Easy to handle
Q15.	Which of the following is used as a solidifying agent in PTC media?
Option A:	Agar
Option B:	Sucrose
Option C:	Sephadex
Option D:	Dextrose
Q16.	Which of the following cannot be used for antibody production using cell culture
Option A:	production of heavy chain and light chain separately in different cells
Option B:	hybridoma technology
Option C:	rDNA introduction of only heavy chain
Option D:	growing B-cell fused myeloma cells for antibody production
Q17.	Chemicals used for gene transfer method include
Option A:	Polyethylene glycol
Option B:	CaNO ₃
Option C:	Molybdenum
Option D:	Glucose
Q18.	Heat labile Media is sterilized by using _____
Option A:	Hot Air Oven
Option B:	Glass Bead Sterilizer
Option C:	UV Light
Option D:	Autoclave
Q19.	The left segment of octopine T-DNA (TL) is necessary for
Option A:	enzymes for agropine biosynthesis
Option B:	tumor formation
Option C:	conjugative transfer
Option D:	Binary transfer
Q20.	_____ is the removal of the medium and transfer of cells from a previous culture into fresh growth medium, a procedure that enables the further propagation of the cell line or cell strain
Option A:	Maintenance
Option B:	Passaging
Option C:	Contact inhibition
Option D:	Cross contamination
Q21.	The size of virulent plasmid of Agrobacterium tumefaciens is

Option A:	140-235kb
Option B:	80-120kb
Option C:	100kb
Option D:	>250kb
Q22.	Which was the first cell line used for vaccine production and has been used for more than 40 years
Option A:	Vero cell line
Option B:	Hela cell line
Option C:	CHO cell line
Option D:	Myeloma cell line
Q23.	Somatic Embryogenesis is usually carried out in _____.
Option A:	Dark
Option B:	Light
Option C:	16 hours Light and 8 hours dark
Option D:	12hours light and 12 hours dark
Q24.	Virus mediated gene transfer using genetically modified bacteriophages is called
Option A:	Transfection
Option B:	Transduction
Option C:	Transformation
Option D:	Conjugation
Q25.	<i>Agrobacterium tumefaciens</i> is
Option A:	Gram positive bacteria
Option B:	A yeast
Option C:	Gram negative bacteria
Option D:	A fungi