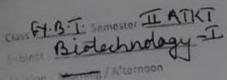
per / Subject Code: 77404 / Biotechnology I: Tissue Culture & Scientific Writing & Communication.



2 1/2 Hours

Q. P. Code: 31312

Total Marks: 75

1. Attempt all questions.

2018 All questions carry equal marks.

- 3. Draw neat labeled diagrams wherever necessary
- 4. Use of log tables and non-programmable calculator is allowed.
- 5. For Q.2, Q.3 and Q.4 attempt A and B OR C and D

Do as directed (Any fifteen) 0.1

15

- What is meant by the term 'explant'? 1.
- is an example of naturally occurring cytokinin. 2
- Name any one macronutrient in plant tissue culture media. 3
- State true or false: Non- absorbent cotton is used for preparation of plugs 4. in plant tissue culture.
- State the pore size of HEPA filters. 5.
- Name any one vitamin used in plant tissue culture media. 6.
- Name any one Plant growth regulator used in plant tissue culture media. 7
- What is in vitro? 8
- Explain the term passaging. 9
- Write the conditions of an ideal autoclave cycle 10.
- Which microscope is used in an animal tissue culture lab? 11
- Which is the indicator used in animal tissue culture media?
- What is a cell strain? 13.
- is referred as the medium through which the information 14. passes. (channel, feedback, receiver)
- What is Bibliography?
- What is an oral presentation? 16.
- State true or false: Review paper summarizes the current state of 17. knowledge of the topic
- State true or false: Hand shake is an example of non verbal 18: communication.
- Give any one physical barrier in communication. 19.
- Give one example of verbal communication. 20.

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Q. 2 A	Enlist and explain any four Micronutrients and Four Macronutrients in	08	
	media used for plant tissue culture.		
Q. 2 B	How would you design a plant tissue culture laboratory for your	07	
	department?		
	OR		
Q. 2 C	Explain the principles of callus culture based on following points:		
	i. Aseptic preparation of explant		
	ii Nutrient media selection		
	iii. Incubation of the culture		
Q. 2 D	State the significance of following instruments/ material in Plant Tissue	07	
	Culture.		
	i. Microtome		
	ii. Vacuum pump		
	iii. Laminar air flow		
	iv. Membrane filtration system		
	v. Autoclave		
	vi. Scalpel		
	vii. 70% ethanol		
Q. 3 A	Enlist and explain the advantages of animal tissue culture.	08	
Q. 3 B	Discuss the principle, working and applications of Hot Air Oven		
×	OR		
Q.3 C	Explain how you would establish a primary cell culture.	08	
Q. 3 D	Illustrate the growth kinetics of a typical animal cell culture.	07	
0 4 4	What is communication? Enlist and explain the elements of the	08	
20.000	communication process.		
Q. 4 B	Discuss the process of scientific writing.	07	
Q. T.D	OR		
0.10	t Clluster and the	08	
Q. 4 C	Abstract:- The antimicrobial potential of seven extracts from four plants		
	was screened against eight bacteria and two pathogenic fungi, using		
	microbroth dilution assay. Lowest concentration of the extract, which	1	

Q. P. Code: 31312

inhibits any visual nucrobial growth after treatment with p-iodonitrotetrazolium violet, was considered to be minimum inhibitory concentration (MIC). Water extracts of Acacia nilonea, Austicia zelanica, Lantana camara and Saraca asoca exhibited good activity against all the bacteria tested and the MIC was recorded in range of 9.375–37.5 µg/ml and 75.0–300.0 µg/ml against the bacterial and fungal pathogens, respectively.

- i. Suggest a suitable title to the research work.
- ii. Which are the four plant extracts used for study? Which test cultures were used for the research work?
- iii. What is the method used for study? What was the result of the study?
- iv. Give four key words for the research work based on the abstract.
- Q. 4 D What is plagiarism? Give an example? How would you avoid plagiarism 07
- Q. 5 Write Short notes on any three of the following
 - a. Totipotency and Cell theory.
 - b. Auxins in plant tissue culture media.
 - c. Serum.
 - d. Trypsinization.
 - e. Non verbal communication