

GANPAT UNIVERSITY
M.Sc. Second Semester Examination (C.B.C.S) April-May, 2011
Subject: Biotechnology/Microbiology
Paper: BTA 201 GMB : Genetics & Molecular Biology
MBA 201 GMB : Genetics & Molecular Biology

Time: 3 hours

Total Marks: 70

Instructions:

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- 1) Attempt any three questions from each section, of which question No. 4 and 8 are compulsory
- 2) Answer each section in separate answer book.

SECTION: I

Q-1	What is crossing over? Discuss the various theories of crossing over with the help of suitable examples.	14
Q-2	Discuss prokaryotic DNA replication in detail.	14
Q-3	Explain intron splicing in detail	14
Q-4	Write short notes on: a) DNA polymerase and RNA polymerase OR a) Activation of amino acids for protein synthesis	07

SECTION: II

Q-5	What is gene regulation? Explain the positive and negative regulation of gene expression with suitable examples.	14
Q-6	Describe the following a) Selectional Load b) Genetic counseling	14
Q-7	"Signal transduction mechanisms are used in metabolic regulations". Explain the above statement with a suitable example.	14
Q-8	Write a notes on following a) Excision repair OR a) Phage Mu	07

GANPAT UNIVERSITY
M. Sc. Second Semester Examination (C.B.C.S) April-May, 2011
Subject: - Biotechnology/ Microbiology
Paper: BTA 202 BTM Biodiversity and Taxonomy of Microorganisms
Paper: MBA 202 BTM Biodiversity and Taxonomy of Microorganisms

Time: 3 hrs

Total Marks: 70

INSTRUCTIONS : (i) Write any three answers from each section, of which Question no 4 and question no 8 are compulsory.
(ii) Use separate answer sheet for each section.

SECTION - I

1. What are Archaeobacteria? Enlist various groups of Archaeobacteria and write in detail about Halophiles. 14
2. Discuss in detail about "Molecular methods used for microbial classification". 14
3. Describe salient features and importance of bacteria belonging to Enterobacteriaceae family 14
4. **Write short note on :**
Metabolic fingerprinting 07

OR

Numerical taxonomy

SECTION II

5. What are the findings of Robertson's experiments? Discuss in detail various experiments in support of growth of fungi 14
6. Describe in detail: General characters, reproduction and Economic importance of Protozoa 14
7. Give answer of the following 14
 - (a) Life cycle of T4 Bacteriophage
 - (b) Distinguishing features of Zygomycotina
8. Write short note on : 07
Economic importance of Algae.

OR

Viroids and Prions

END OF PAPER

GANPAT UNIVERSITY

M.Sc. Second Semester Examination (C.B.C.S) April-May 2011

Subject: Microbiology/Biotechnology

Paper : BTA 203 BBE Bioprocess and Biochemical engineering

MBA 203 BBE Bioprocess and Biochemical engineering

Time: 3 hours

Total Marks: 70

Instructions:

- 1) Attempt any three questions from each sections of which question No.4 and question No.8 are compulsory.
- 2) Answer each section in separate answer book.

SECTION -I

1. Discuss sterilization of medium in a batch process? 14
2. Discuss and compare different types of Bioreactor designs 14
3. Write in detail about various carbon and nitrogen sources used in fermentation process 14
4. Write a short note on Scale up in Bioprocess 07

OR

Screening of industrially important microorganisms

SECTION -II

5. Discuss the role of Aeration and Agitation and write in detail about the methods for determination of $K_L a$ 14
6. a) Explain methods of cell disruption (07)
b) Discuss liquid-liquid extraction for recovery and purification of fermentation products (07)
7. Discuss kinetic characteristics of microbial growth in continuous culture 14
8. Write a short note on Chemical factors affecting fermentation process 07

OR

Various aspects of fermentation economics.

GANPAT UNIVERSITY
M.Sc. Second Semester Examination (C.B.C.S.) April-May, 2011
Subject : Biotechnology/Microbiology
Paper : BTA 204 BCA Biostatistics and Computer Application
Paper : MBA 204 BCA Biostatistics and Computer Application
Paper : BIA 204 BCA Biostatistics and Computer Application

Time : 3 Hours

Total Marks : 70

Instructions :

- 1) Attempt any three questions from each section, of which questions No. 4 and 8 are compulsory
- 2) Answer each section in separate answer book.

SECTION- I

- Q.1 Describe, in detail, the various types of probability distributions. (14)
- Q.2 What is Chi square ? Explain how it will be calculated. Write its applications. (14)
- Q.3 Write note on :
- a) Standard deviation (07)
 - b) Graphical presentation of data (07)
- Q.4 Describe the Student's t-test. (07)

SECTION -II

- Q.5 What is an operating system ? Explain any one operating system in detail. (14)
- Q.6 a) Explain the concept of Boolean searching giving suitable example. (07)
- b) Define database . Discuss types of databases in context of data. (07)
- Q.7. a) Discuss any four online sources used for biological research. (07)
- b) Write a short note on Output devices. (07)
- Q.8 Write a note on different types of computers. (07)

END OF PAPER

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GANPAT UNIVERSITY

M. Sc. Second Semester Examination (C.B.C.S) April-May, 2011

Subject: Biotechnology / Microbiology

Paper: BTA 205 LCS : Language & Communication Skills

Paper: MBA 205 LCS: Language & Communication Skills

Paper: BIB 205 LCS: Language & Communication Skills

Time: 3 Hours

Total Marks: 70

Instructions:

- 1) Attempt any three from each section, of which question No.4 and 8 are compulsory.
- 2) Answer each section in Separate answer book.

Section: I

Q.1	Attempt any two from the following.	(14)
(A)	What are the five important aspects to be considered while planning for your business presentation?	
(B)	Discuss fundamentals of a group discussion.	
Q.2	Attempt any two from the following.	(14)
(A)	What are the differences between Group Discussion and debate?	
(B)	Make a list of Do's and Don'ts in Group Discussion.	
Q.3	Attempt any two from the following.	(14)
(A)	What are attention grabbers in the delivering of presentation?	
(B)	How should candidates behave in an interview?	
Q.4	Prepare a list of useful tips for an Interview.	(7)
	OR	
	What are the differences between Presentation and Public Speaking?	

Section: II

Q.5	As a committee prepare a report on the causes of the strike and the need to provide certain facilities to the employees of Singh and Bhatia Limited, 5 Kasturba Gandhi Marg, New Delhi.	(14)
Q.6	Draft an application for the post of lecturer for the Mehsana Urban Bank Institute of Bioscience, Ganpat Vidyanagar, Kherva, Mehsana.	(14)
Q.7	Write any two letters from the following.	(14)
(A)	Write a letter applying for import Quota for THE EXPOERT TRADING COMPANY, 57 Commercial Street, Kanpur.	
(B)	You are expecting an increasing turnover in the coming season but are not in a position to finance yourself additional stocks nor are you able to obtain term credit from your suppliers. Request your bankers to allow you an overdraft of Rs. 50,000 for a period of these months on your personal security.	
Q.8	Make a list of tips for delivering Conference Papers.	(7)
	OR	
	Discuss the Elements of Proposal writing.	

END OF PAPER