

STARTED BATCH IN CERTIFICATE COURSE - 2021

IBSC STUDENTS - I SEMESTER



CERTIFICATE COURSE

PHARMACEUTICAL MICROBIOLOGY

ORGANISED BY

DEPARTMENT OF BIOMEDICAL SCIENCE

HINDU COLLEGE, MARKET CENTRE

GUNTUR - 522003

	NAME OF THE CERTIFICATE COURSE	ACADEMIC YEAR	FROM	TO
1	Pharmaceutical Microbiology	2021-2022	20-6-2022	20-7-2022

DURATION : 30 HOURS

PHARMACEUTICAL MICROBIOLOGY

(THEORY)

UNIT I : CULTURE MEDIA

Growth and cultivation of bacteria and virus. Study of different important media required for the growth of aerobic and anaerobic bacteria & fungi. Differential media, enriched media and selective media, maintenance of lab cultures.

UNIT - I STERILIZATION

Detailed study of different methods of sterilization including their merits and demerits. Sterilization methods for all pharmaceutical products. Detailed study of sterility testing of different pharmaceutical preparations.

UNIT II : DISINFECTION

Disinfectants- Study of disinfectants, antiseptics, fungicidal and virucidal agents factors affecting their activation and mechanism of action. Evaluation of bactericidal, bacteristatic, , virucidal activities, evaluation of preservatives in pharmaceutical preparations.

UNIT IV : STAINING TECHNIQUES

Different methods used in isolation and identification of bacteria with emphasis to different staining techniques and biochemical reactions. Counting of bacteria -Total and Viable counting techniques.

UNIT V : MICROBIAL SENSITIVITY

Microbial culture sensitivity Testing: Interpretation of results Principles and methods of different microbiological assays, microbiological assay of Penicillin, Streptomycin and vitamin B2 and B12.

References

a. Prescott L.M., Jarley G.P Klein D.A —Microbiology|| 2nd- edition Mc Graw Hill Company Inc

b. Rawlins E.A.||Bentley's Text Book of Pharmaceutics|| B ailliere Tindals 24-28

London 1988

c. Forbisher — Fundamentals of Microbiology|| Philadelphia W.B. Saunders.

d. Prescott L.M. Jarley G.P., Klein.D.A. — Microbiology.||2nd edition WMC Brown

Publishers, Oxford. 1993

e. Vanitha Kale and Kishor Bhusari — Applied Microbiology || Himalaya Publishing

house Mumbai.

f. A text book of Medical Microbiology by Ananthanarayana and panikar

PRACTICALS

1.Isolation of bacteria : Streak plate method , Pour plate method

2. Preparation of media and sterilisation
3. Staining techniques – Simple staining ; Gram’s staining
4. Cultural sensitivity testing for some micro-organisms
5. Enumeration of micro-organisms (Total and Viable)
6. Study of the methods of isolation of pure culture.
7. Sterility testing of different pharmaceutical products - Injections ; Ophthalmic preparations

REFERENCES:

1. Microbiology: An Introduction, 9th edition (2008), Gerard J. Tortora, Berdell R. Funke, Christine L. Case; Benjamin Cummings. ISBN-13:978-0321733603.
2. Prescott, Harley, and Klein's Microbiology, 8th edition, (2011), Joanne M. Willey, Linda M. Sherwood, Christopher J. Woolverton, McGraw Hill International. ISBN- 13:978-0071313674.
3. Bailey and Scott’s Diagnostic Microbiology, 12th edition (2007), Betty A. Forbes, Daniel F. Sahm and Alice S. Weissfeld; Mosby Elsevier Publishers, ISBN-13: 978- 0808923640.
4. Microbiology, 6th edition (1993), Pelczar, Chan and Krieg; McGrawHill International, ISBN-13:978-0070492585.
5. Microbiology: A Laboratory Manual, 10th edition, (2013), James Cappuccino and Natalie Sherman, Benjamin Cummings. ISBN-13:978-0321840226.

PHARMACEUTICAL MICROBIOLOGY

QUESTION PAPER

Max Time : 2 hours

Max Marks : 50 Marks

SECTION – A

Answer any '2' of the following questions

2 × 10 = 20M

1. Write in detail about different culture media for bacteria
2. Write about culture sensitivity testing
3. Write about Microbial assay Antibiotics
4. Write about different disinfection methods

SECTION- B

Answer any '5' of the following questions.

5 × 4 = 20M

1. Methods for sterilization
2. Bacterial growth curve
3. Minerals used for microbial nutrition
4. Different bacterial counting methods
5. Phenol coefficient method
6. Sensitivity of MICROORGANISMS
7. Filter disc method
8. Factors influencing bacterial growth

SECTION-C

Answer all the following questions

5 × 2 = 10M

1. Define sterilization
2. Define antifungal activity
3. Define antibiotics
4. Define disinfectant
5. Define metabolite

ATTENDANCE

Blank area for student responses.

MARKS OBTAINED (50 MARKS)

ADMISSION	ROLL	STUDENT NAME	MARKS OBTAINED (50
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NO	NO		M)
4906	557	BALUSU ALEKHYA	42
4907	558	BANDEREDDY TIRUMALA SAINADH	39
4908	559	BANGARU KEERTHANA	40
4909	560	BATCHU NAVYA NIHARIKA LAKSHMI	43
4910	561	BONALA SREENIVASULU	45
4911	562	BONIGALA VEERA SIRISHA	43
4912	563	BURADAGUNTA ANUSHA	40
4913	564	CHALLA PUJAMBICA	41
4914	565	CHINKA DIVYA SAI MANIKANTA	38
4915	566	DEGALA SUVARTHA RAJU	40
4916	567	DEVANDLA ANITHA	45
4918	569	DUDDULA ANUSHA	42
4919	570	LINGALA AISHWARYA	41
4920	571	MALAPATI ANIL KUMAR	46
4921	572	MANDUGULA HEMACHANDRA CHARI	47
4922	573	NALLAPU SANTOSH	40
4923	574	POTHABATHULA YAMINI	46
4924	575	RUDRAPOGU SHANMUKH RAJ	39
4925	576	TALLAPALLI MOHANA	47
4926	577	VEMANA GANESH	39

4927	578	YEKULA ANUPRIYA	45
5089	740	AMMANABROLU ESTHER RANI	42
5090	741	MADA PREM HARSHA VARDHAN	38
5091	742	PARIMI LAKSHMI MANASA	37
4889	540	ALAPARTHI VELANGANI VASANTHANJALI	38
4890	541	EAGA HEMAKEERTHISRI	41
4891	542	GAJJALAKONDA SAI SRUJANA	46
4893	544	MURIKIPUDI GRACE MARY SOWJANYA	42
4894	545	TADISETTY SAI SRAVANI	46
4896	547	TIRIVEEDHI VYSHNAVI	45
4897	548	VENGALASETTY DEVAKI SAI	43
4887	538	GHANTA SUNANDHINI	41



HINDU COLLEGE, GUNTUR
CERTIFICATE COURSE FOR (2021-2024) BATCH
DEPARTMENT OF BIOMEDICAL SCIENCES

CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Miss MANDUGULA HEMA CHADRA CHARI
Studying B.Sc. Biomedical Sciences has participated in Certificate Course for
Thirty days conducted by Department of Biomedical Sciences, HINDU COLLEGE,
Guntur, from 20/06/2022 to 20/07/2022. We wish all the best in his/her future
endeavours.

HOD

Head
Department of Biomedical Sciences
Hindu College, Guntur.

DIRECTOR

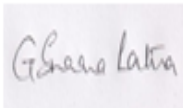
DIRECTOR
Sciences & Allied Courses,
Hindu College
Amaravathi Road Campus



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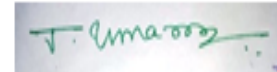
CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Miss TADISETTY SAI SRAVANI Studying B.Sc. Biomedical Sciences has participated in Certificate Course for Thirty days conducted by Department of Biomedical Sciences, HINDU COLLEGE, Guntur, from 20/06/2022 to 20/07/2022. We wish all the best in his/her future endeavours.

A rectangular box containing a handwritten signature in black ink, which appears to be 'G. Suresh Lakshmi'.

HOD

Head
Department of Biomedical Sciences
Hindu College, Guntur.

A rectangular box containing a handwritten signature in green ink, which appears to be 'J. Uma Devi'.

DIRECTOR

DIRECTOR
Sciences & Allied Courses.
Hindu College
Amaravathi Road Campus



HINDU COLLEGE, GUNTUR
CERTIFICATE COURSE FOR (2021-2024) BATCH
DEPARTMENT OF BIOMEDICAL SCIENCES

CERTIFICATE OF PARTICIPATION

This is to certify that Mr/Miss POTHABATTULA YAMINI Studying B.Sc. Biomedical Sciences has participated in Certificate Course for Thirty days conducted by Department of Biomedical Sciences, HINDU COLLEGE, Guntur, from 20/06/2022 to 20/07/2022. We wish all the best in his/her future endeavours.

HOD

Head
Department of Biomedical Sciences
Hindu College, Guntur.

DIRECTOR

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Sciences & Allied Courses,
Hindu College
Amaravathi Road Campus