

# ANDHRA UNIVERSITY



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All Official letters, packages etc, should be addressed to the Registrar by designation and not by name.

Visakhapatnam,  
Dt: 22-12-2022

No. L I (1&2)/U.G. SEC's Courses/ Syllabi & MQP/2020-21

From: **THE REGISTRAR**

To

The Controller of Examinations,  
Andhra University,  
Visakhapatnam.

Sir,

Sub: Approval of Syllabus & Model Question Papers – Reg.  
Ref: B.A. B.Sc. Syllabus & Model Question Papers.

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With reference to the above, I am by direction to inform you that the Choice Based Credit System, U.G. Skill Enhancement Courses (w.e.f. 2020-2021) Syllabus & Model Question Papers have been approved as detailed below:

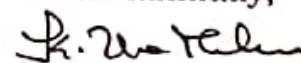
S.No.	Subject/Email dated	Name & Designation	Name of the College	Syllabus & Model question paper	Name of the Paper
1.	B.Sc. Microbiology/ 01-12-2022	Chairman	-	Model Question Paper	1.Paper 6A:Food and Dairy Microbiology 2.Paper 6A:Food and Dairy Microbiology 3.Paper 7A: Environmental and Agriculture Microbiology 4.Paper 7A: Environmental and Agriculture Microbiology 5.Paper 6B:Clinical and Diagnostics Microbiology 6.6B: Clinical and Diagnostics Microbiology 7.7B: Molecular Biotechnology, Biostatistics and Bioinformatics 8.7B:Molecular Biotechnology, Biostatistics and Bioinformatics 9.Paper 6C: Pharmaceutical Microbiology 10. Paper 6C: Pharmaceutical Microbiology 11.Paper 7C: Biosafety and Intellectual Property Rights 12. Paper 7C: Biosafety and Intellectual Property Rights
2.	B.Sc.	-	Gayatri Degree	Model	1.Course 6A: Fish



	Fisheries/ 02-12-2022		College, Parvathipuram	Question Paper	Processing Technology 2.Course 7A: Fisheries
	B.Sc. Human Genetics / 02-12-2022	-	-	Model Question Paper	1.Paper A1:Clinical Genetics & Genetic Counselling 2.Paper A2:Laboratory Diagnosis in Genetics 3.Paper B1:Human Genome Projects and Genomes 4.Paper B2: Molecular Techniques in Genetic Engineering 5.Paper C1: Developmental and Behavioral Genetics 6.Paper C2: Molecular Pathology in Human Diseases
	B.A. Special English / 03-12-2022	Chairperson	-	Model Question Paper	1.6B: Teaching English Online 2.7B: Journalism and Advertising (Print Media)
	B.Sc. Nutrition / 03-12-2022	-	-	Syllabus & Model Question Paper	1.Advanced Diet Therapy 2.Human Physiology
5.	B.Sc. Botany / 05-12-2022	Chairperson	Govt. Degree College (M), Srikakulam	Model Question Paper	1.Paper 6C:Plant Tissue Culture 2.Paper 7C; Mushroom Cultivation
7.	B.A. Journalism & Mass Communication	Prof. D.V.R. Murthy	Head of the Dept. of Journalism & Mass Communication Andhra University, Visakhapatnam	Model Question Paper	1.Paper-I-Radio Journalism 2.Paper-II-Human Rights and Media

Hence, I request to arrange to circulate the same among the Teaching Staff and Students concerned and placed in A.U. website.

Yours faithfully,



(K. UMA MAHESWARI)  
DEPUTY REGISTRAR (ACADEMIC)

**Copies to:**

1. The Dean of Academic Affairs, A.U., VSP.
2. The Dean, U.G. & P.G, Professional Courses, A.U., Vsp.
3. The Dean, CDC, A.U., Vsp.
4. The Dean, Confidential, A.U., Vsp.
5. All Principals, A.U. Affiliated Colleges Offered in U.G. courses.
6. The Superintendent S.I Section for taking necessary further action.
7. The Secretary to V.C., Rector Table, P.A. to Registrar, A.U., Vsp.
8. The Director, Computer Centre, A.U., Vsp.
9. O.C. & O.O.F.

**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 6A: FOOD AND DAIRY MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

- 1. Food sanitation**
- 2. Aflatoxins**
- 3. Canning**
- 4. SCP**
- 5. Dehydration**

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

- 1. Food sanitation and control**
- 2. Food intoxication**
- 3. Mycotoxin**
- 4. Physical method of food preservation**
- 5. Mushrooms**
- 6. Microbial contamination of milk**
- 7. Pasteurization**
- 8. Probiotic foods available in market**

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

- 9. Explain about sources of food contamination and identification of fungi in food.**
- 10. Explain about Botulism**
- 11. Explain about Chemical methods of food preservation**
- 12. Write a note on Fermented dairy food product**
- 13. Write about factors that affect the microbial growth in milk**
- 14. Explain about microorganisms in milk and their diseases**



**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 6A: FOOD AND DAIRY MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

- 1. Identification of fungi**
- 2. Mycotoxin**
- 3. Thermal processing**
- 4. Fermented foods**
- 5. Sterilization**

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

- 6. Food sanitation methods**
- 7. Factors affecting microbial growth in foods**
- 8. Fungi involved in food spoilage**
- 9. Bacteriocins**
- 10. Sauerkraut**
- 11. Types of Cheese**
- 12. Health benefits of Probiotics**
- 13. Proteolysis**

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

- 14. Write about microorganisms that are associated with foods**
- 15. Explain about Salmonellosis and Shigellosis**
- 16. Write about Physical methods of food preservation**
- 17. Write the preparation of any two fermented foods**
- 18. Explain about Mushroom types and health benefits**
- 19. Write about sources of microbial contamination of milk**

**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7A: ENVIRONMENTAL AND AGRICULTURE MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Food chain
2. Solid waste
3. Lignin
4. Biofertilizer
5. Golden rice

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Sulphur cycle
7. Acid rain
8. Bioremediation
9. Soil culture methods
10. Rhizosphere
11. PSB
12. NPV
13. Winogradsky's column

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Write about types of Host-Microbe interactions
15. Explain about BOD and COD
16. Explain the role of microorganisms in decomposition of cellulose
17. Explain about Mycorrhizae
18. Write about contributions of G. Ranga swamy and Beljerinck
19. Write about any two plant fungal pathogens



**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7A: ENVIRONMENTAL AND AGRICULTURE MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Food web
2. Composting
3. Lignin
4. VAM
5. Tomato leaf curl

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Advantage and disadvantages of transgenic plants
7. TMV
8. BGA
9. Azotobacter
10. Soil nutrients
11. Biofouling
12. Phosphorus cycle
13. Trickling filters

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Explain Nitrogen cycle
15. Write about Sewage treatment
16. Write about Bioremediation of hydrocarbons and oil spills
17. Write about Rhizosphere and Phyllosphere micro flora
18. Define Biofertilizers. Write about types, advantages and disadvantages of Biofertilizers
19. Write about any two Viral pathogens

**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 6B: CLINICAL AND DIAGNOSTICS MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Epidemic
2. Meningitis
3. Simple staining
4. Platelet count
5. Hemagglutinin

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. RIA
7. ESR
8. BT and CT
9. Pregnancy test
10. Kirby Bauer method
11. Treponema
12. Herd immunity
13. IMVIC test

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Explain about role of Housefly in transmission of diseases
15. Explain about diagnosis and treatment of Urinary tract infections
16. Describe the biochemical reactions that are used for identification of bacterial pathogens
17. Explain about methods involved in collection of Urine and sputum
18. Describe Antigen-Antibody reactions
19. Explain about Immunoelectrophoresis



**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7B: MOLECULAR BIOTECHNOLOGY, BIOSTATISTICS AND  
BIOINFORMATICS**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Homopolymer tailing
2. Liposome
3. Biofertilizer
4. Standard deviation
5. HTML

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Molecular phylogenetics
7. ANOVA
8. Biogas
9. Southern blotting
10. Blue white screening
11. BAC
12. EMBL
13. Cosmids

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Explain about PCR technique
15. Write about Screening method
16. Explain about Transformation and Microinjection
17. Describe applications of r-DNA technology in agriculture
18. Write about F-test, T-test, Chi-square test
19. Write about BLAST and FASTA



**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7B: MOLECULAR BIOTECHNOLOGY, BIOSTATISTICS AND  
BIOINFORMATICS**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Ligases
2. Bacteriophage
3. Bioplastics
4. Variance
5. HTPP

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Restriction endonuclease
7. Ti plasmid
8. YAC
9. Applications of r-DNA technology
10. Chi-square test
11. Electroporation
12. Ethical issues of BT cotton
13. BLAST

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Explain about DNA sequencing methods
15. Explain about blotting techniques
16. Explain about Plasmids
17. Explain the industrial applications of Genetically engineered microbes
18. Explain mean, median, mode with one example each
19. Write about NCBI and EMBL

**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 6C: PHARMACEUTICAL MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

- 1. Good Manufacturing practices**
- 2. pH**
- 3. MPN**
- 4. Morphine**
- 5. Peptide vaccine**

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

- 6. Define QC**
- 7. Good Laboratory practices**
- 8. LAL test**
- 9. Factors affecting the spoilage**
- 10. Membrane filtration**
- 11. Morphine**
- 12. Role of E.coli in r-DNA technology**
- 13. Toxoids**

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

- 14. Explain and differentiate Sterilization, disinfection, and decontamination**
- 15. Write about endotoxin tests /LAL test**
- 16. Explain about specialized media for identification of pathogens in Industries**
- 17. Explain about techniques involved in enumeration of microorganism**
- 18. Explain about molecular mechanisms of diseases and drug action with two examples**
- 19. Write about attenuated and inactivated viral and bacterial vaccines**

**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 6C: PHARMACEUTICAL MICROBIOLOGY**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Disinfection
2. Sterility test
3. Autoclave
4. Antibiotics
5. Attenuated vaccine

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Sterilization
7. Selective media
8. LAF
9. MIC
10. Alkaloids
11. Genomics
12. Endotoxin test
13. Personnel hygiene training

**Section -C**

**Answer any four of the following questions**

**( 4x10=40M)**

14. Describe about laboratory facilities designed for QC
15. Write about indicator media used in pharmaceutical and food industry
16. Write about any two instruments associated in QC and QA
17. Write about any two pharmaceutical products of microbial origin
18. Explain the role of E.coli in r-DNA therapeutic proteins
19. Explain the expression of recombinant protein in yeast



**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7C: BIOSAFETY AND INTELLECTUAL PROPERTY RIGHTS**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Biosafety
2. Cartagena protocol
3. WIPO
4. Patenting authorities
5. PCT

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Paris convention treat
7. Rights and duties of patent owner
8. Trade marks
9. Environmental issues related to GMO's
10. Biohazards
11. RCGM
12. Hague agreement
13. Copy right

**Section -B**

**( 5x10=50M)**

**Answer all questions. Each question carries 10 marks**

14. Write about Biological Safety Cabinet's and their types
15. Write about GMO application in food and agriculture
16. Explain the guidelines for using radioisotopes in laboratories and precautions
17. Write about importance, management, advantages and disadvantages of IPR
18. Write about Patent infringement
19. Write about GATT and TRIPS agreement



**B.Sc MICROBIOLOGY (revised syllabus under CBCS) w.e.f 2022-2023**

**MODEL QUESTION PAPER**

**SEMESTER – V ( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**Paper 7C: BIOSAFETY AND INTELLECTUAL PROPERTY RIGHTS**

**Time 3hours**

**Marks 75**

**Section -A**

**Answer all the following questions**

**( 5x2=10M)**

1. Biohazards
2. RCGM
3. Trade secrets
4. Patent infringement
5. Berne conventions

**Section -B**

**Answer any five of the following questions**

**( 5x5=25M)**

6. Biological Safety Cabinets
7. ISBC
8. Cartagena protocol
9. Importance of IPR
10. Patenting authorities
11. Types of patent
12. GATT
13. UPOV

**Section -B**

**( 5x10=50M)**

**Answer all questions. Each question carries 10 marks**

**(OR)**

14. Explain about Biosafety guidelines
15. Explain about concerns and challenges of GMO's
16. Explain about guidelines for using radioisotopes in laboratories and precautions
17. Write in detail about IPR, its types and functions
18. Explain about procedure of Patent filing, licensing and agreement
19. Write about TRIPS agreement and role of Madrid agreement

B. Sc DEGREE EXAMINATION

FIFTH SEMESTER.

COURSE 6A : FISH PROCESSING TECHNOLOGY.

: SECTION - A :

Maximum :  $5 \times 5 = 25$

Marks.

Answer any five of the following.

- ① ಲವಣೀಕರಣ. (Salting.)
- ② ತಾಜಾ చేపలకు, చెడిపోయిన చేపలకు గల తేడాలు?
- ③ అగర్
- ④ ఫ್ರోಸెసింగ్ ప್లాంట్లలో వ్యక్తిగత శుభ్రత.
- ⑤ చేపల ఫ్రోಸెసింగ్ అయితే పడ్డతుల యెంతో నిర్వహణ (Gmps) ను అవలంబించుము.
- ⑥ ఈరవేయలు.
- ⑦ సముద్రపు కలుపు మెకలు.
- ⑧ రిగ్ మార్టీస్.

: SECTION - B :

Marks :  $5 \times 10 = 50$ .

- ① చేపల నిల్వ-చేయಲು అయితే ప్రాథమిక అంశాలు  
(or)
- ② చేపల చెడిపోవడం గురించి అవలంబించుము.

2) చేపలు నిల్వచేయుటలో వివిధ సంప్రదాయాలకు పేర్లను  
వివరించండి.

(10)

4) కానింగ్ (ఉష్ణాన్ని పట్టి ద్వారా చేపలు నిల్వచేయు విధానం  
వివరింపండి).

5) సముద్రపు కలుష మెక్కడ ఉంటుంది? సముద్రపు కలుష  
మెక్కడ ఉత్పత్తి అవుతుంది? వ్యాసము వ్రాయండి.

(10)

6) అగర్ , టెల్లిన మురియి కర్మాగారాల తయారు చేయు విధానము  
మురియి వారి ఉపయోగాలను వివరింపండి.

7) సముద్ర భవన పదార్థ పరిశీలనపై పర్యావరణ శుభ్రత యొక్క  
ప్రభావము వివరింపండి.

(10)

8) సముద్రమునందు నాల్గవ ప్రమాణాలు , క్రమబద్ధీకరణ విధానాన్ని  
వివరింపండి.

9) సముద్ర భవన పదార్థాలు (Sea foods) నాల్గవ నిర్దేశాలు  
GLPS లో ఉంటున్న ప్రయోజనాల పేర్లను గురించి వివరించండి.

(10)

10) HECCP యొక్క ఉద్దేశ్యం గూర్చి వ్రాయండి (లేదా)  
సముద్ర భవన పదార్థాల (10) భవన భద్రతలో ప్రమాద నివారణ  
ముందు క్లిష్టమైన నియంత్రణ వివరించండి?



# B.S.C DEGREE EXAMINATION

COURSE 7A :- Fifth Semester [Fisheries]

Time - Three hours (Section-A) Maximum Marks - 75

Answer any five -  $5 \times 5 = 25$

- ① Methods of Seed Collection?
- ② Write about finfish and shellfish?
- ③ Benthic breeding and types of benthic breeding?
- ④ fish pituitary Gland extract for injection
- ⑤ Write about traditional hatcheries?
- ⑥ Breeding technique and seed production of Common carp?
- ⑦ Short note on Spawning and hatching of Eggs?
- ⑧ Marine fish seed production of milkfish?

## Section - B

Answer any five questions of following  
(10 marks each que)  $10 \times 5 = 50$

- ⑨ A) Natural breeding and seed resources of carp in major Rivers in India?  
(or)
- B) Natural shrimp seed resources; Site and collection methods?



10)

A) Band breeding techniques; and  
Advantages and disadvantages of  
Band breeding?

(or)

B) Induced breeding of Indian major  
carps by hypophyisation?

11)

A) Breeding techniques and seed production  
of channa, pangasius and Tilapia?

(or)

B) Stopping and fertilization of seeds?

12)

A) General design of shrimp hatcheries?

(or)

B) Operation and management of hatchery  
Sections?

13)

A) Seed production and nursery rearing  
of *Macrobrachium rosenbergii*?

(or)

B) Seed production of 'Crab and lobsters?

**BSc HUMAN GENETICS (Revised Syllabus Under CBCS W.E.F 2022-2023)**

**MODEL QUESTION PAPER**

**SEMESTER - V**

**(SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperA1: CLINICAL GENETICS & GENETIC COUNSELLING**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions . Each Question Carries 5 Marks**

1. Phenyl Ketonuria
2. Neuro Fibromatosis I
3. Disorders Of Eye
4. Dysmorphology
5. Genetic Counselling
6. Genome Imprinting Disorder
7. Non-Mendelian Disorders
8. Risks Of Genetic Counselling

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

1. A) Write About Monogenic Diseases- Marfan Syndrome  
(OR)  
B) Write About Angelman Syndrome
2. A) Write About Charcot Marie Tooth Syndrome  
(OR)  
B) Write About Syndromes Of Triplet Nucleotide Expansion
3. A) Explain Disorders Of Hematopoietic Systems  
(OR)  
B) Write An Essay On Atherosclerosis
4. A) What Is Genetic Counselling? Explain The Role Of Genetic Counselling  
(OR)  
B) Explain Preimplantation Diagnosis
5. A) Genetic Counselling In Mendelian Disorders  
(OR)  
B) Ethical And Legal Issues Of Genetic Counselling

**BSc HUMAN GENETICS (Revised Syllabus Under CBCS W.E.F 2022-2023)**

**MODEL QUESTION PAPER**

**SEMESTER - V**

**( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperA2: LABORATORY DIAGNOSIS IN GENETICS**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions. Each Question Carries 5 Marks**

1. FSH
2. Comet Assay
3. Neural Tube Defect
4. Thalassemia
5. Structural Anomalies
6. Fragile X Syndrome
7. Albumin Test
8. Short Term Lymphocyte

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

1. A) Write About ELISA and Its Applications.  
(OR)  
B) Write Principle and Applications Of HPLC.
2. A) Write Chromosomal Abnormalities In Cancer.  
(OR)  
B) Explain About Sister Chromatid Exchange.
3. A) Write Principle and Application Of PCR-RFLP  
(OR)  
B) Write A Classification Of Genetic Disorders
4. A) Write Biochemistry and Diagnostic Tests Of Creatinine Phosphokinase Test  
(OR)  
B) Write Biochemistry and Diagnostic Tests Of G-6-P Syndrome.
5. A) Explain The Causes and Factors Of Genetic Counselling.  
(OR)  
B) Write Ethical and Legal Issues Of Genetic Counselling



**BSc HUMAN GENETICS (Revised Syllabus Under CBCS W.E.F 2022-2023)**

**MODEL QUESTION PAPER**

**SEMESTER - V**

**( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperB1: HUMAN GENOME PROJECT AND GENOMES**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions . Each Question Carries 5 Marks**

1. Phenetics
2. 1000 Genome Project
3. Significance Of Bacteria Genome
4. SSLP S
5. STS Mapping
6. Applications Of HGP- ELSI
7. Cladistics
8. Transcriptome

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

1. A) Explain The General Features Of The Genome  
(OR)  
B) Write About Nuclear Genome Organization
2. A) Write About Genetic Mapping  
(OR)  
B) Write Principle & Applications Of FISH
3. A) Write About Human Genome Project  
(OR)  
B) Write About Hap Map Project
4. A) Explain About Microarrays  
(OR)  
B) Write About Locating The Genes In The Genome Sequence
5. A) Explain About Molecular Phylogenetics  
(OR)  
B) Explain Evolutionary Relationship Between Humans and Primates



**BSc HUMAN GENETICS (Revised Syllabus Under CBCS W.E.F 2022-2023)**

**MODEL QUESTION PAPER**

**SEMESTER - V**

**( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperB2: MOLECULAR TECHNIQUES IN GENETIC ENGINEERING**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions . Each Question Carries 5 Marks**

1. Primer Synthesis
2. Inverse PCR
3. Radioactive Probes
4. Staining Techniques
5. Pyrosequencing
6. Electrophoresis
7. Blotting Technique
8. Hot Start PCR

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

1. A) Isolation Of Genomic DNA  
(OR)  
B) Write Principle and Applications Of Agarose Gel Electrophoresis
2. A) Write About PCR And Components OF PCR  
(OR)  
B) Explain About Real Time PCR
3. A) Write Principle and Applications Of Southern Blotting Technique  
(OR)  
B) What Are Probes And Types Of Probes
4. A) Explain About DNA Sequencing  
(OR)  
B) Write About Single Molecule Sequencing
5. A) Explain About Yeast Hybrid System  
(OR)  
B) Write About 3D Gel Electrophoresis

**BSc HUMAN GENETICS (Revised Syllabus Under CBCS W.E.F 2022-2023)**

**MODEL QUESTION PAPER**

**SEMESTER - V**

**( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperCI: DEVELOPMENTAL AND BEHAVIORAL GENETICS**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions. Each Question Carries 5 Marks**

1. Oogenesis
2. Gap Gene
3. Fertilization
4. Drosophila Development
5. Segment Polarity Genes
6. Behavior
7. Zygotic Genes
8. Germ Cells

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

1. A) Explain About Germ Cells  
(OR)  
B) Write About Fertilization And Gastrulation
2. A) Write About Molecular Aspects Of Development  
(OR)  
B) Explain the Maternal Effect of Gene and Pair Rule Gene
3. A) Explain About Genetics Of the Embryonic Development Of Drosophila  
(OR)  
B) Write About Zygotic Genes And Segment Formation
4. A) Explain About Flower Development In Arabidopsis  
(OR)  
B) Explain the Development And Role Of the Homeotic Selector Gene
5. A) Explain About Behavior In Drosophila  
(OR)  
B) Explain the Genetic Basis Of Alcoholism

**MODEL QUESTION PAPER**

**SEMESTER - V**

**( SKILL ENHANCEMENT COURSE – ELECTIVE )**

**PaperC2:MOLECULAR PATHOLOGY IN HUMAN DISEASES**

**Time- 3 hours**

**Marks -75**

**Section -A**

**( 5x5=25)**

**Answer Any Five Questions. Each Question Carries 5 Marks**

- 1. Tuberculosis**
- 2. Typhoid**
- 3. Malaria**
- 4. Oncogenes**
- 5. ISH**
- 6. Principle Of Electrophoresis**
- 7. Real-Time PCR**
- 8. Colorectal cancer**

**Section -B**

**( 5x10=50)**

**Answer All Questions. Each Question Carries 10 Marks**

- 1. A) Write Etiology & Pathology Of PKU  
(OR)  
B) Write Etiology And Pathology Of Lesch Nyhan Syndrome**
- 2. A) Write Epidemiology And Mode Of Infection Of Histoplasmosis  
(OR)  
B) Write About Tumor Suppressor Genes And Molecular Basis Of Oncogenes**
- 3. A) Write Principle And Application Of Immunoblotting  
(OR)  
B) Write Principle And Application Of DNA Sequencing**
- 4. A) Write Genetic Testing For Thalassemia  
(OR)  
B) Write Genetic Testing For Familial Breast Cancer**
- 5. A) Write Principles Of HPV Testing  
(OR)  
B) Explain About Hepatitis B Infection .**

**B. A. Degree Examination**  
**SPECIAL ENGLISH-Skill Enhancement Course (SEC)**  
**Semester V-6B**  
**TEACHING ENGLISH ONLINE**  
**Revised (CBCS) w.e.f. 2022-23**

Time: Three Hours  
75

Maximum Marks:

**Section A**

Answer any SIX questions. Each answer carries 5 marks.

(6 x 5 = 30M)

1. Give a brief account of Self-learning. What are the advantages of it?
2. Differentiate between Timelines and Chunking.
3. Explain briefly about procedure of lesson planning.
4. Write a note on LMS and Moodle.
5. What is meant by Copyright?
6. Explain Additional Inputs in learning English online.
7. Describe Chat Boxes and interactive/smart boards.
8. Write a brief note on (MALL) Mobile-assisted language learning.
9. How to create own resources on the Online education platform?
10. Comment on Online Assessment tools.

**Section B**

Answer any THREE questions. Each answer carries 15 marks.  
45M)

(3 x 15 =

1. Explain Online English Teaching with reference to the learners, the context and the content.
2. Elaborate in detail about the following  
(1) Blended Learning (2) Guided Learning (3) Flipped Classroom
3. Summarize the effective methods of Online Classroom Management.
4. What are the skills required for online collaboration?
5. What are the techniques for writing digital or online media?
6. Explain the importance of Google Classroom in Online teaching.

\*\*\*\*\*





**B. A. Degree Examination**  
**SPECIAL ENGLISH-Skill Enhancement Course (SEC)**  
**Semester V-7B**  
**ENGLISH FOR JOURNALISM AND ADVERTISING (PRINT MEDIA)**  
**Revised (CBCS) w.e.f. 2022-23**

Time: Three Hours  
75

Maximum Marks:

**Section A**

Answer any SIX questions. Each answer carries 5 marks.

(6 x 5 = 30M)

1. Write a brief note on the ethics of journalism.
2. Discuss the basic principles of writing a News Report.
3. Explain the types of Newspaper columns.
4. Write a note on the use of language in Advertisements.
5. What are the Principals of Journalism?
6. What is meant by Proofreading? Write the symbols of proofreading.
7. Comment on the lexical features of advertising.
8. What is the relationship between advertising and journalism?
9. Give an account of Mobile Journalism.
10. What is the difference between Web Edition and E-Edition of a newspaper?

**Section B**

Answer any THREE questions. Each answer carries 15 marks.  
45M)

(3 x 15 =

1. Critically examine the social, legal, professional and editorial responsibilities of journalists.
2. Explain the role of English language in Professional writing with special reference to the Use of Tenses, Vocabulary and Reported Speech.
3. Discuss the role of Newspapers as an advertising media.
- 4 Explain the impact of Digital technology on Print Media.
5. What are the techniques for writing digital or online media?

6. Elaborate in detail about the advantages and limitations of digital printing.

\*\*\*\*\*

(First page for SECs, model only)

ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION  
REVISED UG SYLLABUS UNDER CBCS  
(Implemented from Academic Year 2020-21)  
PROGRAMME: THREE YEAR B.Sc.,

Domain Subject: NUTRITION

Skill Enhancement Courses (SECs) for Semester V, from  
2022-23(Syllabus-Curriculum)

Structure of SECs for Semester – V

(To choose One pair from the Four alternate pairs of SECs)

Univ. Code	Courses 6 & 7	Name of Course	Th. Hrs. / Week	IE Mar-ks	EE Mar-ks	Credits	Prac. Hrs./ Wk	Mar-ks	Credits
	6A	Advanced Diet Therapy	3	25	75	3	3	50	2
	7A	Human Physiology	3	25	75	3	3	50	2

OR

	6B	Nutrition & Fitness	3	25	75	3	3	50	2
	7B	Nutrition Health Communication	3	25	75	3	3	50	2

OR


	6C	Food processing & preservation	3	25	75	3	3	50	2
	7C	Food labelling & packaging	3	25	75	3	3	50	2

OR

	6D	Food Product development	3	25	75	3	3	50	2
	7D	Entrepreneurship Management	3	25	75	3	3	50	2

**Note-1:** For Semester-V, for the domain subject Nutrition, any one of the four pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C or 6D & 7D. The pair shall not be broken (ABCD allotment is random, not on any priority basis).

**Note-2:** One of the main objectives of Skill Enhancement Courses (SEC) is to inculcate field skills related to the domain subject in students. The syllabus of SEC will be partially skill oriented. Hence, teachers shall also impart practical training to students on the field skills embedded in the syllabus citing related real field situations.

  
S.A. ...  
M.V.P. ...

Three-year B.Sc.  
Domain Subject: NUTRITION  
III Year B. Sc., – Semester – V  
**Course 6A: ADVANCED DIET THERAPY**  
(Skill Enhancement Course - 05 Credits)  
Max Marks: Theory:100 + Practical:50

(Total Hours: 90 including Teaching, Lab, Field Training and unit tests etc.)

**ADVANCED DIET THERAPY**  
(Theory -3 Credits)

**I. Learning Outcomes:**

Students after successful completion of the course will be able to:

- Apply nutrition principles to health promotion and the prevention of diseases
- Apply the principles in planning menus for disease conditions
- Master professional diet counselling skills
- Manage a dietary department at the capacity of a dietitian.
- Recommend personalized diets for various disease condition

**II. Theory Syllabus: (50 Hrs)**

**Unit I: Diet in Diabetes Mellitus**

Classification, symptoms, Complications, diagnosis of diabetes mellitus- Insulin therapy. Dietary management and nutritional therapy, meal plan (with and without insulin). Diabetes in pregnancy, Diabetic coma, Juvenile Diabetes- diet management. 10 Hrs

**Unit II: Diet in diseases of the cardiovascular system**

Atherosclerosis: Etiology, symptoms and risk factors. Dietary care management, Ischemic heart disease – nutritional management. Congestive heart disease and nutritional management. Hypertension – etiology, prevalence, nutritional management and prevention. 10 Hrs

**Unit III: Diet in Liver diseases**

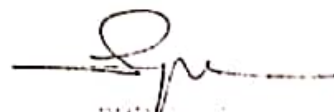
Alcoholic liver disease, cirrhosis, hepatic coma and gall stones- etiology, Symptoms, complications, diagnostic tools and dietary management of liver diseases. 10 Hrs

**Unit IV: Diet in Renal diseases**

Diseases of kidney – classification, etiology, characteristic symptoms and dietary management in: Glomerulonephritis – acute and chronic, Nephrotic syndrome, renal failure and uremia, acute and chronic renal failure. 10 Hrs

**Unit V: Diet in Critically ill patients**

Cancer – Types, Nutritional and non- nutritional etiological factors, symptoms of Surgery and burns, Pre-operative and post- operative nutritional care. Nutritional management of burns patients. Inborn errors of metabolism – Biochemical basis and nutritional management of PKU and Maple Syrup Urine Disease. 10Hrs

  
SANGHVI  
M.V.P. College



## ADVANCED DIET THERAPY (Practical – 2 Credits)

### III. Skill Outcomes:

On successful completion of this practical course, student shall be able to:

- Understand the etiology and symptoms of different diseases
- Comprehend the diet management for different types diabetes
- Understand the dietary management of cardiovascular disorders and liver diseases
- Gain knowledge on diet therapy of renal diseases
- Get insights in to the diet therapy of critically ill patients

### IV. Practical Syllabus: (30 Hrs.)

Computation of nutrient requirements, planning, preparation & evaluation of therapeutic diets for the following conditions.

1. Diabetes mellitus & its complications
2. Cardio Vascular Disorders
3. Liver diseases
4. Renal disorders
5. Burns
6. Pre and post-surgery conditions
7. Different types of cancers
8. Inborn disorders of metabolism

### V. RECOMMENDED READINGS:

1. Mahan LK & Ecott- Stump S (2000): Krause's Food, Nutrition and Diet therapy, 10<sup>th</sup> ed. WB Saunders Ltd.
2. Srilakshmi B (2005) Dietetics, 5<sup>th</sup> ed. New age International (P) Ltd. Pbs. New Delhi
3. Gopalan C (1996) Nutritive value of Indian foods. NIN. Hyderabad.
4. Michele JS, Sadler J, strain J, Benjamin C (1999) Encyclopedia of Human Nutrition.
5. Ganesh and Co., Williams S (1981) Nutrition and diet therapy, 4<sup>th</sup> Ed. Missouri. Masby co. Pbs.
6. Gopalan C and Narasinga Rao B(1988) Dietary Allowances for Indians. NIN

### VI. Co-Curricular Activities:

a) **Mandatory:** (*Training of students by teacher on field related skills: 10 hrs*)

1. **For Teacher:** Training of students by teacher, in laboratory and field visits for a total of 10 hours on visit to a local hospital having a dietary department and disease specific diet planning and computation of nutritive value

2. **For Student:** Individual visits to local Govt. and corporate hospitals, submission of a hand written field work report not exceeding 10 pages in given format

3. Max marks for Field Work Report. 05.

4. Suggested Format for Field work: *Title page, student details, content page, introduction, work done, findings, conclusions and acknowledgements.*

5. Unit tests (IE).

b) **Suggested Co-Curricular Activities**

1. Training of students by related industrial experts.

2. Assignments (including technical assignments like project formulation, model projects and report writing.

3. Seminars, Group discussions, Quiz, Debates etc. (on related topics)

4. Preparation of videos on tools and techniques of diet prescription and counselling.

5. Invited lectures and presentations on related topics by Dietitians in the field

SAN  
M.P.O.



## VII. Suggested Question Paper Pattern

### ADVANCED DIET THERAPY (Theory)

Max. Marks: 75

Time – 3 Hrs

#### SECTION A (Total: 10 Marks)

Very Short Answer Questions (10 Marks: 5x2)

1. Types of Diabetes Mellitus
2. Atherosclerosis
3. Symptoms of Cirrhosis
4. Low salt diet
5. Energy requirements for Burns

#### SECTION B (Total: 5x5=25 Marks)

(Answer any five questions. Each answer carries 5 marks  
(At least 1 question should be given from each Unit)

1	Write about Complications of Diabetes
2	Discuss about nutritional management of Congestive heart disease
3	Discuss about the diagnostic tools in liver diseases
4	Explain the types of kidney diseases
5	Brief about etiological factors of cancer
6	Discuss about diagnosis of Diabetes
7	Write about High fiber diets
8	Discuss about high and low cholesterol foods

#### SECTION C (Total: 4x10 = 40 Marks)

(Answer any four questions. Each answer carries 10 marks  
(At least 1 question should be given from each Unit)

1	Elaborate on diet management of diabetes in pregnancy
2	Explain in detail about etiology and nutritional management of Hypertension
3	Discuss about etiology and diet management of Alcoholic liver disease
4	Discuss about the symptoms and dietary management of Glomerular nephritis
5	Explain about the post operative nutritional management of critically ill patients
6	Explain in detail symptoms and diet therapy for Phenyl ketonuria condition

### Suggested Question Paper Model for Practical Examination Semester – V/ Nutrition – 6A (Skill Enhancement Course) ADVANCED DIET THERAPY (Practical)

Max. Marks: 50

Time: 3 Hrs.

1. Write the nutritional requirements, plan whole day menu for a Cirrhosis patient and calculate nutritive value – 25 M
2. Write a discharge diet plan for a diabetic patient on insulin therapy -15 M
3. Record + Viva-voce 6+4 = 10 M

B.A.  
M.V.P.



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Three-year B.Sc.  
Domain Subject: NUTRITION  
III Year B. Sc., – Semester – V  
**Course 7 A: HUMAN PHYSIOLOGY**  
(Skill Enhancement\*Course (Elective), 05 Credits)  
Max Marks: Theory:100 + Practical:50  
(Total Hours: 90 including Teaching, Lab, Field Training and unit tests etc.)

**HUMAN PHYSIOLOGY**  
(Theory- 3 Credits)

**I. Learning Outcomes:**

Students after successful completion of the course will be able to:

- Understand and distinguish the functions at cellular level
- Comprehend the physiological functions of cardio vascular system
- Illustrate the role of gut in digestion and absorption
- Get an insight of functions of respiratory system
- Get sensitized about organs of special senses

**II. Theory Syllabus (50 Hrs)**

**UNIT 1: Introduction to human body**

Definition of Anatomy and physiology, Types of cells and tissues of the body. Skeletal system – Function, types of bones, classification of bones, and growth of long bone. 10 Hrs

**UNIT 2: Blood and circulatory System**

Composition of blood- WBC, RBC, Platelets –Structure, formation and function, coagulation, of blood, blood groups and Rh factor, Heart – Structure, and functions, blood pressure, types of circulation, principal blood vessels- structure and function. 10 Hrs

**UNIT 3: Digestive system**

Structure and functions of various organs of the GI Tract, Digestion and absorption of food and the role of enzymes and hormones. 10 Hrs

**UNIT 4: Respiratory system**

Structure of Lungs, Mechanism of respiration and its regulation, O<sub>2</sub> and CO<sub>2</sub> transport in blood, vital capacity and other lung volumes, Respiratory passages, Alveoli, Physiology of respiration; rate and control. 10 Hrs

**UNIT 5: Organs of special senses:**

Tongue, nose, ear, eyes and skin-structure and their physiological functions. 10 Hrs



88  
MAY

88  
MAY





## HUMAN PHYSIOLOGY (Practical- 2 credits)

### III. Skill Outcomes:

- On successful completion of this practical course, student shall be able to:
  - Identify various tissues
  - Attain experience in assessment of blood clotting time
  - Gain hands on experience in blood grouping
  - Evaluate and assess the CBC
  - Estimate of some clinical parameters
  - Measure blood pressure

### IV Practical Syllabus – (30 Hrs)

1. Identification of tissues slides – epithelial tissues, neuron, muscular tissues, Cardiac tissues, blood, CS of an artery and lung, pancreas, liver, esophagus, stomach and intestine
2. Blood clotting time (both methods) and bleeding time (Duke's method)
3. Blood groups and Rh factor.
4. Estimation of hemoglobin- Sahli's method
5. Enumeration of RBC / WBC, Differential count of WBC
6. Complete Blood Count (CBC)
7. Measurement of Blood Pressure and Pulse Rate
8. Spotters: Instruments and Reagents.

### V. RECOMMENDED READINGS:

1. Human Physiology & health, David Wright (2004)
2. Fundamentals of Human Physiology, Stuart Ira fox (2008)
3. Human Anatomy and Physiology, S.B.Bhise, AV.Yadav, Nirali Prakashan (2005)
4. Handbook Of General Anatomy, B.D. Chaurasia, Third Edition (1996)
5. Review Of Medical Physiology, William F.Ganong, MD , 20 th Edition.
6. Elements Of Human Anatomy Physiology& Health Education by Ramesh K.Goyal

### VI. Co-Curricular Activities:

#### a) Mandatory: *(Training of students by teacher on field related skills: 10 hrs)*

1. For Teacher: Training of students by teacher, a total of 10 hours on identification of slides of tissues, blood pressure measurement etc
2. For Student: Individual visits to local Govt. hospital labs, submission of a hand written field work report not exceeding 10 pages in given format
3. Max marks for Field Work Report: 05.
4. Suggested Format for Field work: *Title page, student details, content page, introduction, work done, findings, conclusions and acknowledgements.*
5. Unit tests (IE).

#### b) Suggested Co-Curricular Activities

1. Training of students by related industrial experts.
2. Assignments (including technical assignments like project formulation, model projects and report writing.
3. Seminars, Group discussions, Quiz, Debates etc. (on related topics).
4. Preparation of videos on anatomy and digestion of food, role of enzymes etc.
5. Invited lectures and presentations on related topics by field/industrial experts.





**HUMAN PHYSIOLOGY**  
(Theory)

Max. Marks: 75 Time: 3 hrs

**SECTION A (Total: 10 Marks)**

**Very Short Answer Questions (10 Marks: 5 x2)**

1. Functions of cell.
2. Platelets
3. Salivary gland secretions
4. Structure of Alveoli
5. Functions of tongue

**SECTION B (Total: 5x5=25 Marks)**

(Answer any five questions. Each answer carries 5 marks )  
(At least 1 question should be given from each Unit)

1	Explain about the hormones of digestive system
2	Write about types of bones
3	Explain the composition of blood
4	Write about the structure and functions of stomach
5	Write about the structure of lungs
6	Explain the structure and functions of nose
7	Describe the layers of GI tract
8	Brief about clotting of blood

**SECTION C (Total: 4x10 = 40 Marks)**

(Answer any four questions. Each answer carries 10 marks  
(At least 1 question should be given from each Unit)

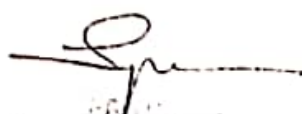
1	Elaborate on structure and growth of long bones
2	Describe in detail the structure and functions of heart
3	Discuss about the digestion and absorption of nutrients in GI tract
4	Write about the mechanism of respiration
5	Elaborate on structure and physiological functions of skin
6	Explain the anatomy of Muscle tissue

**Suggested Question Paper Model for Practical Examination**  
**Semester – V/ Nutrition –7A (Skill Enhancement Course)**

**HUMAN PHYSIOLOGY**  
**Practical**

Max. Marks: 50 Time: 3 Hrs.

1. A. Measure the blood pressure and evaluate  
B. Identify the spotter – 25 M
2. Estimate the Haemoglobin % of given sample - 15 M
3. Record + Viva-voce 6+4 = 10 M

  
SARV  
M.V.P. College

**B.Sc (CBCS) DEGREE EXAMINATION****FIFTH SEMESTER****BOTANY****PAPER-6 C (Plant Tissue Culture) (Skill Enhancement Course (Elective)****(With effect from 2020-21 Admitted Batch)****Model question paper****Max Time: 3 Hr****Max Marks: 75****SECTION-A****Answer all questions.****5X2=10M**

1. Totipotency
2. UV sterilization
3. callus
4. Synthetic seeds
5. Cryopreservation

**SECTION-B****Answer any three of the following and draw a labelled diagram wherever necessary.****3X5=15 M**

6. Write about types of cultures ?
7. Write any two aseptic conditions.
8. What are somaclonal variations? write briefly
9. Significance of pathogen indexing.
10. BT- Cotton.

**SECTION -C****Answer all questions. Draw a labelled diagram wherever necessary****5X10=50M**

- 11 a) Write about scope and significance of plant tissue culture.

**(Or)**

- b) Write an essay on Infrastructure for? a tissue culture Laboratory.

- 12 a) What is nutrient media? Explain

**(Or)**

b) What is Fumigation? Write its importance in tissue cultivation

13 a) What is explant? give some examples

(Or)

b) Write an essay on callus culture

14 a) Expand PGR and write its role.

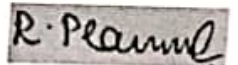
(Or)

b) What are the advantages and applications of pathogen indexing.

15. a) Which methods are followed for germplasm conservation? Explain

(Or)

b) Write an essay on Transgenic plants.



(Dr.R.Prameela)  
Chairperson, BOS  
UG Botany, AU

**B.Sc (CBCS) DEGREE EXAMINATION**

**FIFTH SEMESTER**

**BOTANY**

**PAPER-6 C (Plant Tissue Culture) (Skill Enhancement Course (Elective))**

**(With effect from 2020-21 Admitted Batch)**

**Model question paper**

**Max Time: 3 Hr**

**Max Marks: 75**

**SECTION-A**

**Answer all questions.**

**5X2=10M**

1. Totipotency
2. UV sterilization
3. callus
4. Synthetic seeds
5. Cryopreservation

**SECTION-B**

**Answer any three of the following and draw a labelled diagram wherever necessary.**

**3X5=15 M**

6. Write about types of cultures ?
7. Write any two aseptic conditions.
8. What are somaclonal variations? write briefly
9. Significance of pathogen indexing.
10. BT- Cotton.

**SECTION –C**

**Answer all questions. Draw a labelled diagram wherever necessary**

**5X10=50M**

- 11 a) Write about scope and significance of plant tissue culture.

**(Or)**

- b) Write an essay on Infrastructure for? a tissue culture Laboratory.

- 12 a) What is nutrient media? Explain

**(Or)**





b) What is Fumigation? Write its importance in tissue cultivation

13 a) What is explant? give some examples

(Or)

b) Write an essay on callus culture

14 a) Expand PGR and write its role.

(Or)

b) What are the advantages and applications of pathogen indexing.

15. a) Which methods are followed for germplasm conservation? Explain

(Or)

b) Write an essay on Transgenic plants.

R. Prameela

(Dr.R.Prameela)  
Chairperson, E  
UG Botany,

**B.Sc (CBCS) DEGREE EXAMINATION**

**FIFTH SEMESTER**

**BOTANY**

**PAPER-7 C (Mushroom Cultivation) (Skill Enhancement Course (Elective))**

**(With effect from 2020-21 Admitted Batch)**

**Model question paper**

**Max Time: 3 Hr**

**Max Marks: 75 M**

**SECTION-A**

**Answer all questions.**

**5X2=10M**

1. To which group mushrooms belong?
2. Bulk chamber
3. Spawn
4. Casing
5. Freezing

**SECTION -B**

**Answer any three of the following and draw a labelled diagram wherever necessary.**

**3X5=15M**

6. What are the differences between edible and poisonous mushrooms?
7. What is Composting ?
8. Write about storage of spawn
9. Milky mushrooms
10. Write about quality assurance of Mushrooms.

**SECTION –C**

**Answer all questions. Draw a labelled diagram wherever necessary.**

**5X10=50M**

- 11 a) Write an essay on medicinal mushrooms in India.

**(Or)**

- b) Write about morphological features of '*Agaricus Bisporus*' and '*Calocybe indica*'.



12 a) What are the Basic facilities for growing Mushrooms?

(Or)

b) Write brief essay on long method of Composting

13 a) What are the different types of casing mixtures? Explain.

(Or)

b) Which facilities required for spawn preparation?

14 a) Write about problems faced in mushroom cultivation

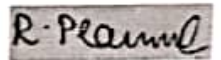
(Or)

b) Write an essay on cultivation of paddy straw mushroom

15 a) Write an essay on preservation of mushrooms

(Or)

b) Write about the management of Waste disposal of mushrooms.



(Dr.R.Prameela)  
Chairperson,BOS  
UG Botany, AU

**B.Sc (CBCS) DEGREE EXAMINATION**

**FIFTH SEMESTER**

**BOTANY**

**PAPER-7 C (Mushroom Cultivation) (Skill Enhancement Course (Elective)**

**(With effect from 2020-21 Admitted Batch)**

**Model question paper**

**Max Time: 3 Hr**

**Max Marks: 75 M**

**SECTION-A**

**Answer all questions.**

**5X2=10M**

1. To which group mushrooms belong?
2. Bulk chamber
3. Spawn
4. Casing
5. Freezing

**SECTION -B**

**Answer any three of the following and draw a labelled diagram wherever necessary.**

**3X5=15M**

6. What are the differences between edible and poisonous mushrooms?
7. What is Composting ?
8. Write about storage of spawn
9. Milky mushrooms
10. Write about quality assurance of Mushrooms.

**SECTION –C**

**Answer all questions. Draw a labelled diagram wherever necessary.**

**5X10=50M**

- 11 a) Write an essay on medicinal mushrooms in India.

**(Or)**

- b) Write about morphological features of 'Agaricus Bisporus' and 'Calocybe indica'.





12 a) What are the Basic facilities for growing Mushrooms?

(Or)

b) Write brief essay on long method of Composting

13 a) What are the different types of casing mixtures? Explain.

(Or)

b) Which facilities required for spawn preparation?

14 a) Write about problems faced in mushroom cultivation

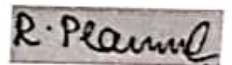
(Or)

b) Write an essay on cultivation of paddy straw mushroom

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Model  
Question Paper

B.A

V Semester

Journalism &  
Mass Communication

Andhra University  
Journalism and mass communication

BA

Fifth semester

Journalism  
Paper I- Radio Communication

Time: 3 hrs.

Marks: 75

Answer all questions. All questions carry equal marks.

1. Discuss radio as a channel of mass communication

OR

What are the important elements of radio script?

2. Present a sketch of radio studio

OR

What are the dubbing techniques?

3. What is 'microphone' talent?

OR

Discuss about field recording and its problems

4. Explain the functions of station director

OR


What is the nature of duty of TREX?

5. Discuss radio's role in development?

OR

Write short notes on any two of the following.

- a) BBC
- b) Broadcast code
- c) Outdoor broadcast(OB)
- d) Local radio

  
Head of the Department  
Journalism & Mass Communication  
Andhra University  
VISAKHAPATNAM-530 003

# Journalism & Mass Communication

## Model question paper -

Andhra University

BA (Journalism and mass communication)

(Admitted batch 2020-2021)

Fifth semester

Paper II- Human Rights and media

Time: 3 hrs.

Marks: 75

Answer all questions. All questions carry equal marks.

1. Explain the importance of the study of human rights.

OR

Trace the origin of human rights concept in the world.

2. What is international bill of human rights?

OR

Examine the components of civil and human rights.

3. Elaborate the concepts of apartheid and genocide.

OR

Can death penalty be abolished?

4. How can NHRC help the disabled?

OR

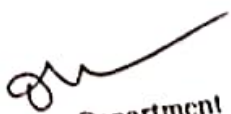
Examine the steps to eradicate child labour in India.

5. How can newspapers cover human rights issues?

OR

Write short notes on any two of the following.

- a) SHRC
- b) Racial discrimination
- c) Migrant workers
- d) Slavery

  
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Journalism & Mass Communication  
Andhra University  
VISAKHAPATNAM-531 003