INTERNAL ASSIGNMENT QUESTIONS
P.G. Diploma in Bio Informatics

ANNUAL EXAMINATIONS
2024

PROF. G. RAM REDDY CENTRE FOR DISTANCE EDUCATION
(RECOGNISED BY THE DISTANCE EDUCATION BUREAU, UGC, NEW DELHI)
OSMANIA UNIVERSITY
(A University with Potential for Excellence and Re-Accredited by NAAC with "A" + Grade)

DIRECTOR
Prof. G.B. Reddy
Hyderabad – 7 Telangana State

Dear Students,

Every student of PG Diploma in Bio Informatics semester I has to write and submit **Assignment** for each paper compulsorily. Each assignment carries **30 marks.** The marks awarded to the students will be forwarded to the Examination Branch, OU for inclusion in the marks memo. If the student fail to submit Internal Assignments before the stipulated date, the internal marks will not be added in the final marks memo under any circumstances. The assignments will not be accepted after the stipulated date. **Candidates should submit assignments only in the academic year in which the examination fee is paid for the examination for the first time.**

Candidates are required to submit the Exam fee receipt along with the assignment answers scripts at the concerned counter on or before **27.07.2024** and obtain proper submission receipt.

ASSIGNMENT WITHOUT EXAMINATION FEE PAYMENT RECEIPT (ONLINE) WILL NOT BE ACCEPTED

Assignments on Printed / Photocopy / Typed will not be accepted and will not be valued at any cost. Only

HAND WRITTEN ASSIGNMENTS will be accepted and valued.

Methodology for writing the Assignments (Instructions) :

1.   First read the subject matter in the course material that is supplied to you.
2.   If possible read the subject matter in the books suggested for further reading.
3.   You are welcome to use the PGRRCDE Library on all working days for collecting information on the topic of your assignments. (10.30 am to 5.00 pm).
4.   Give a final reading to the answer you have written and see whether you can delete unimportant or repetitive words.
5.   The cover page of the each theory assignments must have information as given in FORMAT below.

FORMAT

1.   NAME OF THE STUDENT   :

2.   ENROLLMENT NUMBER   :

3.   NAME OF THE COURSE   :

4.   SEMESTER (I, II, III & IV)   :

5.   TITLE OF THE PAPER   :

6.   DATE OF SUBMISSION   :

6.   Write the above said details clearly on every subject assignments paper, otherwise your paper will not be valued.
7.   Tag all the assignments paper wise and submit them in the concerned counter.
8.   Submit the assignments on or before **27.07.2024** at the concerned counter at PGRRCDE, OU on any working day and obtain receipt.

DIRECTOR

INTERNAL ASSESSMENT

PAPER – I : BICOMPUTING AND BIOSTATISTICS

ASSIGNMENT - I

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. Draw a block diagram of a computer and explain its functions.

2. What is Operating System ? What are its Functions ?

3. Explain about any 5 DOS Internal Commands.

4. Explain functions in C-Language. Write any 5 Storing Functions.

5. Explain about Normal Distribution.

ASSIGNMENT - II

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. What is measure of Central Tendency ? What are its measures ?

2. Explain about any 5 DOS External Commands.

3. Write about file handling in C-language.

4. Write a C-Program to find the number of purines and pyramidines.

5. The survival rate of a species of birds during a harsh winter is 0.7. If the population of 20 birds faces this winter, what is the probability that 15 birds will survive using Binomial Theorem.

INTERNAL ASSESSMENT

PAPER – II : MOLECULAR BIOLOYGY & GENETICS ENGINEERING

ASSIGNMENT - I

UNIT – I : Answer the following questions (each question carries three marks)   **5x3=15**

1. Describe the model of DNA structure.

2. Describe the mode of DNA Replication in Eukaryote.

3. Explain the Translational Machinery in Eukaryotes.

4. Write a brief note on Ribosomes.

5. Write a note on Post-translational modifications.

ASSIGNMENT - II

UNIT – I : Answer the following questions (each question carries three marks)   **5x3=15**

1. Explain the mode of Gene Regulation of Expression at Transcriptional level.

2. Explain the role of DNA Methylation in Gene Expression Regulation.

3. Write a note on DNA modifying enzymes.

4. Explain in detail the process of Gene Cloning.

5. Discuss in detail the applications of Recombinant DNA Technology.

INTERNAL ASSESSMENT

PAPER – III : BIOLOGICAL DATABASES AND ALOGRITHMS

ASSIGNMENT - I

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. What are the data formats in Biological Data ?

2. Compare and Contrast Secondary and Specialized Databases.

3. What is DDBT and EMBL.

4. How is Blosum Score calculated.

5. Give the limitations of Exhaustive Alogrithm.

ASSIGNMENT - II

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. Explain the use of NCBI for Bioinformatics studies.

2. Describe the KEGG Pathway.

3. Give the working steps of Search Algorithm for FASTA.

4. Write the steps of Smith-Waterman Algorithm.

5. Give the features of PROSITE.

INTERNAL ASSESSMENT

PAPER – IV : BIO PYTHON

ASSIGNMENT - I

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. Explain built in data types in Python.

2. Write about if-elif-else statement with example.

3. Explain in detail about functions in Python.

4. Explain methods to process list.

5. Explain about Handling Exceptions in Python?

ASSIGNMENT - II

UNIT – I : Answer the following questions (each question carries three marks)   5x3=15

1. What are the Operators in Python ?

2. Explain about loops and Nested Loops in Python.

3. What are Tuples ? Explain Operations on Tuples.

4. Write in detail about file handling in Python.

5. Explain about command line arguments in Python.