



PA-003-1016012

Seat No. _____

**Third Year B. Sc. (Sem. VI) (CBCS) (W. E. F. 2016)
Examination**

March / April - 2020

**MB - 602 : Analytical Techniques And Bioinformatics
(New Course)**

Faculty Code : 003

Subject Code : 1016012

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 (A) Answer the following questions : 4
- (1) What is GLP?
 - (2) Give lamberts law
 - (3) Define quality management
 - (4) Define IR spectroscopy
- (B) Answer in brief : (Any One) 2
- (1) What is Mass Spectroscopy?
 - (2) Define radioactivity and radioisotope
- (C) Answer in detail : (Any One) 3
- (1) Give disadvantages of IR spectroscopy
 - (2) Explain Monochromator
- (D) Write a note : (Any One) 5
- (1) Explain in detail NMR
 - (2) Explain Atomic absorption spectroscopy.

- 2** (A) Answer the following questions : **4**
- (1) Define chromatogram.
 - (2) What is R_f Value?
 - (3) Give one disadvantages of TLC.
 - (4) What is HPLC ?
- (B) Answer in brief : (Any **One**) **2**
- (1) Explain Partition coefficient.
 - (2) What is difference between GSC and GLC ?
- (C) Answer in detail : (Any **One**) **3**
- (1) Write down the principle of affinity chromatography.
 - (2) Write principle of ion exchange chromatography.
- (D) Write a note : (Any **One**) **5**
- (1) Explain Size exclusion chromatography.
 - (2) Explain Paper Chromatography.
- 3** (A) Answer the following questions : **4**
- (1) What is Electrophoretic mobility?
 - (2) Define autoradiography.
 - (3) What is capillary electrophoresis?
 - (4) Full form of SDS-PAGE.
- (B) Answer in brief : (Any **One**) **2**
- (1) Write about optical biosensor.
 - (2) Write about flow cytometry.

- (C) Answer in detail : (Any **One**) **3**
- (1) Write about Native gel electrophoresis.
 - (2) Write about PFGE.
- (D) Write a note : (Any **One**) **5**
- (1) Explain in details about agarose gel electrophoresis.
 - (2) Give details about SDS-PAGE.
- 4 (A) Answer the following questions : **4**
- (1) What is Dot Blot technique?
 - (2) What is SNP?
 - (3) Full form of RFLP and VNTR.
 - (4) What is Primer ?
- (B) Answer in brief : (Any **One**) **2**
- (1) Give overview of chemical synthesis of DNA.
 - (2) What is difference between southern blotting and northern blotting ?
- (C) Answer in detail : (Any **One**) **3**
- (1) Explain FISH.
 - (2) Explain Western blotting.
- (D) Write a note : (Any **One**) **5**
- (1) Explain PCR
 - (2) Explain about Maxam and Gilbert procedure for DNA sequencing.

- 5** (A) Answer the following questions : **4**
- (1) Define Bioinformatics.
 - (2) Define Proteomics.
 - (3) Full form of DBMS.
 - (4) What is secondary database?
- (B) Answer in brief : (Any **One**) **2**
- (1) Write about gene bank.
 - (2) Explain sequence retrieval system.
- (C) Answer in detail : (Any **One**) **3**
- (1) Write about SWISS-PROT.
 - (2) Write about FASTA.
- (D) Write a note : (Any **One**) **5**
- (1) Explain in detail about Phylogenetic analysis.
 - (2) Write about Biological databases.
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