Code No: 07A42302 **R07** **Set No. 2**

II B.Tech II Semester Examinations,APRIL 2011
INSTRUMENTAL METHODS OF ANALYSIS
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain in detail about the shielding and deshielding zones existence in High Resolution NMR. [16]
2. Explain in detail about the column calibration in Gel-Permeation Chromatography. [16]
3. Explain in detail about Dispersive components of Infrared Spectrometer. [16]
4. Write down the applications of:
   (a) Flame emission spectroscopy
   (b) Atomic absorption spectroscopy
   (c) Atomic emission spectroscopy. [6+6+4]
5. (a) How different spectrophotometers are prcised?
   (b) Discuss in detail about errors in pH meters. [8+8]
6. Explain:
   (a) Equilibrium density gradient ultra centrifugation
   (b) Zonal ultra centrifugation. [8+8]
7. Write short notes on:
   (a) Focal length
   (b) Focal point
   (c) Resolution
   (d) Refraction index
   (e) Working distance of objective
   (f) SEM principle.
   (g) TEM principle. [16]
8. Explain the Diffraction phenomena with the aid of the reciprocal lattice construction for powders. [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A42302 **R07** **Set No. 4**

II B.Tech II Semester Examinations,APRIL 2011
INSTRUMENTAL METHODS OF ANALYSIS
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Write down the applications of:
   (a) Flame emission spectroscopy
   (b) Atomic absorption spectroscopy
   (c) Atomic emission spectroscopy. [6+6+4]
2. Explain in detail about the shielding and deshielding zones existence in High Resolution NMR. [16]
3. Write short notes on:
   (a) Focal length
   (b) Focal point
   (c) Resolution
   (d) Refraction index
   (e) Working distance of objective
   (f) SEM principle.
   (g) TEM principle. [16]
4. Explain in detail about the column calibration in Gel-Permeation Chromatography. [16]
5. Explain:
   (a) Equilibrium density gradient ultra centrifugation
   (b) Zonal ultra centrifugation. [8+8]
6. Explain in detail about Dispersive components of Infrared Spectrometer. [16]
7. (a) How different spectrophotometers are prcised?
   (b) Discuss in detail about errors in pH meters. [8+8]
8. Explain the Diffraction phenomena with the aid of the reciprocal lattice construction for powders. [16]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A42302 **R07** **Set No. 1**

II B.Tech II Semester Examinations,APRIL 2011
INSTRUMENTAL METHODS OF ANALYSIS
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain the Diffraction phenomena with the aid of the reciprocal lattice construction for powders. [16]
2. (a) How different spectrophotometers are prcised?
   (b) Discuss in detail about errors in pH meters. [8+8]
3. Explain:
   (a) Equilibrium density gradient ultra centrifugation
   (b) Zonal ultra centrifugation. [8+8]
4. Explain in detail about the shielding and deshielding zones existence in High Resolution NMR. [16]
5. Explain in detail about the column calibration in Gel-Permeation Chromatography. [16]
6. Explain in detail about Dispersive components of Infrared Spectrometer. [16]
7. Write short notes on:
   (a) Focal length
   (b) Focal point
   (c) Resolution
   (d) Refraction index
   (e) Working distance of objective
   (f) SEM principle.
   (g) TEM principle. [16]
8. Write down the applications of:
   (a) Flame emission spectroscopy
   (b) Atomic absorption spectroscopy
   (c) Atomic emission spectroscopy. [6+6+4]

⋆ ⋆ ⋆ ⋆ ⋆

Code No: 07A42302 **R07** **Set No. 3**

II B.Tech II Semester Examinations,APRIL 2011
INSTRUMENTAL METHODS OF ANALYSIS
Bio-Technology

Time: 3 hours **Max Marks: 80**

Answer any FIVE Questions
All Questions carry equal marks

⋆ ⋆ ⋆ ⋆ ⋆

1. Explain in detail about the shielding and deshielding zones existence in High Resolution NMR. [16]
2. (a) How different spectrophotometers are prcised?
   (b) Discuss in detail about errors in pH meters. [8+8]
3. Explain in detail about the column calibration in Gel-Permeation Chromatography. [16]
4. Explain in detail about Dispersive components of Infrared Spectrometer. [16]
5. Explain:
   (a) Equilibrium density gradient ultra centrifugation
   (b) Zonal ultra centrifugation. [8+8]
6. Write down the applications of:
   (a) Flame emission spectroscopy
   (b) Atomic absorption spectroscopy
   (c) Atomic emission spectroscopy. [6+6+4]
7. Write short notes on:
   (a) Focal length
   (b) Focal point
   (c) Resolution
   (d) Refraction index
   (e) Working distance of objective
   (f) SEM principle.
   (g) TEM principle. [16]
8. Explain the Diffraction phenomena with the aid of the reciprocal lattice construction for powders. [16]

⋆ ⋆ ⋆ ⋆ ⋆