



K18U 0629



Reg. No. : .....

Name : .....

**II Semester B.Sc. Degree (C.C.S.S. – Supple.) Examination, May 2018**  
**CORE COURSE IN BOTANY/PLANT SCIENCE**  
**2B02 BOT / 2B01 PLS : General Informatics and Instrumentation**  
**(2012 – 13 Admns.)**

Time : 3 Hours

Weightage : 30

**Instruction : Draw diagrams wherever necessary.**

**SECTION – A**

Answer **all** questions in bunches of **four**. Each bunch carries a weightage of **1**.

1. Choose the correct answer.

- i) 1 KB is equal to \_\_\_\_\_ byte.  
a) 1                      b) 1024                      c) 1042                      d) 2024
- ii) Flight simulator is an example of  
a) Virtual reality                      b) Artificial intelligence  
c) Biocomputer                      d) Fastscan
- iii) Living cells can be observed and studied using  
a) Phase contrast microscope                      b) Fluorescence microscope  
c) Scanning electron microscope                      d) Transmission electron microscope
- iv) Which among the following is a mounting agent ?  
a) Canada balsam                      b) Formalin  
c) Ethyl alcohol                      d) Acetocarmine

2. State **true** or **false** :

- i) Eye piece is otherwise known as ocular lens.
- ii) In electrophoresis DNA will migrate towards anode.
- iii) Centrifuge works based on the principle of Beer Lambert's law.
- iv) Microtome is a cutting device.

3. Fill in the blanks :

- i) INFLIBNET was initiated by \_\_\_\_\_
- ii) Non toxic dyes used to stain living cells are called as \_\_\_\_\_
- iii) Sedimentation coefficients of biological molecules are expressed in \_\_\_\_\_
- iv) Aqueous system capable of resisting any change in the pH of a solution when excess of acid or bases are added is called as \_\_\_\_\_



4. Match the following :

**A**

**B**

**C**

- |                                       |                      |                                  |
|---------------------------------------|----------------------|----------------------------------|
| i) Scanning electron microscope       | Accessory instrument | Differential absorption of light |
| ii) Compound microscope               | Transmitted electron | Outline sketches                 |
| iii) Transmission electron microscope | Scattered electron   | Dark and light areas             |
| iv) Camera lucida                     | Transmitted light    | Surface view                     |

5. Answer in **one** word or in **one** sentence :

- NICNET
- Whole mounts
- PAGE
- Digital divide.

**SECTION – B**

Answer **any four**. Differentiate the following. **Each** question carries a weightage of 1.

- Smear and squash preparation.
- Rotary microtome and Sledge microtome.
- SEM and TEM.
- Cyber threats and cyber addictions.
- Input devices and output devices.
- Paper chromatography and thin layer chromatography.

**SECTION – C**

Answer **any five**. Short answer questions; **each** question carries a weightage of 1.

- What is Information overload ?
- Write the potential hazards of social networking sites.
- Name any two fixing agents.
- Write the use of Canada balsam.



- What is the importance of Cyber law ?
- Name any two operating systems.
- Write the principle of Fluorescence microscopy.

**SECTION – D**

Answer **any six**. Short answer questions; **each** question carries a weightage of 2.

- Give an account of the role of IT in teaching.
- Explain with diagram the working principles and applications of Spectrophotometer.
- Elaborate the salient features of computer.
- What is meant by Numerical aperture of an optical instrument ? Write the formula to find out Numerical Aperture.
- Briefly describe the sterilization instruments used in cell culture.
- Write briefly on the working of pH meter.
- Write the applications of Artificial Intelligence.
- Mention any four health issues related to IT.

**SECTION – E**

Answer **any one**. Essay type questions. **Each** question carries a weightage of 4.

- Give a detailed note on the application of IT in medicine, defense, weather forecasting and resource management.
- Explain any three separation techniques that can be used in Biochemical studies.
- Explain the following with an example :
  - Killing and fixing agents
  - Double staining
  - Mounting agents.