



বিদ্যাসাগর বিশ্ববিদ্যালয়

VIDYASAGAR UNIVERSITY

M.Sc. Examinations 2020

Semester IV

**Subject: BIO MEDICAL LABORATORY SCIENCE &
MANAGEMENT**

Paper: BML - 401

(Theory)

Full Marks:40

Time: 2HRS

Candidates are required to give their answers in their own words as far as practicable.

Answer any one of the following questions (within 250 words)

Paper: BML 401: Advance Techniques in Laboratory Science

1. Discuss different types of leads used in EEG. What is montage? Diagrammatically represent the placement of EEG leads with the full name of placement area on scalp.
2. What is polysomnography? Discuss the electrical wave pattern of brain during arousal and different stages of sleep.
3. Discuss the role of using SDS, TEMED and beta marcaptoethanol in SDS-PAGE? What do you mean by sieving effect of gel?
4. Discuss the working principle of Western blot technique? Why is blocking essential during Western blot.
5. Who discovered chromatography? Differentiate normal phase and reverse phase HPLC. Discuss the technique of paper chromatography with its principle.
6. What is Einthoven's triangle? Write the physiological basis of different ECG waves. What are limb leads and chest leads of ECG?
7. What is pluripotent stem cell? What are the three unique properties of stem cells? Discuss briefly about stem cell therapy.
8. Write the principle of operation of auto-analyzer? What are the components of auto analyzer? Write the applications of auto analyzer in biomedical sciences.



9. Discuss briefly about density gradient centrifugation. What are the different types of rotor used in centrifuge? Write the applications of centrifuge.
10. What is the role of multiplex PCR in molecular diagnostics? Differentiate between end-point PCR and real-time PCR?
11. Write about the essential components of PCR? What is the purpose of integration of dideoxy capillary sequencing facility in modern day clinical settings?
12. Discuss about the applications of Southern blotting technique. Briefly describe a point-of-care non-sputum test to identify tuberculosis.

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