

[This question paper contains 2 printed pages.]

Sr. No. of Question Paper : 2092

GC-3

Your Roll No.....

Unique Paper Code : 32583902

Name of the Paper : Medical Laboratory Diagnostics

Name of the Course : B.Sc. (Hons.) Biomedical Science (CBCS) – Skill Enhancement Course

Semester : III

Duration : 3 Hours

Maximum Marks : 50

Instructions for Candidates

1. Write your Roll No. on the top immediately on the receipt of this question paper.
2. Attempt **Five** questions in all.
3. Question No. 1 is compulsory.
4. Give illustrations and examples wherever required. (Subparts of the questions should be attempted together.)

1. (a) Define each of the following terms : (4×1=4)

- (i) Subculturing
- (ii) Sensitivity of a reaction
- (iii) Trisomy of chromosome
- (iv) Counterstain

- (b) State whether true or false. Justify. (2×4=8)

- (i) M9 is an undefined media.
- (ii) HBGAc is a measurement of diabetic condition.
- (iii) Chemical waste could be discarded in normal garbage bin.
- (iv) AB blood group is considered universal donor.

- (c) Differentiate between the following (**any four**) : (3×2=6)

- (i) Physical and Chemical Methods of Sterilization.

P.T.O.

(ii) Class II and Class III Biosafety Cabinets

(iii) Direct and Indirect ELISA

2. (a) Give one example each of : (1×4=4)
- (i) Acidic Stain
 - (ii) Rod shaped bacteria
 - (iii) Pathogenic protozoan
 - (iv) Aneuploidy
- (b) What precautions are taken while screening blood for transfusion ? (4)
3. Give role / significance of the following : (4×2=8)
- (i) Antigen – Antibody interaction in diagnosis of diseases
 - (ii) Gram Staining
 - (iii) Platelet transfusion
 - (iv) Rhesus factor
4. (a) TSH levels are elevated in hypothyroidism. Explain why ? (4)
- (b) On what principle is a PCR reaction based ? Draw a simplified scheme of a PCR cycle showing denaturation, annealing and extension. (4)
5. (a) Give the principle/Working of the following : (2×2=4)
- (i) Laminar Flow
 - (ii) Agarose Gel Electrophoresis
- (b) What are Good Laboratory Practices ? Discuss any four. (4)
6. Write short notes on : (3,2,3)
- (i) A Genetic Disorder
 - (ii) Sandwich ELISA
 - (iii) Male Infertility