

001/19

**The West Bengal University of Health Sciences**  
**MBBS 1<sup>st</sup> Professional Examination, July 2019**

Subject: Biochemistry  
Paper : II

Full Marks : 50  
Time : 2 ½ hours

*Attempt all questions. The figures in the margin indicate full marks.*

**Group A**

1. a) Write with the help of a diagram, describe the stage of initiation and elongation of translation process in *E. coli*. State the mechanism of Streptomycin and Puromycin in the inhibition of translation process in prokaryotes. 9+3

or

- b) Write down with the help of a diagram stage of initiation and elongation of replication process. Differentiate between DNA polymerase I and DNA Polymerase III. 3+9

**Group B**

2. Answer *any two* of the following:
- a) Write down the non-oxidative process of HMP Shunt Pathway and its importance. 6+1
- b) Write down the  $\beta$ -oxidation of Palmitic acid and mention problem that arise out of medium chain Acyl CoA Dehydrogenase deficiency. 6+1
- c) Write down the synthesis of bilirubin. Explain the term direct bilirubin, indirect bilirubin and Van der Berg reagent. Mention the changes that take place in serum bilirubin (direct) and bilirubin (indirect) level in haemolytic and obstructive jaundice. 4+2+1

**Group C**

3. Write short note on *any four*: 4x3
- a) Cyt P450.
- b) Point mutation.
- c) Pyruvate dehydrogenase.
- d) Alkaptonuria.
- e) Genome of retrovirus.

**Group D**

4. Explain the following statement: 4x3
- a) Hartnup disease gives rise to Pellagra like syndrome.
- b) Vitamin K deficiency is responsible for haemorrhagic diseases of newborn.
- c) HDL participates in reverse cholesterol transport.
- d) RNA editing mechanism is responsible for APO B48 synthesis in intestinal cells.