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01103 A

First M.B.B.S. Examination, Summer 2018
BIOCHEMISTRY – I

Total Duration : Section A + B + C = 2½ Hours Section B & C Marks : 40

SECTION – B & SECTION – C

Instructions : 1) *Use **blue/black** ball point pen only.*
2) ***Do not** write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) ***All** questions are **compulsory**.*
4) *The number to the **right** indicates **full** marks.*
5) *Draw diagrams **wherever** necessary.*
6) *Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.*
7) *Use a common answerbook for Section B & C.*

SECTION – B
(SAQ) **(24 Marks)**

2. Short answer question (**any six** out of seven) : **(6×4=24)**

a) Describe briefly the process of gene expression regulation involving Lac-operon.

b) What is Protein Energy Malnutrition ? Write briefly about Kwashiorkor.

c) A mentally challenged child attending Psychiatry OPD has a mousy odor in urine. Tested with ferric chloride has shown positive for phenyl-ketone derivatives.
   i) What is the condition named ?
   ii) What is the biochemical basis ?
   iii) What would be the rational treatment ?

d) Give brief account of transamination reactions.

e) Describe briefly the biochemical basis of sickle cell anaemia

f) A 60 year old person complained of pain and swelling in the toe and knee joints. Laboratory test for uric acid showed a serum level of 20 mg/dl
   i) What is the clinical condition ?
   ii) What is the bio chemical basis ?
   iii) What would be the rational treatment ?

g) What are iso-enzymes ? Illustrate with suitable examples the diagnostic importance of them.

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SECTION – C
(LAQ)

(16 Marks)

(2×8=16)

3. Long answer question (**any two** out of three) :

   a) What is ribosome ? Describe its role in translation. Give suitable examples of antibiotics which act on ribosome.

   b) Describe synthesis of vitamin D in the body and its role in calcium homeostasis.

   c) What are enzymes ? How are they classified as per IUB norms ? Describe the effect of substrate concentration, temperature and pH on enzyme activity.

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