

BIOCHEMISTRY
GMERS MEDICAL COLLEGE, VALSAD
First Year M.B.B.S. Preliminary Examination 2018
Paper-II

Time: 2 hour and 30 minutes

Marks: 50

Instruction:

- 1) Write each section in separate answer books.
- 2) Draw figures wherever possible

SECTION-1

1. Short note : (2 out of 3)

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- 1) Name the active form of Vitamin D, how it is formed in the body ? Explain its metabolic functions, deficiency manifestation and RDA
- 2) DNA Replication with inhibitor
- 3) Formation of various biologically important products from tyrosine. Why administered dopamine is not effective in the treatment of parkinsonism?

2. Describe in brief : (4 out of 6)

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- 1) PCR (polymerase chain reaction)
- 2) Carcinogens and tumor markers
- 3) Regulation of Gene expression
- 4) Restriction fragment length polymorphisms (RFLP)
- 5) Hyperuricemia and gout
- 6) Clinical aspects of nucleotides

3. Answer in one or two lines: (5 out of 6)

5

- 1) What is acute phase protein? Give two examples.
- 2) Therapeutic uses of enzyme
- 3) Characteristic of pellagra.
- 4) Function of Restriction endonuclease
- 5) What is post translation modification?
- 6) Define specific dynamic action with different food

SECTION-II

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4. Case with 5 question

A 41 years –old male complaining about hyper pigmented macules & papules all over the skin and severe oral pain and difficulty of mouth opening. During medical history assessment, he reported the removal of two skin lesion nine years before; one of them on facial skin(basal cell carcinoma) and another one at the chest skin(lentigo simplex) due to sensitivity of UV rays. The patient had consanguineous parents. He was instructed to keep a rigorous photo protection of the body and perform proper hygiene of the mouth.

- 1) What is the diagnosis?
- 2) How UV radiation causes damage to DNA?
- 3) What is difference between DNA damage and mutation?
- 4) Some amount of UV light is good for health in normal person. Explain.
- 5) What is autosomal genetic disorder?

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5. Answer in few line: (5 out of 7)

- 1) Telomerase is essential for dividing cell
- 2) Glutathione & NADPH play important role for maintain RBC membrane
- 3) Vitamin C is involved in post-translational modification of collagen
- 4) Tryptophan rich diet causes drowsiness
- 5) CK-MB is better diagnostic index of MI
- 6) Biotin is known as anti egg white injury factor
- 7) Proline and glycine are frequently found in beta-bends of secondary Structure of protein

6. Answer in one or two lines: (5 out of 6)

5

- 1) B-carotene and its antioxidant role
- 2) What is allosteric regulation
- 3) What is Lesch-Nyhan syndrome?
- 4) Function of 2-3 BPG
- 5) Define detoxification
- 6) What is the cause for sickle cell anemia