Annual Paper, 2014
2nd Year MCQs
One best Response (10 Marks)

Instructions:
• Encircle on best answer from the options given below Question Carry 01 Marks.

1. A 56 year old diabetic with end stage renal disease had a kidney transplant from his son. His nephrologist is concerned with the possibility of transplant rejection and puts the patient on mycophenolic acid that inhibits which of the following enzyme in nucleotide metabolism?
   a) PRPP synthetase
   b) IMP dehydrogenase
c) Adeno succinate synthetase
d) Ribonucleotide reductase
e) Adenyl succinate

2. Mutation that creates Methylation / Depurination is repaired by:
   a) BER
   b) NER
c) DSBR
d) MMR
e) PPR

3. Which of the following compound is a positive Allosteric modifier of the enzyme pyruvate carboxylase?
   a) ATP
   b) Acetyl-CoA
c) Biotin
d) Fructose 6 Phosphate
e) Oxaloacetate

4. Which of the following enzymes in glycolytic pathway is inhibited by fluoride?
   a) Aldolase
   b) Enolase
c) Glyceraldehyde-3-Phosphate dehydrogenase
d) Phosphoglycerate Kinase
e) Pyruvate kinase

5. The form in which mostly dietary lipids are packaged and exported from the intestinal mucosal cells is as;
   a) Free fatty acids
   b) Mixed micelles
c) Free triglycerol
d) 2- monoacyl glycerol
e) Chylomicrons
6. A teenager concerned about his weight attempts to maintain a fat-free diet for a period of several weeks. If his ability to synthesize various lipids were examined, he would be found to be most deficient in his ability to synthesize:
   a) Triacylglycerol
   b) Phospholipid
   c) Cholesterol
   d) Sphingolipids
   e) Prostaglandins

7. The terminal electron acceptor during mitochondrial respiration:
   a) $H_2O$
   b) $NAD^+$
   c) FAD
   d) ATP
   e) $O_2$

8. Which of the following is a common nitrogen acceptor for all reactions involving transaminases?
   a) Alpha ketoglutarate
   b) Oxalacetate
   c) Pyruvate
   d) Acetoacetate
   e) Fumarate

9. A 60-year-old female presents with osteoporosis due to calcium deficiency. Which of the following hormone should be given as treatment to this patient?
   a) Oxytocin
   b) Parathyroid hormone
   c) Prolactin
   d) Calcitonin
   e) Thyroid hormone

10. Which of the following condition is consistent with low serum thyroid-stimulating hormone and elevated serum thyroxin?
    a) Graves disease
    b) Pituitary hyperthyroidism
    c) Hypothalamic hyperthyroidism
    d) Iodine deficiency
    e) Secondary hyperthyroidism
### Single True and False (05 Marks)

**Instructions:**
- Encircle “T” if the statement is TRUE
- Encircle “F” if the statement is FALSE
- Negative Marking – 0.25 per incorrect answer

<table>
<thead>
<tr>
<th>Qs</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Allopurinol that effectively treats gout has no effect on neurological symptoms of Lysch-Nyhan patients because of decrease denovo purine synthesis.</td>
<td>T F</td>
</tr>
<tr>
<td>2. For initiation, the initiator tRNA carries lysine.</td>
<td>T F</td>
</tr>
<tr>
<td>3. Oxaloacetate is allosteric modifier of the enzyme pyruvate carboxylase.</td>
<td>T F</td>
</tr>
<tr>
<td>4. Von Gierke’s disease is characterized by deficiency of glucokinase.</td>
<td>T F</td>
</tr>
<tr>
<td>5. UTP is essential for converting glucose to glycogen in liver.</td>
<td>T F</td>
</tr>
<tr>
<td>6. In Tangier disease ATP binding Cassette Protein is most important causative factor.</td>
<td>T F</td>
</tr>
<tr>
<td>7. ETC is located in Inner membrane of the mitochondria.</td>
<td>T F</td>
</tr>
<tr>
<td>8. Insulin after binding to insulin receptors activate cAMP.</td>
<td>T F</td>
</tr>
<tr>
<td>9. Glutamine synthesis is first line of defense in brain in condition of hyperammonemia.</td>
<td>T F</td>
</tr>
<tr>
<td>10. Acromegaly termed for increased production of growth hormone in humans.</td>
<td>T F</td>
</tr>
</tbody>
</table>