QUAID-I-AZAM UNIVERSITY
ISLAMABAD

B.Sc. Annual Examinations--2013
(PART-I)

SUBJECT: Biochemistry
PAPER: A (Theory)

Time Allowed: 3 Hours
June 10, 2013
Max Marks: 40

Note: Attempt total FIVE questions selecting any FOUR from Section B. All questions carry equal marks. Q. No. 1 is compulsory to be attempted on this page and must be handed over to the Superintendent within first 25 minutes.

SECTION-A (OBJECTIVE) To be attempted in 25 minutes.

Q. No.1

(a) Encircle the correct one.

1. All NUCLEIC ACIDS:
   (a) are polymers of NUCLEOTIDE (b) contain DEOXYRIBOSE
   (c) are double stranded (d) are double helical

2. The order of ENZYME action in replication is:
   (a) DNA POLYMERASE → HELICASE → PRIMASE → GYRASE
   (b) DNA POLYMERASE → HELICASE → GYRASE → PRIMASE
   (c) HELICASE → GYRASE → PRIMASE → DNA POLYMERASE
   (d) HELICASE → PRIMASE → GYRASE → DNA POLYMERASE

3. In NUCLEIC ACIDS a covalently bonded structure with a NITROGENOUS BASE and SUGAR molecule is called a:
   (a) PEPTIDE (b) NUCLEOSIDE (c) POLYPEPTIDE (d) NUCLEOTIDE

4. The process by which RNA is made from DNA is:
   (a) synthesis (b) translation (c) transcription (d) replication

5. ADENINE always pairs with:
   (a) THYMINE (b) CYTOSINE (c) GUANINE (d) RIBOSE

6. The “RUNGS” of the DNA ladder are made of:
   (a) PHOSPHATES and HYDROGEN (b) GLUCOSE and SUGARS
   (c) SUGARS and PHOSPHATES (d) BASE PAIRS

7. A gene is:
   (a) a segment of DNA that codes for a PROTEIN (b) a molecule within DNA
   (c) a set of HOMOLOGOUS CHROMOSOMES (d) a type of PANTS

8. The site of a gene where RNA POLYMERASE binds is called a(n):
   (a) operator (b) terminator (c) promoter (d) none of these.

(b) Fill in the blanks with appropriate words.

1. In NUCLEIC ACIDS, a sugar attached with PHOSPHATE and NITROGENOUS BASE is called a __________________________.

2. DNA POLYMERASE needs a short sequence of DNA called ________________ to start polymerization.

3. A sudden heritable change in DNA sequence is called a __________________________.

4. DNA POLYMERIZATION by the DNA POLYMERASE is always from ________________ direction.

5. In any given duplex DNA, the amount of PURINES is always ____________ to the amount of PYRIMIDINES.

6. In PROTEIN SYNTHESIS the adopter molecule that brings AMINO ACIDS to RIBOSOME is called ________________.

7. The model that explains gene regulation in PROKARYOTES is called ________________ model.

8. POST-TRANSCRIPTIONAL modifications of mRNA are carried out only in ________________ organisms.