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SARDAR PATEL UNIVERSITY

M. Sc. (Genetics) – Third Semester Examination (CBCS)

Friday, 3rd November, 2017

2:00 p.m. to 5:00 p.m.

PS03CGEN02: Human Molecular Genetics

Total Marks: 70

Note: (1) Figures to the right indicate marks.

(2) Draw a neat and labeled diagram, wherever necessary.

Q. 1 Choose the most appropriate answer from the four alternatives given: [08]

- i. Which one of this describes a contig?
 - (a) Library of overlapping clones
 - (b) A complete mRNA library
 - (c) An ordered genomic library
 - (d) None of these
- ii. Linkage mapping can determine the distance between which of the following pairs of DNA sequences?
 - (a) Two known genes
 - (b) AFLPs and RFLPs
 - (c) Two AFLPs
 - (d) All of the above
- iii. Poly Q tract is a characteristic feature found in _____.
 - (a) Cystic fibrosis
 - (b) Huntington's chorea
 - (c) Phenylketonuria
 - (d) Hemophilia
- iv. Which one of the following is a temporary diabetes?
 - (a) IDDM
 - (b) Monogenic diabetes
 - (c) Diabetes insipidus
 - (d) Gestational diabetes
- v. Accumulation of branched chain amino acids in children causes _____.
 - (a) Cystic fibrosis
 - (b) DMD
 - (c) Phenylketonuria
 - (d) MSUD
- vi. Which one of the following MPS has 4 subtypes?
 - (a) Hurlers syndrome
 - (b) Sanfilippo syndrome
 - (c) Morquio syndrome
 - (d) Sly syndrome
- vii. Drug induced hemolytic anemia in African males are due to deficiency of _____.
 - (a) Glutathione Reductase
 - (b) NADPH
 - (c) G6PDH
 - (d) Glucose 6. Phosphatase
- viii. Which of the following is not a part of typical phase II conjugation reactions?
 - (a) Acetylation
 - (b) Hydroxylation
 - (c) Methylation
 - (d) Glucuronidation

Q.2 Answer any SEVEN from the following:

[14]

- i. Differentiate between genetic mapping and physical mapping.
- ii. Enlist various positional independent strategies.
- iii. Write functions of Htt protein.
- iv. Write examples of various epigenetic mechanisms.
- v. Enlist X linked lipidosis and mucopolysaccharidosis.

P.T.O.

