

se

[11/A-14]

SEAT No. _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY
S.Y.B.Sc.4th SEMESTER EXAMINATION
10th April 2018, Tuesday
10.00 AM to 1.00 PM
Concepts of Biology (US04CBIO 01)

Total Marks-70

Q.1 Multiple Choice Questions (one mark each) 10

1. Polytene Chromosome is a _____ chromosome.
 (a) normal (b) giant (c) both a & b (d) none
2. Metacentric chromosome has _____ arm lengths.
 (a) equal (b) unequal (c) shorter (d) none
3. Centromere is a part of _____.
 (a) cell wall (b) chromosome (c) golgi body (d) all of the above
4. _____ sugar is present in RNA.
 (a) ribose (b) deoxyribose (c) both (d) none
5. _____ has clover leaf model.
 (a) r RNA (b) t RNA (c) m RNA (d) all
6. Watson & Crick proposed the model of _____.
 (a) RNA (b) DNA (c) both a & b (d) none
7. Guanine & Cytosine have _____ hydrogen bonds.
 (a) 2 (b) 3 (c) 1 (d) 4
8. _____ enzyme unwinds the DNA in replication.
 (a) polymerase (b) helicase (c) okazaki fragment (d) none
9. Okazaki fragment is found in _____ strand.
 (a) leading (b) lagging (c) both a & b (d) none
10. _____ RNA is involved in transcription.
 (a) r RNA (b) t RNA (c) m RNA (d) all .

Q.2 Answer any ten 20

- 1 What is telocentric chromosome?
- 2 Write about euchromatin.
- 3 What is a telomere?
- 4 What is a nucleoside?
- 5 Write about rRNA .
- 6 Write the names of purines & pyrimidines of DNA.

[P.T.O.]

- 7 What is the role of DNA polymerase?
- 8 Write the function of DNA ligase.
- 9 Explain the role of single stranded binding proteins.
- 10 Write the function of mRNA in protein synthesis.
- 11 What is active amino acid?
- 12 What is gene?
- Q.3a. Discuss the typical structure of Chromosome. 5
- b. Write the chemical composition and function of chromosome. 5
- OR**
- Q.3a. Write a short note on Polytene chromosome. 5
- b. Write a short note on heterochromatin. 5
- Q.4a. Write the Watson & Crick model of DNA. 6
- b. Write a note on t RNA. 4
- OR**
- Q.4a. Write about nitrogenous bases of DNA. 6
- b. Explain about mRNA. 4
- Q.5a. Write the process of DNA replication in Prokaryotes. 5
- b. Write the process of DNA replication in Eukaryotes. 5
- OR**
- Q.5. Explain about all the enzymes and proteins in DNA replication. 10
- Q.6 Write about process of Transcription in detail. 10
- OR**
- Q.6. Explain in detail process of Translation. 10