1. Which of the following method is responsible for genetic exchange in prokaryotes?
   a) Conjugation  
   b) Transformation  
   c) Transduction  
   d) All of the above

2. Transduction is carried out through
   a) Chromosomes  
   b) RNA  
   c) Phage  
   d) Plasmid

3. Which of the following is incorrect about DNA replication?
   a) It is carried out in 5’ to 3’ direction  
   b) Two polynucleotide strands of DNA run in opposite direction  
   c) One strand is synthesized in continuous fashion  
   d) Both the strands are synthesized in continuous fashion

4. Which of the following DNA shows left handed double helix?
   a) Z-DNA  
   b) A-DNA  
   c) B-DNA  
   d) A-DNA & B-DNA

5. Greatest process ability is of
   a) DNA polymerase-I  
   b) DNA polymerase-II  
   c) DNA polymerase-III  
   d) RNA polymerase

6. Which is the correct equation between linking number (Lk), writhe (Wr), twist (Tw)
   a) Tw = Lk + Wr  
   b) Wr = Lk + Tw  
   c) Lk = Tw + Wr  
   d) Lk = -Tw + Wr

7. Holliday junction is related to
   a) Transduction  
   b) Transformation  
   c) Recombination  
   d) Polymerization

8. Rho protein is needed for
   a) Transcription termination  
   b) Translation termination  
   c) Replication termination  
   d) Replication initiation

9. Which of the following molecules is L shaped?
   a) t-RNA  
   b) m-RNA  
   c) r-RNA  
   d) None of the above

10. Start codon for translation is
    a) AUG  
    b) GUG  
    c) UAG  
    d) Both a & b are correct

11. 30S & 50S are the subunits of
    a) 100S ribosome  
    b) 70S ribosome  
    c) 80S ribosome  
    d) 50S ribosome

12. Stop codon for protein synthesis is
    a) UAG  
    b) UGA  
    c) UAA  
    d) All of the above

13. The most abundant RNA is
    a) m-RNA  
    b) r-RNA  
    c) t-RNA  
    d) Depends on the state of the cell

14. Adaptor molecule in protein synthesis (translation) is
    a) t-RNA  
    b) m-RNA  
    c) r-RNA  
    d) None of the above

15. Which one of the following is transcription promoter site for prokaryotes?
    a) Hogness Box  
    b) Pribnow box  
    c) CAAT Box  
    d) Both a & c are correct

16. The nucleic acid found in Tobacco Mosaic Virus is
    a) ss RNA  
    b) ds RNA  
    c) ss DNA  
    d) ds DNA

17. Stability of a DNA is determined by its
    a) Number of adenine-guanine bonds  
    b) Number of guanine-cytosine bonds  
    c) Number of phosphodiester bonds  
    d) Both a & b are correct

18. An operon is
    a) Protein & gene  
    b) Gene cluster & promoter  
    c) Translation initiator factor  
    d) Group of proteins

19. The malfunctioning of which one of the following enzymes is linked with tumor formation?
    a) Endonuclease  
    b) Telomerase  
    c) DNA polymerase  
    d) Telomerase

20. Lac Z gene of E. coli codes for
    a) Alpha glucosidase enzyme  
    b) Beta galactosidase enzyme  
    c) Topoisomerase enzyme  
    d) Lactase enzyme

21. The only amino acid that has 3 codons for its formation is
    a) Methionine  
    b) Isoleucine  
    c) Lysine  
    d) Glutamine

22. What is the nature of genetic material that is responsible for reverse transcriptase?
    a) RNA dependent DNA polymerase  
    b) DNA dependent RNA polymerase  
    c) DNA dependent DNA polymerase  
    d) DNA dependent RNA polymerase

23. Retrovirus has
    a) Plus strand mRNA  
    b) Minus strand mRNA  
    c) ds DNA  
    d) ss DNA

24. No of base pairs found in normal B-DNA’s per turn of helix is
    a) 12  
    b) 15  
    c) 10  
    d) 8

25. Klenow fragment is a part of
    a) RNApolymerase  
    b) DNApolymerase1  
    c) Topoisomerase  
    d) DNApolymerase2

**ANSWERS**

|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|

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1. Which day is observed as Elephant Appreciation Day?
   a) March 7
   b) September 22
   c) October 2
   d) December 14

2. May 30 is observed as ……:
   a) World day for the abolition of meat
   b) National Cleanliness Day
   c) International Respect for Chickens Day
   d) Day of Mourning for Animals in Laboratories

3. Jumping Frog Day is on………:
   a) March 14
   b) August 8
   c) November 26
   d) May 13

4. ……………is observed as Japan Dolphin Day:
   a) September 1
   b) October 0
   c) November 20
   d) December 20

5. October 4 is observed as………:
   a) World Farm Animals Day
   b) World Animal Day
   c) Meatless Day
   d) World Vegan Day

6. National Pollution Control Day is observed on………:
   a) May 2
   b) June 2
   c) November 2
   d) December 2

7. International Rabbit Day is on………:
   a) March 11
   b) March 12
   c) March 13
   d) March 14

8. World Ecology Day is on………:
   a) November 1
   b) December 11
   c) January 11
   d) February 11

9. Save Spider Day is on………:
   a) March 11
   b) March 12
   c) March 13
   d) March 14

10. ……………is observed as Slug Day.
    a) March 20
    b) May 28
    c) June 20
    d) April 20

11. Forest Martyr’s Day is on………:
    a) November 10
    b) December 10
    c) June 10
    d) February 10

12. International Day for preventing the exploitation of the environment in war and armed conflict is on……:
    a) September 6
    b) October 6
    c) November 6
    d) December 6

13. World Farm Animals Day is celebrated on………:
    a) September 2
    b) October 2
    c) November 2
    d) December 2

14. World Day of Prayer for Animals is on………:
    a) September 2
    b) October 4
    c) November 2
    d) December 2

15. Hug your Cat Day is on………:
    a) June 1
    b) June 2
    c) June 3
    d) June 4

16. July 28 is observed as………:
    a) Cow appreciation Day
    b) World Nature Conservation Day
    c) World Population Day
    d) World Leprosy Day

17. World Day for Bulls is on………:
    a) July 22
    b) July 23
    c) July 24
    d) July 25

18. World Day of Action against Seal Hunting is on………:
    a) March 15
    b) April 15
    c) May 15
    d) June 15

19. World House Sparrow Day is on………:
    a) March 17
    b) March 8
    c) March 19
    d) March 20

20. Save the Rhino Day is observed on………:
    a) May 1
    b) June 1
    c) July 1
    d) August 1

21. Wildlife Week Celebration in India is observed from………:
    a) August 2
    b) September 2
    c) October 2
    d) November 2

22. National Pet Memorial day in U.S.A. is celebrated on………:
    a) September 7
    b) September 8
    c) September 9
    d) 2nd Sunday of September

23. World Day for Laboratory animals is on………:
    a) April 23
    b) April 24
    c) April 25
    d) April 26

24. International Homeless Animals Day is observed on………:
    a) August 18
    b) August 19
    c) August 20
    d) August 21

25. International Day for Natural Disaster Reduction is on………:
    a) October 10
    b) October 11
    c) October 12
    d) October 13

ANSWERS
1. b 2. d 3. d 4. a 5. b 6. d 7. a 8. a
25. d

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