

1. Booklungs are found in :
(1) Amoeba (2) Polystomella
(3) Euglypha (4) Arachnids
2. Silk is obtained from :
(1) Adult moth (2) Caterpillar stage
(3) Egg (4) Cocoon
3. Neurogenic heart is found in :
(1) Human beings (2) Rat
(3) Rabbit (4) Invertebrates
4. Epiphysis is also known as :
(1) Pineal (2) Pituitary
(3) Thyroid (4) Hypothalamus
5. Simplest and smallest form of amino acid is :
(1) Glycine (2) Proline
(3) Lysine (4) Argenine
6. PCOS is related to :
(1) Ovary (2) Uterus
(3) Testes (4) Oviduct
7. Seminogelin is secreted by :
(1) Epididymis (2) Seminal Vesicle
(3) Thecal cells (4) Oviduct

8. First cleavage in frog is :

- (1) Horizontal (2) Meridional
(3) Equatorial (4) Latitudinal

9. Which of the following is nuclear receptor ?

- (1) AR (2) GPCR
(3) IR (4) MT1

10. Cryptorchidism is related to :

- (1) Testes (2) Thyroid
(3) Ovary (4) Pancreas

11. T_m of primers can be calculated as :

- (1) $T_m = 2(A+T) + 4(G+C)$ (2) $T_m = 4(A+T) + 2(G+C)$
(3) $T_m = 2(A+G) + 4(T+C)$ (4) $T_m = 4(A+G) + 2(T+C)$

12. The meaning of palindrome is :

- (1) Specific RNA sequences required for splicing
(2) Specific DNA sequences required for replication initiation
(3) DNA sequences which can be read forward and backward same
(4) Specific DNA sequences required for transcription

13. The genome size of E. coli is :

- (1) 4.2Mb (2) 5.5 Mb (3) 6.2Mb (4) 7.2Mb

14. Agarose is :
- | | |
|--------------------|------------------|
| (1) Polysaccharide | (2) Lipid |
| (3) Protein | (4) Nucleic acid |
15. In SDS/PAGE role of SDS is to provide :
- | | |
|--------------------------------|--------------------------------|
| (1) Negative charge to protein | (2) Positive charge to protein |
| (3) Ion to buffer | (4) Negative charge to buffer |
16. Enzymes used for degradation of RNA in RNA: DNA hybrid :
- | | |
|------------|-------------|
| (1) RNaseA | (2) RNaseH |
| (3) DNase | (4) RNaseV1 |
17. SYBR green bind with :
- | | |
|-------------------------|-------------------------|
| (1) Single stranded DNA | (2) Double stranded DNA |
| (3) Single Stranded RNA | (4) All |
18. Linker/ adapter is helpful for the :
- | | |
|---------------------------------|-------------------------|
| (1) Vector synthesis | (2) Insert synthesis |
| (3) Restriction site generation | (4) Polymerase activity |
19. Super-coiled plasmid DNA can be converted into relaxed plasmid with the help of :
- | | |
|----------------|-------------------|
| (1) DNA gyrase | (2) Endonuclease |
| (3) Ligase | (4) Topoisomerase |

- 20.** Edman degradation is used for :
- (1) DNA sequencing
 - (2) RNA sequencing
 - (3) Peptide and protein sequencing
 - (4) Not associated with sequencing
- 21.** In eukaryotes translation is initiated by binding of ribosome to the :
- (1) Pribnows box
 - (2) Hogness box
 - (3) 5'cap
 - (4) Poly A tail
- 22.** Tetracycline blocks protein synthesis by :
- (1) Inhibiting initiation of translation
 - (2) Inhibiting binding of aminoacyl t-RNA to ribosome
 - (3) Inhibiting translocase enzyme
 - (4) Inhibiting peptidyl transferase
- 23.** The smooth ER is especially abundant in cells that synthesize extensive amounts of :
- (1) Proteins
 - (2) Lipids
 - (3) Enzymes
 - (4) Toxins
- 24.** After four cycles of PCR reaction, each molecule of a duplex DNA will give rise to :
- (1) 16 double-stranded DNA
 - (2) 16 single strands of DNA
 - (3) 32 single strands of DNA
 - (4) 32 double-stranded DNA

- 25.** Which of the following is true ?
- (1) A messenger RNA molecule has the form of a double helix
 - (2) Ribosomes contain RNA nucleotides and proteins
 - (3) The Uracil nucleotide consists of the uracil nitrogen base, a deoxyribose sugar and a phosphate group
 - (4) In eukaryotes, DNA manufactured in the nucleus and RNA is manufactured in the cytoplasm
- 26.** The length of DNA molecule greatly exceeds the dimensions of the nucleus in eukaryotic cells. How is this DNA accommodated ?
- (1) Through elimination of repetitive DNA
 - (2) Deletion of non-essential genes
 - (3) Super-coiling in nucleosomes
 - (4) DNase digestion
- 27.** In addition to ATP, what are the end products of glycolysis ?
- (1) CO_2 and H_2O
 - (2) NADH and pyruvate
 - (3) CO_2 and ethyl alcohol
 - (4) H_2O and ethyl alcohol
- 28.** The optically inactive amino acid is :
- (1) Serine
 - (2) Glycine
 - (3) Methionine
 - (4) Leusine

29. For isopycnic density gradient centrifugation, the density of dispersion medium must be.....than the dispersed material.
- (1) Denser (2) Equal
(3) Lighter (4) Neutral
30. Maximum numbers of Hydrogen bonds interactions are possible in water molecule :
- (1) 4 (2) 3 (3) 1 (4) 2
31. A mixture of proteins can be separated by :
- (1) Precipitation (2) Centrifugation
(3) Circular dichorism (4) Optical rotatory dispersion
32. When the amino acid alanine (R-group is CH₃) is added to a solution with a pH of 7.3, alanine becomes ?
- (1) A cation (2) Nonpolar
(3) A zwitterions (4) An isotope
33. The isoelectric point of an amino acid is defined as the pH :
- (1) Where the molecule carries no electric charge
(2) Where the carboxyl group is uncharged
(3) Where the amino group is uncharged
(4) of maximum electrolytic mobility

39. Mylenation of Peripheral nervous system is done by which of the following ?
- (1) Oligodendrocytes (2) Astroglia
(3) Microglia (4) Schwan cells
40. If a plasmid (size=5kb) is having one BamH1 and one EcoR1 site 2kb apart and it is digested by the above two enzymes, then how many fragments will be generated and what will be their size ?
- (1) One fragment of 5kb (2) Two fragments of 2kb
(3) Two fragments of 2kb & 3kb (4) One fragments of 4kb