Test questions for Bi7291en Human Genetics

1) Middle age theories of genetics
2) Mendel ´s CV
3) Monohybrid crossing
4) Reciprocal crossing
5) Dihybrid crossing
6) Molecular basis of Mendel´s laws
7) Heredity of sexuality and sex-linked traits
8) Rules of sex-linked inheritance
9) Human sex linked traits and heredity
10) Exceptions from Mendel´s ratios
11) Central dogma of molecular biology
12) Proof of DNA as a carrier of genetic information
13) Watson-Crick model of DNA
14) *In situ* hybridization
15) DNA sequencing principles
16) PCR method
17) Massive parallel sequencing
18) Human genome project
19) 1000Genomes project
20) Development of human cytogenetics
21) Chromosomes and DNA
22) Human karyotype
23) Stratification of human chromosomes
24) Microscopic and submicroscopic structure of chromosomes
25) Morphology of chromosomes
26) Chromosome staining
27) Metaphase detection techniques
28) Techniques of molecular cytogenetics
29) Structural, numerical aberrations
30) Translocations
31) Origin of aneuploidies
32) Trisomic syndromes

33) Gonosome syndromes
34) Structural variability of chromosomes
35) Molecular mechanisms of creation of structural chromosomal aberrations
36) Reparation mechanisms of DNA breaks
37) Microdeletion syndromes
38) Genomic imprinting
39) Duplication and their pathological effects
40) Marker chromosomes
41) Genetic significance of inversions
42) Congenital reciprocal translocations in humans
43) Problems of genetic studies in humans
44) Variability of human genome
45) Genetically determined pathologies in humans
46) Genetic counselling
47) Monogenic diseases
48) Autosomal dominant inheritance and human diseases
49) Autosomal recessive inheritance and human diseases
50) Genetic basis of cystic fibrosis
51) Examples of X-linked recessive inheritance diseases in humans
52) Development of human oncogenetics
53) The origin of the Philadelphia chromosome
54) The role of cytogenetic testing in oncology
55) Clonal CHAs in tumors
56) Genome destabilization and the multistep process of tumor formation
57) Protoncogens vs tumor suppressor genes
58) Chromosomal aberrations in tumors - basic classification
59) Numerical CHAs in tumor diseases
60) Translocations and tumors
61) Translations associated with creation of chimeric proteins
62) Translocations associated with protooncogen activation
63) Involvement of *IgH* locus 14q32 in cancer diseases
64) Chromosomal deletions in the process of carcinogenesis
65) Knuston hypothesis
66) Aberrations with gain of genetic material
67) Double minute chromosomes

68) Chromothripsis and tumor diseases
69) Prognostic changes of chromosomal aberrations associated with negative prognosis in hematoncologic malignancies
70) Prognostic changes of chromosomal aberrations associated with negative prognosis of solid tumors
71) Personalized medicine and genetics
72) Assisted human reproduction (AHR)
73) Genetic causes of male and female infertility
74) Methods of AHR
75) IVF cycle, Chromosomal aberrations in embryos
76) Preimplantation genetic analyses
77) Embryo biopsy difference
78) Vitrification
79) Problems of PGA
80) Karyomapping
81) Massive parallel sequencing technology (MPS) in IVF