

TEST 6
BIOLOGY



Prof.

**ABID
UMER**



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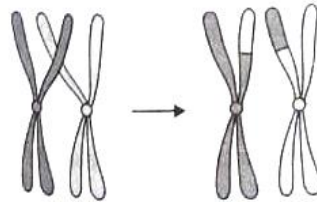
Prof. Abid Umer

WHATSAPP

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**Biology (Cell Cycle, variety of life, Bioenergetics)
TEST NO 6**

- Astral microtubules radiate outwards from:**
A) Lysosomes B) Centrioles C) Golgi complex D) Glyoxysomes
- Some organisms both plants and animals undergo asexual reproduction which involves:**
A) Asymmetric division B) Mitosis C) Meiosis D) Nuclear mitosis
- During meiosis replication of chromosomes occurs in.**
A) S – phase C) S – phase and Leptotene
B) S phase and Zygotene D) All
- Meiosis is evolutionary significant because it results in.**
A) Genetically similar daughters C) Eggs and sperms
B) four daughter cells D) Recombination
- Pick up the correct statement:**
a) Synapsis of homologous chromosomes occurs during prophase I
b) Division of centromeres takes place during anaphase I
c) Spindle fibers disappear completely in telophase of mitosis
d) Nucleoli may reappear in telophase I.
A) a only B) c only C) a and b only D) a, c and d only
- In metaphase I chromosomes are in.**
A) Tetrads stage B) Dyad stage C) diploid nature D) Attract each other
- G₂ stage of interphase of cell cycle shows.**
A) Active synthesis of DNA C) Active synthesis of protein
B) Active synthesis of RNA D) Both b and c
- What is true of mitosis?**
A) It has two divisions C) It occurs in somatic cells only
B) It maintains number of chromosomes D) It occurs in somatic cells as well as gonads
- What is the stage of mitosis when chromosomes separate and move towards poles.**
A) Prophase B) Metaphase C) Anaphase D) Telophase
- In mitotic metaphase the limbs of the chromosomes occur.**
A) One the equator C) In divaricate condition
B) In different directions D) All
- Which event is shown in the given diagram**



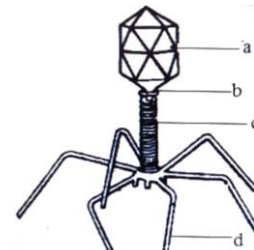
- Prophase-I during meiosis
 - Prophase-II during meiosis
 - Prophase of mitosis
 - Both prophase and metaphase of mitosis
- Diploid chromosome number being 8 what shall be the number of chromatids in each daughter after meiosis.**
A) 16 B) 8 C) 4 D) 2
- In which the number of chromosomes is halved.**
A) Mitosis B) Amitosis C) Meiosis D) Fertilisation
- Crossing over and random assortment of chromosomes are significant happenings of:**
A) Mitosis B) Binary fission C) Meiosis D) Cell division
- The condensation of chromosomes reaches to its maximum during:**
A) Leptotene B) Pachytene C) Zygotene D) Diakinesis

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- 16. The paired chromosomes repel each other and begin to separate in:**
 A) Leptotene B) Diplotene C) Zygotene D) Pachytene
- 17. Nuclear membrane disorganizes at the beginning of:**
 A) Prophase I B) Metaphase I C) Anaphase I D) Telophase I
- 18. The protists have.**
 A) Only free nucleic acid
 B) Membrane bound nucleoproteins lying embedded in the cytoplasm
 C) Nucleoprotein in direct contact with rest of the cell substance
 D) None
- 19. Fungi resemble plants in.**
 A) Lack of chloroplasts and heterotrophic nutrition C) Having a cell wall and vacuoles
 B) Reproduction by only sexual means D) Exhibition of bioluminescence
- 20. Identify the incorrect statement.**
 A) Virus has a protein coat called capsid made of small subunits called capsomeres
 B) The core has the genetic material either RNA or DNA or both
 C) The capsomeres are arranged in helical or icosahedral forms
 D) Viruses can infectancy type of organisms
- 21. Members of kingdom Protista.**
 A) Are primarily aquatic C) Are all ciliated or flagellated
 B) Do not have membrane bound organelles D) reproduce exclusively by asexual means
- 22. At cytokinesis, in plants, a membrane structure called Phragmoplast is formed from vesicles originating from:**
 A) Lysosomes B) Glyoxysomes C) Centrioles D) Golgi complex
- 23. Nucleus can be seen in:**
 A) Metaphase B) Non-dividing phase C) Anaphase D) Dividing phase
- 24. Plant cells lack.**
 A) Centriole B) Asters C) Spindle fibers D) Both a and b
- 25. Consider the following statements about features of kingdoms:**
(i) In Animalia the mode of nutrition is autotrophic.
(ii) In monera the nuclear membrane is present.
(iii) In Protista cell wall type is prokaryotic.
(iv) In Plantae the cell wall is present.
 A) (i) Alone is correct B) (ii) alone is correct C) (iii) Alone is correct D) (iv) alone is correct
- 26. Fungi are heterotrophs like animals but they are different than animal because**
 A) They produce enzymes C) They lack chlorophyll
 B) They first digest the organic food then absorb D) They obtain food from dead organic matter
- 27. In general appearance the helical phages are:**
 A) Cubical B) Icosahedral C) Polyhedral D) Rod shaped
- 28. Which one is false about AIDS:**
 A) HIV B) Acquired C) Host specific D) B-lymphocyte
- 29. Crossing over and random assortment of chromosomes are significant happenings of:**
 A) Mitosis B) Binary fission C) Meiosis D) Cell division
- 30. The condensation of chromosomes reaches to its maximum during:**
 A) Leptotene B) Pachytene C) Zygotene D) Diakinesis
- 31. Which of the following is not reduced during Non-cyclic phosphorylation?**
 A) ADP B) NADP C) Pq D) Cytochrome q
- 32. Photo phosphorylation takes place in conjunction with Electron transport chain in membrane of**
 A) Mitochondria B) Chloroplast C) Golgi body D) Lysosome
- 33. Which one occurs in the dark reaction of photosynthesis?**
 A) Reduced NADP is oxidized C) Triose phosphate are reduced
 B) RuBP is oxidized D) ADP is phosphorylated

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- 34. Oxygen released during photosynthesis come from**
 A) Glucose B) Carbon dioxide C) Water D) Chlorophyll
- 35. Viroid's differ from viruses in.**
 A)Satellite RNA packed with viral genome C)Naked RNA molecules only
 B) Naked DNA molecules D) Naked DNA packaged with viral genome
- 36. Which of the following cannot be grown on artificial culture medium?**
 A)E.coli B)TMV C)Aspergillus D)Saccharomyces
- 37. In photosynthesis oxygen is liberated during.**
 A)Hydrolysis of carbohydrates C)reduction of CO₂
 B)Breakdown of proteins D)Hydrolysis of water
- 38. Water releases protons. Twelve water molecules will release.**
 A)24H⁺ B)48H⁺ C)12H⁺ D)6H⁺
- 39. Rate of photosynthesis is higher in.**
 A) Very high light B)Red light C)Green light D)Continuous light
- 40. ADP – ATP reaction occurs when two protons (H⁺) are passed from.**
 A)Thylakoid to cytosol C)Lumen of thylakoid to stroma
 B)Thylakoid to lumen D)Stroma to Thylakoid lumen
- 41. Three carbons of phosphoglyceric acid formed during carbon fixation are derived from.**
 A)PEP + CO₂ B)RuBP C)CO₂ D)RuBP + CO₂
- 42. Carbon dioxide joins the photosynthetic pathway in.**
 A)PS I B)PS II C)Light reaction D)Dark reaction
- 43. A molecule of glucose is formed in Calvin cycle from.**
 A)6CO₂ + 12 ATP C)6CO₂ + 18ATP + 30 NADPH
 B)6CO₂ + 18 ATP + 12 NADPH D)6CO₂ + 30ATP + 12 NADPH
- 44. Leaves are green because they.**
 A) Absorb green light C) Utilize green light
 B) Do not absorb but reflect green light D) Absorb and reflect green light
- 45. In photosynthesis splitting of water occurs during.**
 A)Cyclic photophosphorylation C)Oxidative photophosphorylation
 B) Non-cyclic photophosphorylation D) Calvin cycle
- 46. Chlorophyll b is.**
 A) C₅₅H₇₀O₆N₄Mg B) C₅₅H₇₂O₆H₄Mg C) C₅₅H₇₂O₅N₄Mg D) C₄₅H₇₂O₅N₄Mg
- 47. Which group differs in chlorophyll b as compared with a**
 A) CH₃ is replaced by CHO C) NH₂ is replaced by PO₄
 B) CHO is replaced by CH₃ D) C₂H₅ is replaced by CHO
- 48. Haem portion of the Haemoglobin is**
 A) Phytol B) Porphyrin C) Acetyl D) Ketone compound
- 49. Chl-a exists in how many forms:**
 A) 2 B) 3 C) Single D) Several
- 50. How many NADH₂ are utilized during fermentation per glucose molecule**
 A) 2 B) 3 C) 4 D) 6
- 51. Two hydrogen or two electrons are removed in which step of glycolysis**
 A) Preparatory B) Assimilatory C) Oxidative D) Reductive
- 52. Virus are no more alive as isolated chromosomes because.**
 A)They require both RNA and DNA C)They both require oxygen for respiration
 B) they both need food molecules D)Both require the environment of a cell to replicate
- 53. Identify the parts a-d marked in the given figure.**
 A)a-Head , b-Collar , c-Sheath , d-Tail fibers
 B)a-Collar , b-Head, c-Sheath, d-Tail fibers
 C)a-Head, b-Collar, c-Tail fibers, d-Sheath
 D)a-Collar, b-Tail fibers, c-Head, d-Sheath



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- 54. Viruses can reproduce only in animal and plant cells, where they reproduce by replication, so they are called**
- A) Intercellular parasites
B) Obligate intracellular parasites
C) Mutualistic parasites
D) Facultative intracellular parasite
- 55. The enzymes involved in viral replication are synthesized**
- A) By viral ribosomes
B) By viral envelope
C) By the host cell
D) By interior surface of viral Capsid
- 56. An isolated virus is not considered living, since it _____**
- A) Separates into two inert parts
B) Rapidly loses its genome
C) Cannot metabolize
D) Is coated with an air tight shield
- 57. In the lysogenic cycle, the DNA of a bacteriophage**
- A) Joins the bacterial chromosome
B) Attaches to the inner surface of the host membrane
C) Is immediately degraded when it enters the host
D) Goes directly to the host's ribosome for translation
- 58. _____ proposed the kingdom Protista**
- A) Robert Koch
B) Carlous Linnaeus
C) Robert Whittaker
D) Ernst Hackel
- 59. The best known phages are T phages that infect**
- A) Pseudomonas
B) Mycoplasmas
C) Escherichia coli
D) Salmonella typhi
- 60. In the conversion of RuBP to G3P (first carbohydrates) synthesis**
- A) 9 ATP and 9 NADPH are consumed
B) 9 ATP and 6 NADPH are consumed
C) 6 ATP and 6 NADPH are consumed
D) 6 ATP and 9 NADPH are consumed
- 61. In non-cyclic photophosphorylation, water molecules are split, oxygen is released and hydrogen is taken up by an acceptor molecule which one is the hydrogen acceptor?**
- A) FAD
B) NAD
C) NADP
D) RBP
- 62. Chlorophylls and haemoglobin contain _____ & _____ respectively**
- A) Copper and Manganese
B) Magnesium and Iron
C) Potassium and Iron
D) Magnesium and Potassium
- 63. The oxidation of glyceraldehydes -3- phosphate produces in Glycolysis**
- A) PEP
B) 3-phosphoglycerate
C) 1, 3-bisphosphoglycerate
D) Dihydroxyacetone phosphate
- 64. When phosphate is enzymatically transferred from an organic substrate molecule to ADP directly it is called**
- A) Photophos phorylation
B) Photocyclic phosphorylation
C) Oxidative phosphorylation
D) Substrate level phosphorylation
- 65. How many capsomers are present in the capsid of Adenoviruses**
- A) 242
B) 252
C) 262
D) 272
- 66. First of All AIDS was reported in young males, all these young patients were.**
- A) Heterosexual
B) Abnormal
C) Homosexual
D) Hermaphrodite
- 67. The major cell infected by HIV is the helper-----which is major component of immune system**
- A) B-lymphocyte
B) T-lymphocyte
C) Never cell
D) Macrophages
- 68. The phage which causes lysis of the host is**
- A) Lytic phage
B) Both lytic or virulent
C) Virulent
D) Temperate
- 69. The word virus is derived from Latin word**
- A) Vacca
B) Venome
C) Virion
D) Viroid
- 70. The paired chromosomes repel each other and begin to separate in:**
- A) Leptotene
B) Diplotene
C) Zygotene
D) Pachytene

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- 71. The stage that may last for days, weeks or even years is:**
A) Leptotene B) Zygotene C) Diplotene D) Pachytene
- 72. Chlorophyll is a large molecule whose maximum weight is present in ?**
A) Tail C) Head
B) Functional group D) Central metallic ion
- 73. Chlorophylls and hemoglobin resembled due to their**
A) Globin parts and tail C) Central metallic ions
B) Heads D) Functional groups
- 74. Which of the following is reduced during Alcoholic fermentation?**
A) Oxaloacetate B) Citrate C) Acetate D) Pyruvate
- 75. RUBP is regenerated when _____ is phosphorylated**
A) G3P B) RuP C) Phosphoglycerate D) Citrate
- 76. Which one occurs in the dark reaction of photosynthesis?**
A) CO₂ reduced C) H₂O is added in CO₂
B) RuBP is oxidized D) ADP is phosphorylated
- 77. Photo phosphorylation takes place in**
A) Matrix B) Thylakoid C) Intermembrane space D) Stroma
- 78. Glycolysis is a catabolic reaction. Which statement is true regarding glycolysis**
A) ATP are produced only C) ATP are used only
B) ATP are used & produced only D) Net gain and loss of ATP is equal
- 79. Segregation of mendelian factors (Aa) occurs during.**
A) Diplotene B) Anaphase I C) Zygotene / pachytene D) Anaphase II
- 80. In mitosis Centromere divides during.**
A) Prophase B) Metaphase C) Anaphase D) Telophase



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