CELL BIOLOGY STATE PMP EXAMS EXERCISE

1. The main function of lysosome is :
[UTTARANCHAL PMT 2004]
(1) Sexual reproduction
(2) Extracellular digestion
(3) Inracellular digestion
(4) Both(2) and(3)

2. Which of the following maintens continuity between the water and lipid phase inside and outside the cell :
[UTTARANCHAL PMT 2004]
(1) Cell wall
(2) Lecithin
(3) Cell vacuole
(4) Cell membrane of woody plants

3. The membrane surrounding cell vacuole is called
[UTTARANCHAL PMT 2004]
(1) tonoplast (2) Cell wall
(3) Plasma membrane (4) Cell membrane

4. The diagammatic representation of chromosomes in known as :
[UTTARANCHAL PMT 2006]
(1) idiogram (2) karyotype
(3) holotype (4) nomotype

5. Thread like structure that are composed of the nuclear DNA of eukaryotic cells and are the carrier of genetic information. These structure were known as chromosomes. The term " chromosome" was given by :
[UTTARANCHAL PMT 2006]
(1) Waldeyer (2) Belbiani
(3) Purkinje (4) Sutton

6. Chromosomes, Present in prolonged prophase in the salivary glands of Drosophila are :
[UTTARANCHAL PMT 2006]
(1) Polytene chromosome
(2) B-chromosomes
(3) Lampbrush chromosome
(4) supenumerary chromososmes

7. Chromosomes at anaphase are of various shapes due to position of :
[UTTARANCHAL PMT 2006]
(1) Setellie (2) Chromonem
(3) Centromere (4) DNA

8. The term 'nucleosome' was given by oudet oline and olins called these particle as 'nu' particles which histone is absent in nucleosome :
[UTTARANCHAL PMT 2006]
(1) H1 (2) H2
(3) H3a (4) H4

9. Nucleosome given beaded appearance to chromosome. They help in packing of DNA in the chromosomes. A nucleosome has : **[UTTARANCHAL PMT 2006]**
(1) about 2 turns of DNA
(2) 8 histone molecules of 4 types (2 mols each of H2 a, H2 b, H3 and H4)
(3) 200 nitrogen base pairs
(4) all of the above

10. Salivary gland chromosome were discovered by Balbiani (1881) from salivary glands of larva of :
[UTTARANCHAL PMT 2006]
(1) Chironomous (2) Drosophila
(3) Silk worm (4) Lac worm

11. Is SAT chromosome, ST (Satellite) in terminal part of chromosome beyond secondary contraction. It contains :
[UTTARANCHAL PMT 2006]
(1) DNA (2) RNA
(3) repetitive DNA(4) None of the these

12. Material exchange through nucleopores is faciliate by :
[UTTARANCHAL PMT 2006]
(1) Lamina propria (2) lipid layer
(3) Nucleoplasmin (4) Nucleoles

13. Centroide is :
[UTTARANCHAL PMT 2006]
(1) Microtubuler and membraneless
(2) Absent in Amoeba, red algae, blue-green algae, conifers and angiosperm and made up of a peripheral double microtubuls
(3) Basically locomotary and their role in spindle formation is secondary
(4) All of the above

14. Association of a m-RNA with several ribosomes is called :
[West Bengal 2007]
(1) Polysome (2) Informosome
(3) Both(1) and(2 (4) None of these

15. G2 phase comes between :
[West Bengal 2007]
(1) S and M pahse
(2) G1 and S phase
(3) S and D phase
(4) G1 and M Phase

16. Lampbrush chromosome is found in :
[West Bengal 2007]
(1) Oocyte of amphibians
(2) salivary glande of mosquito
(3) Silk gland of silkworm
(4) None of the above

17. Prokaryotic ribosomes re :
[West Bengal 2007]
(1) 50s (2) 60s
(3) 70s (4) 80s

18. Mesosome of prokaryotes perform function similar to :
[West Bengal 2007]
(1) Mitochondria
(2) Peroxysomes
(3) Lysosomes
(4) Ribosomes

19. RER is rough because of the present of
[West Bengal 2007]
(1) Volutin granules on its surface
(2) Ribosomes on its surface
(3) Lysosomes on its surface
(4) Mitochondir on its surface

20. Crossing over takes place between :
[West Bengal 2007]
(1) 2 sister chromatids
(2) 2 non-sister chromatids
(3) 3 homologous chromosomes
(4) 4 non-homologous chromosomes

21. Cellular recognition is fasciliated by components of plasmamembrane. These components are generally :
[West Bengal 2007]
(1) Protein molecules alone
(2) Lipid molecules alone
(3) Both lipid and protein molecules
(4) Gylcolipids and glycoprotiens

22. The significance of meiosis lies in
[C. G. 2004]
(1) Maintaining constancy is the number of chromosomes in an organism
(2) production of genetic variability in the zpopulation of species
(3) Reduction of the diploid number of chromosomes to haploid
(4) All of the above

23. Which among the following can be seen only under the electron microscope :
[C. G. PMT 2004]
(1) Chloroplast (2) Ribosome
(3) Leucoplast (4) Nucleus

24. A mature plant cell has :
[C. G. PMT 2004]
(1) Cell wall and protoplasm
(2) Protoplasm and vacuole
(3) Vacuole and cell wall
(4) Protoplasm cell wall and vacuole

25. The larger sub-unit in 80 s ribosome is : **[C. G. PMT 2004]**
(1) 50 s (2) 60 s (3) 40 s (4) Zero s

26. Golgi bodies are absent in
[C. G. PMT 200]
(1) Plants (2) Bacteria
(3) Animals (4)Eukaryotic cells

27. Endoplsmic reticulum is more developed in : **[C. G. PMT 2004]**
(1) Green cells (2) Young cells
(3) Mture cells (4) Bacteriophage

28. Mitochondria are related to :
[C. G. PMT 2004]
(1) Prokaryotic cell (2) Plamids
(3) Prion (4) Virus

29. The main function of lyosomes in
[C. G. PMT 2004]
(1) Digestion (2) Replication
(3) Translation (4) Translocation

30. Which of the following has a single membrane :
[C. G. PMT 2004]
(1) Ribosome (2) Peroxisome
(3) Nucleus (4) Cetnrosome

31. L-shaped chromosomes are called - **[C. G. PMT 2004]**

(1) Sex-chromosome (2) Acrocentric
(3) Telocentri (4)Sub metacenric

32 Pairing of homologous chromosomes takes place in : **[C. G. PMT 2004]**

(1) Pachytene (2) Zygotene
(3) Diplotene (4) None of these

33. How many meiotic division will be necessary to produce two hundred pollen grain **[C. G. PMT 2004]**

(1) 100 (2) 99 (3) 50 (4) 200

34. Who coined the term 'chromosome' **[C. G. PMT 2004]**

(1) Balbiani (2) Waldeyer
(3) Sutton (4) Purkinje

35.A chromosome having sub- terminal centromere is called -**[C. G. PMT 2004]**

(1) Telocentric
(2) Acrocentic
(3) metacentric
(4)Sub - metacentric

36. Which is the character of mitosis **[C. G. PMT 2005]**

(1) Leptotene (2) Zygotene
(3) Pachytene (4) None of the above

37. How many types of ells are known : **[C. G. PMT 2005]**

(1) One (2) two
(3) Three (4) Four

38. In which mitosis does not-occur **[C. G. PMT 2005]**

(1) Green algae (2) Fungi
(3) Bacteria (4) Higher plants

39. A mature plant cell has : **[C. G. PMT 2005]**

(1) Cell wall (2) Vacuole
(3) Protoplasm (4) All of the above

40. Repulsion of homologous chromosomes takes place in : **[C. G. PMT 2005]**

(1) Zygotene (2) Leptotene
(3) Diakinesis (4) Pachytene

41. In eukaryotic cell the type ribosome is : **[C. G. PMT 2005]**

(1) only 70 s (2) Only 80 s
(3) 70 s and 80 s both (4) Only 50 s

42. Synthesis on DNA takes place in ; **[C. G. PMT 2005]**

(1) G1 (2) G2 (3) S (4) None of these

43. The genetic material of procaryotic cells is celled : **[C. G. PMT 2005]**

(1) Nucleus (2) Nucleolus
(3) Nucleoid (4) Centrosome

44. Which organelle of plant cells secretes polysaccharide to make cell walls : **[C. G. PMT 200]**

(1) Golgi-bodies (2) Lysosome
(3) Mitochondria (4) Chloroplast

45.RNA contains which of the following base, in place of Thymine of DNA : **[C. G. PMT 2005]**

(1) Thymine (2) Uracil
(3) Adenine (4) None of these

46. The main function of lysosomes is in : **[C. G. PMT 2005]**

(1) Only intracellular digestion
(2) Only Extracellular digestion
(3)Both intracellulr and extracellular digestion
(4) None

47. Eukaryotic cell has : **[C. G. PMT 2005]**

(1) One chromatin fiber
(2) Definite nucleus
(3) Incipient nucleus
(4) None of these

48. Four daughter cells formed after meiosis are : **[C. G. PMT 2005]**

(1) Genetically similar
(2) Genetically different
(3) Anucleate
(4) Multinucleate

49. The synthesis of lipids and proteins is associated with : **[C. G. PMT 2005]**

(1) Endoplasmic retculum
(2) Miochondria
(3) Chloroplast
(4) Lysosomes

50. Cell theory was proposed by **[C. G. PMT 2005]**

(1) Scheleiden and Schwann
(2) Watson and Crick
(3) Darwin and Wallace
(4) Mendel and Morgan

51. During meiosis the division of centromere takes place in : **[C. G. PMT 2005]**

(1) First prophase
(2) First anaphase
(3) Second metaphase
(4)Second anaphase

52. Which one of the following is not found in animal cell : **[C. G. PMT 2005]**

(1) Nucleus (2) Golgi bodies
(3) Chloroplast (4) Mitochondria

53. Unit membrane consists of : **[C. G. PMT 2005]**

(1) Lipid + Sugar+ Lipid
(2) Protein + Lipid + Protein
(3) Lipid + Protein + Lipid
(4) Protein

54. Principal constituents of chromosomes are : **[C. G. PMT 2005]**

(1) DNA + Protein (2) DNA
(3) RNA (4) tRNA

55. Shape of chromosome is determined by **[C. G. PMT 2005]**

(1) Telomere (2) Centromere
(3) Chromomere (4) Centrosome

56. In a bacterial cell the respiratory enzymes are found is : **[C. G. PMT 2005]**

(1) Mitochondria (2) Chondrisome
(3) Mesosome (4) Centrosome

57. The cell wall of spirogyra is made up of **[C. G. PMT 2005]**

(1) Cellulose (2) Suberiun
(3) Lignin (4) Chitin

58. The main function of Golgi complex is : **[C. G. PMT 2005]**

(1) Translocation (2) Phosphorylation
(3) Glyco-oxidation (4) Fermentation

59. In cell divisioin, spindle bifrses are made up of protein : **[JHARKHAND 2006]**

(1) Myoglobin (2) tubulin
(3) albumin (4) myosin

60. Bulk of histome proteins systhesized in : **[JHARKHAND 2006]**

(1) G1-phase (2) G2-phase
(3) S-phase (4) G0-phase

61. Choose the incorrect match : **[JHARKHAND 2006]**

(1) Nucleus : RNA
(2) Lysosome : protein synthesis
(3) Mitochondria : respiration
(4) Cytoskeleton : microtubules

62.rough endoplasic reticulum is associated with : **[JHARKHAND 2006]**

(1) fat synthesis
(2) steroid synthesis
(3) protein synthesis (4) all of these

63. Resolving power of electron microscope is : **[JHARKHAND 2006]**

(1) 1 μ (2) 10 Å (3) 100 Å (4) 1000 Å

64. Number of Bar bodies in XXXXY is : **[JHARKHAND 2006]**

(1) 1 (2) 2 (3) 3 (4) 4

65. The study related to the structure and function of a cell called as : **[JHARKHAND 2005]**

(1) Physiology (2) Cell biology
(3) Histology (4) Cellology

66. The longest phase of meiosis (I) is : **[JHARKHAND 2005]**

(1) metaphase I (2) prophase I
(3) anaphase I (4) telophase I

67. Flyid mosaic model was given gy : **[JHARKHAND 2006]**

(1) Knoll and Ruska
(2) Singer nd Ruska
(3) Singer and Nicolson
(4) bateson and Punnet

68. Colchicine prevents the mitosis of cell at : **[JHARKHAND 2005]**
(1) Prophase stage
(2) Anaphase stage
(3) Metaphase stage
(4) Metaphase stage

69. The number of DNA in chromosome at G2 stage **[JHARKHAND 2006]**
(1) One (2) Two (3) Four (4) Eight

70. The characteristic of blue-green algae is : **[JHARKHAND 2006]**
(1) DNA without histone
(2) Nucleus absent
(3) Nuclear membrane absent
(4) All of the above

71. Cell wall of a cell is removed, the remaining is called : **[Bihar 2005]**
(1) Etioplast (2) Aleuroplast
(3) Amyloplast (4) Protoplast

72. Movement against concentration gradient is called : **[Bihar 2005]**
(1) Osmosis (2)active transport
(3) diffusion (4) passive transport

73. Synapsis occurs in . . . . . phase of meiosis : **[Bihar 2005]**
(1) Zygotene (2) Diplotene
(3) Pachytene (4) leptotene

74. Which one is present in both prokaryotic and eukaryotic cell : **[Bihar 2004]**
(1) Ribosome (2) Mitochondria
(3) ER (4) Nucleus

75. Centromereisalso called :**[Bihar 2003]**
(1) Chromomere
(2) Secondary constriction
(3) Primary constriction
(4) Chromonema

76. In " singer and Nicolson" model of plasma membrane, the extrinsic proteins are **[Bihar 2002]**
(1)Tightly associated with intrinsic protein and can be easily separated
(2)Loosely associated with intrinsic protein
(3)Loosely associated with intrinsic protein and can be easily separated
(4) Loosely associated with intrinsic protein and can't be easily separated

77. Ribosomes are associated with : **[Bihar 2002]**
(1) RNA synthesis
(2)Protein nthesis
(3) Enzyme mobilisation(4) DNA synthesis

78. Which organelle is not found in an animal cell : **[Bihar 2001]**
(1) Peroxysome (2) Ribosome
(3) Lysosome (4) None of these

79. Actin fibre is present in : **[Bihar 2001]**
(1) Cilia (2) Flagella
(3) Carbohydrates (4) Microfilaments

80. Carrier proteins are involved in : **[Bihar 2006]**
(1) Transport of enzymes
(2) water transport
(3) Active transport of ions
(4) Passive transport of gases

82. The recent model fro plasma membrane proposed by Siner and nicolson is : **[Bihar 2005]**
(1) Molecular lipid model
(2) Lamellar model
(3) Unit membrane model
(4) fluid mosaic model

83. Significance of meiosis lies in : **[Bihar 2006]**
(1)Reduction of chromosome number to one half
(2) Maintaning constancy of chromosome number during sexual reproduction
(3) Production of genetic variability
(4) All of the above

84. Function of mitochondria is : **[UP CPMT 2002]**
(1) Excretion
(2) Respiration
(3) Digestion
(4) Excretion and respiration

85. Term basal body is associated with the development of : **[UP CPMT 2003]**
(1) cilia and flagella (2) cell plate
(3) phragmoplast (4) kinetochore

86. Golgi body originates from : **[UP CPMT 2003]**
(1) lysosome
(2) Endoplasmic reticulum
(3) mitochondria (4) cell membrane

87. Lipid molecules in plasma membrane are arranged in which manner : **[UP CPMT 2003]**
(1) scattered (2) series
(3) alternate (4) head parallel

88. Structure of nuclear membrance helps in : **[UP CPMT 2003]**
(1) organisation of the spindle
(2) synapsis of homologous chromosome
(3) nucleo-cytoplasmic exchange of material
(4) anaphasic separation of daughter chromosome

89. Hydrolytic enzymes are stored in : **[UP CPMT 2003]**
(1) Golgi bodies
(2) Lysosomes
(3) Endoplasmic reticulum
(4) Mitochondria

90. Ribosomemayalsocalled : **[UP CPMT 2002]**
(1) Microsome (2) Dictyosome
(3) Ribonucleoprotein (4) Oxysomes

91. Genes are present on : **[UP CPMT 2003]**
(1) Chromosomes (2) Lamellae
(3) Plasma membrane (4) Mesosomes

92. The cromosome showing L-shaped structure by the presence of centromere is termed as : **[UP CPMT 2003]**
(1) Acentric (2) Metacentric
(3) Sub-metacentric (4) Telocentric

93. Chromosomes can be seen best during : **[MP PMT 2003]**
(1) Prophase (2) Metaphase
(3) Anaphase (4) Telophse

94. What will be the gametic chromosome number of a cell, if somatic cell have 40 chromosomes **[MP PMT 2003]**
(1) 10 (2) 20
(3) 30 (4) 40

95. Whocoined the term 'cell' **[MP PMT 2003]**
(1) Purkinje (2) Robert Brown
(3) Robert Hooke (4) Hugo von Mohl

96. In which of the following stage chromosomes are arranged at equatorial plate : **[MP PMT 2003]**
(1) Anaphase (2) Metaphase
(3) Prophase (4) Telophase

97. During mitosis number of chromosomes gets : **[MP PMT 2003]**
(1) Change
(2) No change
(3) May be change if cell is mature
(4) May be change if cell is immature

98. Chromosome having centromere in its middle is **[MP PMT 2005]**
(1) Acrocentric (2) Telocentric
(3) metacentric (4) submetacentri

99. Single membrance bound is : **[MP PMT 2005]**
(1) lysosome (2) Plastid
(3) nucleus (4) mitochondria

100. Which of the following do not possess lipoproteinaceous membrane : **[MP PMT 2006]**
(1) lysosomes (2) lomasomes
(3) ribosomes (4) sphaerosomes

101. In meosis chromosome number because : **[MP PMT 2006]**

(1) Half of its parent chromosome

(2) Same at that of parent chromosome

(3) One fourth of its parent chromosome

(4) None of the above

102. Centrosome is not present in : **[MP PMT 2003]**

(1) Cell of higher plants

(2) Cells of lower plants

(3) Cells of higher animals

(4) Cells of lower animals

103. Site of protein synthesis is : **[MP PMT 2005]**

(1) Ribosome (2) SER

(3) Golgi bodies (4) Lysosome

STATE PMT EXAMS EXRCISE — ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**4**	**2**	**1**	**1**	**1**	**1**	**3**	**3**	**4**	**1**	**3**	**3**	**4**	**1**	**1**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**1**	**3**	**1**	**2**	**2**	**4**	**4**	**2**	**4**	**2**	**2**	**2**	**1**	**1**	**2**
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	**4**	**2**	**3**	**2**	**2**	**4**	**2**	**3**	**4**	**3**	**3**	**3**	**3**	**1**	**2**
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**3**	**2**	**2**	**1**	**1**	**4**	**3**	**2**	**1**	**2**	**3**	**1**	**1**	**2**	**3**
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	**2**	**3**	**2**	**3**	**2**	**2**	**3**	**3**	**2**	**4**	**4**	**2**	**1**	**1**	**3**
Que.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Ans.	**4**	**2**	**4**	**4**	**4**	**3**	**4**	**4**	**2**	**1**	**2**	**4**	**3**	**2**	**3**
Que.	91	92	93	94	95	96	97	98	99	100	101	102	103		
Ans.	**1**	**3**	**2**	**2**	**3**	**2**	**2**	**3**	**1**	**3**	**1**	**1**	**1**		