				Ce	ll Cycle and Cell Division
		EXER	SE-I		
1.	Who divided cell cycle in four stages i.e. G_1 , S, G_2 and M :-		10.	During G_2 - phase a diploid cell contains the amount of DNA equal to a :-	
	(A) W. Flemming	(B) Strass burger		(A) Diploid cell	(B) Tetraploid cell
	(C) Howard and Pelc	(D) Farmer		(C) Haploid cell	(D) Nothing can be said
2.	How much part of cell cycle formed by interphase :-		11.	Crossing over takes place in :-	
	(A) 50%	(B) 70%		(A) Zygotene	(B) Pachytene
	(C) 10%	(D) 90%		(C) Diplotene	(D) Diakinesis
3.	How many chromosome produces by meiosis ?	s will be in cells of human,	12.	Which type of Chro shaped during anaphas	mosome will appear 'L' -
	(A) 46	(B) 69		(A) Telocentric	(B) Acrocentric
	(C) 23	(D) 100		(C) Metacentric	(D) Submetacentric
4.	Minimum number of meiotic div. required to produce		13.	A contractile mid body forms during cytokinesis in	
	62 pollengrains :-			(A)Animals	(B) Higher plants
	(A) 15	(B) 31		(C) Fungi	(D)Algae
_	(C) 62 (D) 16		14.	Which chromosome may lost during cell division:-	
5.	In cell cycle, changes of which stage are not visible			(A) Giant chromosome	
	under microscope :-	(D) Drophage		(B) Acentric chromosome	
	(A) Interphase	(B) Prophase		(C) Polycentric chromo	osome
((C) Metaphase (D) Anaphase			(D) Telocentric chromosome	
0.	Which type of division leads to polyploidy :-		15.	In which order cytokinesis occurs in plants :-	
	(A) Cryptomitosis	(B) Meiosis	13.	(A) Centripetal	(B) Centrifugal
-	(C) Endomitosis	(D)Amitosis		(C) Oblique	(D) Equatorial
/.	but occurs in Anaphase-	not ocurs in Anaphase–I	16.	Meiosis not occurs in :-	
	(A) Condensation of chr	omosomes	100	(A) Ovule	(B) Anther
	(B) Poleward movement	tof chromosome		(C) Microsporangia	(D) Shoot tip
	(C) Contraction of spind	le fibers	17	Which of the two event	ts restore the normal number
	(D) Splitting of centromere		17.	of chromosomes in life cycle :-	
8.	In Angiosperms Endomitosis occurs in :-			(A) Mitosis and Meios	is
	(A) Ovule	(B) Tapetum		(B) Meiosis and fertilis	ation
	(C) Endothecium	(D) Leaftip		(C) Fertlisation and mit	tosis
9.	In which stage of cell div	ision, division of matrix of		(D) Only meiosis	
-	chromosome occurs :-	,	18.	Division of nucleus is indirect in '-	
	(A) Late prophase	(B) Early metaphase		(A) Mitosis	(B) Meiosis
	(C) Late metaphase	(D) Anaphase		(C) Amitosis	(D)(A) and (B) both

19 . Number of meiosis required to produce 100		26.	Reason of chromosomal movement in Anaphase :-			
	megaspore in angiosperms	S :-		(A) Astral rays		
	(A) 125	(B) 100		(B) Centrioles		
	(C) 25	(D) 75		(C) Kinetochore		
20.	Constancy of the chromos	ome number in sexually		(D) Kinetochore and spind	lle fibres	
	producing generation is bro	ought by the process of :-	27.	Nuclear envelope reappea	ars at :-	
	(A) Meiosis	(B) Mitosis		(A) Metaphase	(B) Prophase	
	(C)Amitosis	(D) None	• •	(C) Anaphase	(D) Telophase	
21.	Match the column-I with	column–II and select the	28.	Slipping of chiasmata tow	ards the ends of bivalent	
	correct answer :-			(A) Terminalisation	(B) Diekinosis	
	Column-I	Column-II		(A) Interkinesis	(D) Heteropycnosis	
	(a) Pachytene	(i) Synizesis	29	(C) intervinesis (D) neteropychosis		
	(b) Zygotene	(ii) Chiasma visible	47.	nucleus is called :-		
	(c) Diplotene	(iii) Terminalisation		(A) Cytokinesis	(B) Plasmotomy	
	(d) Leptotene	(iv) Gene exchange		(C) Endomitosis	(D) Dino-mitosis	
	(e) Diakinesis	(v) Synapsis	30.	Which division maintains g	enetic similarity :-	
	(A) a–i, b–ii, c–iii, d–iv, e	V		(A) Mitosis	(B) Meiosis	
	(B) a-iv, b-v, c-ii, d-i, e-	iii		(C) Amitosis	(D) Reduction div.	
	(C) a–iii, b–iv, c–v, d–ii, e	⊱i	31 .	Which does not occurs in prophase:-		
	(D) a-ii, b-iii, c-iv, d-i, e	-V	(A) Hydration of chror		atin	
22.	Which division is characteristic of cartilage cells, meganucleus of <i>Paramaecium</i> and foetal membranes :-			(B) Dehydration of chromatin		
				(C) Appearance of chromosome		
			22	(D) Disappearance of nuclear memb. and nucleolus		
	(A) Mitosis	(B) Meiosis	32.	During cell cycle, RNA an place during -	a protein synthesis takes	
	(C) Cryptomitosis	(D)Amitosis		(A) G, and G, - phase	(B) S - phase	
23.	Which part of plant is suitab	le for the study of meiosis:		(C) M - phase	(D) Cytokinesis	
	(A) Root apex	(B) Ovary	33.	In which stage of cell	division, number of	
	(C)Anther	(D) Shoot apex		chromosomes best counter	d:-	
24.	Colchicine, a mitotic poiso	n, arrests the cell division		(A) Prophase	(B) Metaphase	
	in:-			(C) Telophase	(D) Interphase	
	(A) G_1 - phase	(B) G_2 - phase	34 .	The cellular structure which	disappear during mitosis	
	(C) Anaphase	(D) Metaphase		is:-		
25.	Amitosis is characteristic of	of :-		(A) Plasma membrane		
	(A) Higher plants	(B) Higher animals		(B) Nuclear membrane		
	(C) Bryophyta	(D) Lower organisms		(C) Millochondria	d musicalus	
				(D) Inuclear memorane and	u nucleoius	

35.	Cell division in blue green	algae similar to that in:-	44.	'Terminalisation' is a process related with :-	
	(A) Bacteria	(B) Brown algae		(A) Mitosis	(B) Meiosis
	(C) Green algae	(D) Higher plants		(C) Diakinesis	(D) Telophase–I
36 .	Meiosis takes place in:-		45.	Observe the following sch	neme. Which stage of cell
	(A) Apical meristem			division occurs after G_2 pl	hase?
	(B) Inter calary meristem			(A) Prophase	L Y Z
	(C) Reproductive cells			(B) Metanhase	M
	(D) Vegetative cells			(D) Wetaphase	
37.	Replication of DNA in me	iosis occur during :-		(C) Anaphase	
	(A) S - phase (D) S - has			(D) Diakinesis	
	(B) S - phase and leptoter (C) S - phase and leptoter	le	46.	Tetrad formation in meios	is occurs in :-
	(C) S - phase and zygoten (D) All of these	le		(A) Leptotene	(B) Zygotene
38	(D) All OI lifese	wwas first observed by-		(C) Pachytene	(D) Diplotene
50.	(A) Moore (1905) (B) E	armer and moore (1905)	47.	In which stage of mitosi	s, the chromosomes are
	(C) Mosses (1956) (D) F	Temming (1882)		bivalent i.e. composed of	two chromatids :-
39 .	A cell is bound to divide, i	f it has entered :-		(A) Prophase & metaphas	se
	(A) G ₂ - phase	(B) G ₁ - phase		(B) Anaphase and telopha	ise
	(C) Prophase	(D) S - phase		(C) Prophase and telopha	se
40 .	How many chromosome sh	hall be present in a diploid		(D) Metaphase and anaph	nase
	cell at mitotic anaphase	if its egg cell has ten	48.	In plants, meiosis can be o	observed in :-
	chromosome:-			(A) Root tip	(B) Leaf primordia
	(A) 10 (Ten)	(B) 20 (Twenty)		(C) Sporangia	(D) Spores
41	(C) 30 (Thirty)	(D) 40 (Forty)	49 . In Anaphase – I each chromosom		mosome composed of:-
41.	Interzonal fibers occur in:-	(D) Forder motorshood		(A) One chromatid	(B) Two chromatid
	(A) Propriase	(D) Anophasa		(C) Four chromatid	(D) Many chromatid
42	(C) Late propriase (D) Anaphase		50 .	Gap between division pl	hase and start of DNA-
72.	different poles due to:-	mosome move towards		replication is called :-	
	(A) Centriole	(B) Vacuole formation		(A) G_1 - phase	(B) G_2 - phase
	(C) Microtubules	(D) Cytokinesis		(C) M - phase	(D) Interkinesis
43 .	Which one of the following	statements is not true for	51.	In meiosis, division of cen	tromere occurs during:-
	meiosis:-			(A) Interphase	(B) Anaphase - I
	(A) It occur in reproductiv	e tissue only		(C) Anaphase - II	(D) Metaphase - I
	(B) Chromosome undergo	pairing in early prophase-I	52.	In animals, active mitosis	can be observed :-
	(C) Chromosome do not e	exchange part		(A) At the base of nails	(B) At the apex of hairs
	(D) Centromere do not div	vide during anaphase-I		(C) Dermis of skin	(D) Glans

53 .	In meiosis, nuclear membrane and nucleolus		62.	During cell division, spindle fibers attach to which	
	disappear during :-			part of chromosome :-	
	(A) Zygotene	(B) Pachytene		(A) Primary constriction	(B) Sec. Constriction
	(C) Diakinesis	(D) Metaphase - I		(C) Chromomere	(D) Chromatid
54 .	Cell cycle can remain arre	sted at :-	63.	In tetrad, the number of no	on cross over chromatids
	$(A) G_1$	(B) S		is normally:-	
	(C) G ₂	(D) M		(A) Four	(B) Two
55.	Which of the following are	e mitotic poisons :-		(C) One	(D) None
	(A) Colchicine		64.	Term meiosis was coined	by:-
	(B) Mustard gas and Azid	es		(A) W. Flemming	(B)A. Flemming
	(C) Cyanides			(C) Farmer and Moore	(D) Boveri
	(D) All the above		65.	Synaptonemal complex is	characteristic of :-
56.	Gametic meiosis occurs in	:-		(A) Mitotic chromosomes	
	(A) Higher plants	(B)Algae		(B) Leptotene chromoson	ies
	(C)Animals	(D) Bacteria		(C) Paired meiotic chromo	osomes
57.	Longest phase of cell cycl	e is :-		(D) Metaphase	
	(A) Prophase	(B) Telophase	66.	Germ cells in vertebrate g	onads are produced by:-
	$(\mathbf{C}) \mathbf{G}_1$	$(D) G_2$		(A) Mitosis	(B)Amitosis
58.	In cell cycle, which stage is	misnomerly called resting		(C) Mitosis and meiosis	(D) Endomitosis
	phase :		67.	Sporte metosis occurs in :-	
	(A) S-phase	(B) Telophase		(A)Animals	
	(C) Cytokinesis	(D) Interphase		(B) Thallophyta	
59.	Spindle fibers which extend from pole to			(C) Bryophyta	
	kinetochores are :-			(D) All plants except thallophyta	
	(A) Chromosomal or tractile fibers		68.	In mitosis, splitting of chron	natids up to the centromere
	(B) Interzonal fibers(C) Supporting fibers			(A) Prophase	(P) Motophaso
				(A) Fropliase	(D) Telophase
	(D) Astral rays		60	(C) Anapilase	(D) relopitase
60.	The longest phase in meiot	ic division is :-	09.	are characteristic of :-	
	(A) Prophase - I	(B) Metaphase - I		(A) Cryptomitosis	(B) Endomitosis
	(C) Prophase - II	(D) Anaphase - I		(C) Free nuclear div.	(D) Mitosis
61.	Separation of homologou	is chromosomes during	70.	In which stage of cell divis	ion the chromosomes are
	Anaphase - I is called :-			most condensed :-	
	(A) Synapsis	(B) Disjunction		(A) Prophase	(B) Meta phase
	(C) Nondisjunction	(D) Crossing over		(C) Anaphase	(D) Telophase

71.	If a meristematic cell is placed in a medium containing radio active thymidine, radioactivity will be first observed in :-		80 .	Division of centromere occurs in:-	
				(A) Late prophase or early metaphse	
				(B) Late metaphase or ear	'ly anaphase
	(A) Euchromatin	(B) Hetero chromatin		(C) Late anaphase or early	y telophase
=0	(C) Both simultaneously	(D) None of the above $\langle \cdot \rangle$		(D) Late telophase	
72.	Karyoplasmic index (K.I.) 15 :-	81 .	Dinomitosis occurs in:-	
	(A) $\frac{V_n}{V_n - V_c}$	(B) $\frac{V_n}{V_c - V_n}$		(A) Procaryotes	(B) Mesokaryotes
	V _c	V _n		(C) Eucaryotes	(D) Akaryotes
	(C) $\overline{V_n}$	(D) $\overline{V_c + V_n}$	82.	Genetic information is tran	asferred from zygote to all
73.	What happens during grow	wth of a cell :-		body cell by:-	
	(A) K.I. decreases			(A) Meiosis	(B)Amitosis
	(B) K.I. increases			(C) Endomitosis	(D) Mitosis
	(C) K. I. fluctuates		83 .	Division of cell without recognisable chromosomes	
	(D) K. I. remains constant	t		is :-	
74.	Synthesis of proteins occu	rs during :-		(A)Amitosis	(B) Mitosis
	$(A) G_1$	(B) G ₂		(C) Meiosis – I	(D) Meiosis – II
	(C) S	(D) All the above	84 .	Which one of the following	ng is associated with cell
75.	The metabolism of a cell which decreases during			division?	
	prophase again starts incre	easing during :-		(A) Microsome	(B) Microbody
	(A) Telophase	(B) Anaphase		(C) Microtubule	(D) Microfibril
	(C) Metaphase	(D) G_1 - phase	85 .	Stain for cell division :-	
76.	Synthesis of cycline protei	in occurs in:-		(A) Saffranin	(B) Aniline blue
	(A) Permanent tissue	(B) Meristem		(C) PAS	(D) Acetocarmine
	(C) Lignified cells	(D) All the types of cells	86 .	Terminal meiosis occurs in:-	
77.	The changes of Karyokine	esis in mitosis occur in:-	87 .	(A) Sporocyte	(B) Gametocyte
	(A) Cytoplasm	(B) Nucleus		(C) Zygote	(D) Gamete
70	(C) Both 1 and 2	(D) Nucleolus		How many microspore me	other cells are required to
/ð.	condensation of chromoso	ing not occur during		produce 80 male gametes	in angiosperms
	 (A) Unfolding of protein molecules (B) Coiling of DNA (C) Dehydration (D) Hydration 		88.	(A) 10	(B) 20
				(C) 40	(D) 80
				Gap between meiosis - I and II is called :-	
				(A) Interphase	(B) Interkinesis
79	During which stage a diplo	id cell becomes tetraploid		(C) Diakinesis	(D) Metakinesis
	in mitosis:-	in constants withplotd	89 .	In animals, cytokinesis is :	-
	(A) G ₂	(B) Prophase		(A) Centrifugal	(B) Centripetal
	(C) Metaphase	(D) Anaphase		(C) Random	(D) Collateral

90 .	Kernplasm theory propos	ed by:-	100	00.Synthesis and storage of ATP molecules requir	
	(A) Hartig	(B) O. Hertwig		for cell div. takes place in	:
	(C) Huxley	(D) Steward		(A) Prophase	(B) G ₁ -phase
91 .	Rate of cell div. increases	by application of:-		(C) Anaphase	(D) G ₂ -phase
	(A) Cytokinins	(B)Auxins	101	.Spindle microtubules com	posed of :-
	(C) Gibberellins	(D) Colchicine		(A)Actin filament	
92 .	Coiling of chromonema in	prophase of mitosis is-		(B) 95% dynien and 5% I	DNA
	(A) Plectonemic	(B) Paranemic		(C) 95–97% tubulin and 3	3–5% RNA
	(C) Helical	(D) Irregular		(D) Collagen and elastin p	rotein
93 .	Chiasmata appears during	:-	102	E.Each daughter chromoso	ome in anaphase moves
	(A) Diakinesis	(B) Synaptotene		towards opposite poles a	t the speed of 1 μ m per
	(C) Diplotene	(D) Leptotene		minute with the expenditur	re of energy :-
94 .	Meiosis can take place in	:-		(A) 5 ATP	(B) 30 ATP
	(A) Prokaryotic cell	(B) Haploid cell		(C) 38 ATP	(D) 200 ATP
	(C) Dikaryotic cell	(D) Diploid cell	103	Condensation of chromos	omes and appearance of
95 .	What happens in synthesis phase during cell cycle:-		astral rays occur during :-		
	(A) DNA synthesis			(A) prophase	(B) Metaphase
	(B) Chromosome number	becomes double		(C) Anaphase	(D) Telophase
	(C) Formation of two nuclei		104	Cell plate which appea	rs during cytokinesis,
07	(D) Synthesis of proteins	& RNA		ultimately transforms in :-	
90.	along with thining & elongation in chromosomes are diagnostic characters for the phase:-			(A) Middle lamella	(B) Primary wall
				(C) Sec. wall	(D) Plasma membrane
	(A)Anaphase	(B) Metaphase	105	Colchicine $(C_{22}H_{25}O_6N)$	which prevents spindle
	(C) Interphase	(D) Telophase		formation is chemically a :-	-
97 .	What happens in crossing	over :-		(A) Protein	(B) Amino acid
	(A) Duplication of chromo	osomes		(C)Alkaloid	(D) Glycolipid
	(B) Linkage in chromosomes		106	106 . During telophase :-	
	(C) Minimization in genetic	c material		(A) Nuclear membrane is	formed
	(D) Exchange of genetic m	naterial		(B) Nucleolus appears	
98 .	In mitosis, the spindle is :-			(C) Astral rays disappear	
	(A) Bipolar	(B) Multipolar		(D) All the above	
	(C) Apolar	(D) Random	107	Chromosomal morpholo	ogy (Structure) is best
99.	Site of meiosis in Angiosp	erms :-		observed at :-	
	(A) Meristem	(B) Spore Mother cell		(A) Prophase	(B) Metaphase
	(C) Roots	(D) Petals or Pollen		(C) Interphase	(D) Anaphase

108. Direct or incipient cell div. is :-		118. Preparation phase of mitosis is :-			
	(A) Cryptomitosis	(B) Dinomitosis	(A) G ₁ -phase	(B) S-phase	
	(C)Amitosis	(D) Mitosis and Meiosis	(C) Prophase	(D) Interphase	
109	Bead like thickened p.	ortions of leptotene	119. Equatorial plate (Metapha	ase plate) found in :-	
	chromosomes are :-		(A) Metaphase	(B) Prophase	
	(A) Centromeres	(B) Chromomeres	(C) Telophase	(D) Anaphase	
	(C) Centrioles	(D) Chromocenters	120.Synapsis found in betwee	n :	
110	Which stage of cell cycle i	is characterised by DNA	(A) Nonhomologous chro	mosome	
	- replication, synthesis of H	listones and formation of	(B) Homologous chromos	some	
	new nucleosomes :-		(C) Nonhomologous and h	nomologous chromosome	
	(A) S-phase	(B) G_1 -phase	(D) Chromatids		
	(C) G_2 -phase	(D) M-phase	121. When the prophase chron	mosome are stained with	
111.	I. In which stage the centromere lie at equator and arms are directed towards poles :-		acetocarmine they take differential staining. This phenomenon is called :-		
	(A) Metaphase of mitosis	(B) Metaphase -I	(A) Idiogram	(B) Karyotype	
	(C) Metaphase -II	(D) 1 and 3 both	(C) Heteropycnosis	(D) Satellite	
112	What type of division lead t	o coenocytic condition^:-	122. The nuclear spindle :-		
	(A) Cryptomitosis	(B) Endomitosis	(A) Is formed in amitotic d	livision	
	(C) Free nuclear div.	(D) Dino-mitosis	(B) Is formed in mitotic di	vision	
113	In anaphase, a metacentric	chromosome appears :-	(C) Is formed in meiotic division		
	(A) i shaped	(B) J - shaped	(D) Is formed in mitotic ar	nd meiotic division	
	(C) V - shaped	(D) L - shaped	123. Nuclear membrane disapp	pears in :-	
114	Pairing of homologous chr	omosomes is called:-	(A) Late prophase	(B) Early prophase	
	(A) Disjunction	(B) Synapsis	(C) Metaphase	(D) Telophase	
	(C) Segregation	(D) Polyteny	124. Crossing over takes place	eon:-	
115	In meiosis $-I$, the inter zon	al fibers appear in which	(A) Two stranded stage	(B) Three stranded stage	
	stage :-		(C) One stranded stage	(D) Four stranded stage	
	(A) Prophase – I	(B) Metaphase – I	125.Pre - DNA synthesis phas	se is:-	
	(C) Anaphase – I	(D) Telophase – I	(A) G_1 - phase	(B) G ₂ - phase	
116	During cytokinesis in plant	s, which of the following	(C) S-phase	(D) Prophase	
	secretes the middle lamella	1:-	126. Terminalization process st	arts in :-	
	(A) Golgibody	(B) SER	(A) Leptotene	(B) Zygotene	
	(C) RER	(D) Lysosomes	(C) Diplotene	(D) Diakinesis	
117. Which cell division is responsible for the growth of tissue and individuals :-		127. Which of the following division :-	g is called heterotypic		
	(A)Amitosis	(B) Mitosis	(A) Meiosis–I	(B) Meiosis–II	
	(C) Meiosis	(D) Mitosis and meiosis	(C) Mitosis	(D) Amitosis	

128. DNA replication is found in :-		138. Number of spore mother cells required to produce		
(A) Mitosis and meiosis–I		64 spores -		
(B) Mitosis and meiosis–I and meiosis–II(C) Meiosis only(D) Mitosis only		(A) 16 (B) 32		
		(C) 64 (D) 128		
		139. Causes of Cancer is -		
129. Thick-thread stage occur	red in :-	(A) Fast and uncontrolled cell division by Meiosis		
(A) Leptotene	(B) Zygotene	 (B) Stop the process which controls cell division Mitosis 		
(C) Pachytene	(D) Diplotene			
130. Decision of cell division	occurs at –	(C) Over growth of daughter cells in telophase and		
(A) Starting of G_1		due to failure of cleavage furrows and non		
(B) End of G_1		separation of cells		
(C) Initial stage of propha	ase	(D) Unequal amount of DNA in daughter cells		
(D) End of telophase		formed by Mitosis.		
131.Smallest phase of mitosis	is –	140. In which stage of meiosis the chromosomes appear thick and short and located near the periphery of pucleus -		
(A) Prophase	(B) Metaphase			
(C) Anaphase	(D) Telophase	(A) Diskinesis (B) $Z_{Vgotene}$		
132. Synthesis of proteins for f	formation of spindle fibres	(C) Pachytene (D) Diplotene		
takes place in - (A) G_1 -phase (B) S-phase		141. The significance of Meiosis is that it -		
		(A) Produce four cells having chromosomal number		
(C) G_2 - phase	(D) M-phase	(i) Froduce four constanting enformed and internet equal to mother cell(B) Occurs in all types of cells		
133. How many divisions will	occur in an isolated tip cell			
to form 128 cells.		(C) Maintains the constant Chromosomes number		
(A) 128	(B) 127	to a particular species		
(C) 32	(D) 7	(D) Growth of animal body ograns		
134. In which stage the Chromo	osomes combine and begin	142 Which statement is true for mitosis -		
division :-	ther during melosis cell	(A) Daughter cells exhibit division of labour i.e. perform different functions		
(A) Pachytene	(B) Diplotene			
(C) Zygotene	(D) Diakinesis	(B) Daughter cells are exactly similar in all respect		
135 In which stage the DNA i	is doubled :-	(C) Daughter cells have half the number of		
(A) Metaphase	(B) Anaphase	chromosomes as compared to mother cell		
(C) Interphase	(D) Prophase	(D) Daughter cells have differences in genetic		
136 . Enzyme essential for DN	A Replication is :-	characters		
(A) DNA Polymerase	(B) Urease	143. Cell Cycle of an ordinary animal cell -		
(C) Ligase	(D) Zymase	(A) $2n \xrightarrow{\text{Mitosis}} n \xrightarrow{\text{Fertilization}} 2n \xrightarrow{\text{Meiosis}} 2n$		
137. Which type of cell division	on heals the wound -	(B) n $\xrightarrow{\text{Meiosis}} 2n \xrightarrow{\text{Fertilization}} 2n \xrightarrow{\text{Mitosis}} n$		
(A)Amitosis	(B) Mitotic	(C) $2n \xrightarrow{\text{Meiosis}} n \xrightarrow{\text{Fertilization}} 2n \xrightarrow{\text{Mitosis}} 2n$		
(C) Meiosis	(D) Free nuclear	(D) $2n \xrightarrow{\text{Fertilization}} (n) \xrightarrow{\text{Mitosis}} 2n \xrightarrow{\text{Meiosis}} n$		

144. The site of meiosis in higher plants -		153. Chiasmata are formed as a result of :			
(A) Growth cells	(B) Root tip cell	(A) Exchange of parts of paired he			
(C) Stomatal cell	(D) Spore mother cells	chromosome			
145. How many types of spindles are forms during cell		(B) Exchange of part of unpaired non–homologus			
division in Eukaryotes	:-	(C) Duplication of r	parts of paired homologue		
(A) 3	(B) 4	chromosome	parts of parted nonlologus		
(C) 5	(D) 2	(D) Loss of parts of	unpaired non-homologus		
146. Best material for the st	udy of mitosis in laboratory :	chromosome			
(A) Anther	(B) Root tip	154.When synapsis is	complete all along the		
(C) Leaf tip	(D) Ovary	chromosome, the cell i	is said to have entered a stage		
147. Mitosis occurs in :-		(A) Zygotene	(B) Pachytene		
(A) Haploid individual	s (B) Diploid individuals	(C) Diplotene	(D) Diakinesis		
(C) Both (a) & (b)	(D) In bacteria only	155. Many cells function pr	operly and divide mitotically		
148. The number of DNA i	n chromosome at G ₂ state of	eney through they do r	not have		
cell cycle :-	-	(A) Plasma membrane	(B) Cytoskeleton		
(A) One	(B) Two	(C) Mitochondria	(D) Plastids		
(C) Four	(D) Eight	156. Centromere is required for –	d for –		
149. Which is correct for m	eiotic metaphase–I :-	(A) wovement of chromosomes towards poles (B) Cytoplasmic cleavage			
(A) Bivalents are arran	nged at equator	(C) Crossing over			
(B) Univalents are arra	anged at equator	(D) Transcription			
(C) Non-homologus c	hromosomes forms pair	157. At what stage of the ce	ell cycle are histone proteins		
(D) Spindle fibers are	attached at chromomere	synthesized in a eukaryotic cell – (A) During telophase			
150. Crossing over that resu	ilts in genetic recombination				
in higher organisms oc	curs between –	(B) During S-phase			
(A) Non-sister chroma	ttids of a bivalent	(C) During G_2 -stage of prophase			
(B) Two daughter nucl	ei	(D) During entire prop	(D) During entire prophase		
(C) Two different biva	lents	158. If the n=16 in plant cell then how is possible in materbase. Lef maiorie :			
(D) Sister chromatids	of a bivalents	(A) 32 Bivalents	(B) 16 Telravalents		
151. In the somatic cell cyc	le :-	(C) 16 Bivalents	(D) 32 Bivalents		
(A) DNA replication	takes place in S-phase	159.Plasmodesmata are :-			
(B) A short interphase	is followed by a long mitotic	(A) Connections between adjacent cells			
phase		(B) Lignified cemented layers between cells			
(C) G_2 phase follows	mitotic phase	(C) Locomotary structures			
(D) In G_1 phase DNA	content is double the amount	(D) Membranes con	nnecting the nucleus with		
of DNA present in the original cell		plasmalemma			
152. In which stage of meio	sis the chromosome number	(A) Two homologous	chromosomes		
reduces to half:		(A) I wo noniologous chromosomes (B) A male and a female gamete			
(A) Anaphase–I	(B) Anaphase–II	(C) mRNA and ribose	omes		
(C) Telophase–I	(D) Telophase–II	(D) Spindle fibres and	l centromere		