IIT-JEE | PMT (NEET)

Maximum Marks: 720 (+4, -1)

**FULL TEST-1** 

E

Test Time: 3 Hrs.

- 1. A particle is moving along a straight line y = 3 m at a velocity 5 m/s. its angular speed about origin when it is at point P(4 m, 3 m) is
  - (a) 0.8 rad/s(b) 0.6 rad/s
  - (d) 5 rad/s(c) 3 rad/s
- 2. How much energy is required to take a hydrogen atom from its ground state to excited state where it subsequently emits radiation of six different wavelength?
  - (a) 10.2 Ev (b) 12.1 eV
  - (c) 12.75 eV (d) 13.06 eV
- 3. When  $\alpha$ ,  $\beta$  and  $\Upsilon$  radiations pass through a gas, their ionizing powers, in decreasing order, are (b) Υ, β, α
  - (a) $\Upsilon$ ,  $\alpha$ ,  $\beta$
  - (c) α, β, Υ (d)  $\beta$ ,  $\Upsilon$ ,  $\alpha$
- 4. A body takes t second to slide down in a smooth incline surface of angle of inclination  $\theta$ . It takes 3t time to slide down on similar rough surface having coefficient of friction,  $\mu = 0.4$ , then  $\theta$  is

(a) 
$$\tan^{-1}\left(\frac{9}{20}\right)$$
 (b)  $\cos^{-1}\left(\frac{20}{9}\right)$   
(c)  $\cot^{-1}\left(\frac{9}{20}\right)$  (d)  $\sin^{-1}\left(\frac{20}{9}\right)$ 

5. A ball is dropped from 45 m height after first rebounce from the horizontal surface it attains height of 35 m. the coefficient of restitution is

(a) 
$$e = \frac{2\sqrt{2}}{3}$$
 (b)  $e = \frac{\sqrt{7}}{3}$   
(c)  $e = \sqrt{\frac{7}{3}}$  (d)  $e = \frac{2}{3}$ 

6. A capacitor of capacity  $C_1$  is charged upto potential V volt and then connected in parallel to an uncharged capacitor of capacity  $C_2$ . The final potential difference across each capacitor will be

(a)  $\frac{C_2 V}{C_1 + C_2}$ (c)  $\left(1 + \frac{C_2}{C}\right)V$ (d)  $\left(1 - \frac{C_2}{C}\right)V$ 

7. Dipole moment of the charge distribution shown in figure is



8. A wire of resistance *R* is stretched till its radius is half of the original value. Then the new resistance is

(a) 2R

(c) 8R

(a) 1 A

(c) 4 A

(b) 4*R* (d) 16 R

9. The total current supplied to the circuit by the battery is



10. Water is following in streamline motion through a horizontal tube. The pressure at a point in the tube is P where the velocity of flow is v. at another point, where the pressure is P/2, the velocity of flow is ( $\rho$  = density of water)

(a) 
$$\sqrt{v^2 - \frac{P}{\rho}}$$
 (b)  $\sqrt{v^2 + \frac{P}{\rho}}$   
(c)  $\sqrt{v^2 + \frac{2P}{\rho}}$  (d)  $\sqrt{v^2 - \frac{2P}{\rho}}$ 

11. The position (x) varies with time (t) as shown in the given graph. The change in velocity at time  $t_1$ is







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32. The magnifying power of the telescope when it is	(c) 6 cm (d) $\frac{9}{2}$ cm		
in normal adjustment is 20. If the focal length of	$2^{2}$ 37 A coil of one turn is made of a wire of certain		
the objective is 100 cm. find the focal length of	length and then from the same length a coil of two		
eye piece.	turns is made. If the same current is passed in both		
(a) 1 cm (b) 3 cm	the cases, then the ratio of the magnetic induction		
(c) 5 cm (d) 7 cm	at their centres will be		
33. On a polarizing sheet mixture of plane polarized	(a) $2:1$ (b) $1:4$		
and un-polarized light falls normally. On rotating	(c) 4:1 (d) 1:2 38 When a changed particle of charge <i>a</i> and mass m		
the polarized sheet about the direction of the	is moving perpendicularly in a magnetic field $(B)$		
incident beam, the transmitted maximum and	in a circle of radius r, its de Broglie wavelength $\lambda$		
minimum intensities vary by a factor 4. The ratio	is		
of the intensities of polarized and unpolarised light	h $h$ $h$		
is	(a) $\frac{1}{qBr}$ (b) $\frac{1}{2qBr}$		
(a) $\frac{3}{2}$ (b) $\frac{2}{3}$	(c) $\frac{h}{qBr}$ (d) $\frac{2h}{\sqrt{2}qBr}$		
(c) $\frac{5}{4}$ (d) $\frac{4}{5}$	39. After 200 days, the activity of a radioactive		
34. For the given composite arrangement of two	sample is 5000 dps. The activity reduces to 2500		
different materials at steady state. The ratio of	dps after another 100 days. The initial activity of		
temperature gradient is (symbols have their usual	the sample in dps is		
meanings)	(a) 20000 dps (b) 10000 dps		
27°C	• (c) 5000 dps (d) 15000 dps		
	40. Escape velocity from the surface of earth is $v_e$ .		
	The escape velocity from the surface of a planet		
$d \qquad d \qquad d$	whose mass and radius both are half of that of		
$\begin{array}{c} (a) \\ \hline \\ (b) \\ \hline \\ \end{array}$	earth, is		
$(c) = \frac{1}{6}$ (d) 1	(a) $v_e$ (b) $\frac{c}{\sqrt{2}}$		
35. The root mean square speed of hydrogen molecule	(c) $\sqrt{2}v_e$ (d) $2v_e$		
is $v_1$ at temperature T K. the most probable speed	41. If the area enclosed by earth's orbit in one year		
of oxygen molecule is $v_2$ at same temperature.	$(3.5 \times 10^7 \text{s})$ is $7 \times 10^{22} \text{m}^2$ , then find the ratio of		
Then $\frac{v_1}{v_2}$ is equal to	earth's orbital angular momentum to its mass.		
(a) $2\sqrt{6}$ (b) 4	(a) $4 \times 10^{15} \text{m}^2/\text{s}$ (b) $3 \times 10^{15} \text{m}^2/\text{s}$		
(c) $3\sqrt{6}$ (d) 2	(c) $10^{15}$ m <sup>2</sup> /s (d) $2 \times 10^{15}$ m <sup>2</sup> /s		
36. In the two positions of the lens keeping distance	42. In n-p-n transistor $10^{10}$ electrons enters in emitter		
between object and screen fixed, lateral size of the	region in $10^{-6}$ s. if 4% electrons are lost in base		
image is 4 cm and 9 cm. the size of the object is	regin then current amplification factor ( $\beta$ ) is		
(a) 5 cm (b) 13 cm	(a) 48 (b) 36		
	(c) 24 (d) 12		
Space for R	Space for Rough Work		

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43. If $A = 4.321$ cm and $B = 2.1$ cm, then $(A + B)$ is	(d) <i>n</i> -heptane shows +ve deviation while ethanol
equal to	shows –ve deviation from Raoult's law.
(a) 6.421 cm (b) 6.42 cm	48. The vapour pressure of water at 20°C is 17.5 mm
(c) 6.4 cm (d) 6 cm	of Hg. If 18 g of glucose $(C_6H_{12}O_6)$ is added to
44. A ball rolls off the top of stair way with a	178.2 g of water at 20°C, the vapour pressure of
horizontal velocity of magnitude 2 m/s. the steps	the resulting solution will be
are 10 cm high and 20 cm wide. If $g = 10m/s^2$ ,	(a) 17.325 mm of Hg (b) 16.675 mm of Hg
then the ball hits first edge of	(c) 15.750 mm of Hg (d) 16.5 mm of Hg
(a) First step (b) Second step	49. On the basis of the following thermochemical data
(c) Third step (d) Fourth step	$(\Delta G^{\circ}, \operatorname{H}^{+}(aq) = 0)$
45. Rain is falling at 6 km/h making angle 30° with	$H_2O(l) \rightarrow H^+(aq) + OH(aq);  \Delta H = 57.32 \text{ kJ}$
the vertical towards east. A man is walking on	$H_2(g) + \frac{1}{2}O_2(g) \to H_2O(l);  \Delta H = -286.20 \text{ kJ}$
horizontal road towards east at 5 km/h. the speed	the value of enthalpy of formation of OH <sup>-</sup> ion at
with which the rain hits the man is approximately	25°C is
(a) $\sqrt{72}$ km/h (b) $\sqrt{91}$ km/h	(a) -22.88 kJ (b) -228.88 kJ
(b) $\sqrt{31}$ km/h (d) $\sqrt{82}$ km/h	(c) $+228.88$ kJ (d) $-343.52$ kJ
46. Chargaff's rule states that in an organism	50. Which of the following is not a concentration cell?
(a) amount of all bases are equal	(a) $Zn   Zn^{2+} (0.1 \text{ M})     Zn^{2+} (0.01 \text{ M})   Zn$
(b) amount of adenine (A) is equal to that of	(b) Pt $H_2(g) + H^+(1M) \parallel H^+(1M) \mid Pt H_2(g)$
thymine (T) and the amount of guanine (G) is	1 atm 2 atm
equal to that of cytosine (C)	(c) Ag   AgCl, KCl (0.1M)    AgNO <sub>3</sub> (0.2M)  Ag(s)
(c) amount of adenine (A) is equal to that of	(d) None of the above
guanine (G) and the amount of thymine $(T)$ is	51. Given, $E^{\circ}_{Cr^{3+}/Cr} = -0.72 \text{ V}$ ; $E^{\circ}_{Fe^{2+}/Fe} = -0.42 \text{ V}$ ,
equal to that of cytosine (C).	the potential for the cell
(d) amount of adenine (A) is equal to that of	$\operatorname{Cr}   \operatorname{Cr}^{3+} (0.1 \text{ M})    \operatorname{Fe}^{2+} (0.01 \text{ M})   \operatorname{Fe} \text{ is}$
cytosine (C) and the amount of thymine $(1)$ is	(a) -0.26 V (b) 0.26 V
equal to that of guanne (G).	(c) 0.339 V (d) -0.339 V
47. A binary inquite solution is prepared by mixing <i>n</i> -	52. Which one of the following pairs of species have
testoments is correct regarding the behaviour of	the same bond order?
the solution?	(a) $NO^+$ , $CN^+$ (b) $CN^-$ , $NO^+$
(a) The solution formed is an ideal solution	(c) $CN^{-}$ , $CN^{+}$ (d) $U_{2}^{-}$ , $CN^{+}$
(a) The solution formed is an ideal solution. (b) The solution is non-ideal showing $+ye$	53. Which of the following has zero electron density
deviation from Raoult's law	in xy plane?
(c)The solution is non-ideal, showing -ve	(a) $d_{yz}$ (b) $a_{x^2-y^2}$
deviation from Raoult's law.	(c) $p_z$ (d) $d_{xy}$
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54. The weight of Na <sub>2</sub> CO <sub>3</sub> r	required to completely		(a) $H_4P_2O_7$	(b) $H_3PO_2$
neutralize 45.6 mL to 0.235	$5 \text{ N H}_2 \text{SO}_4$ will be	(c) $H_3PO_3$ (d) $H_3PO_4$		(d) $H_3PO_4$
(a) 0.47 g (l	b) 0.57 g	62.	Which can act as a buffe	er?
(c) $0.67 \text{ g}$ (c)	d) 0.77 g		(a) NH <sub>4</sub> Cl + NH <sub>4</sub> OH	
55. The ionic radius of $Rb^+$ and	d I <sup>-</sup> are 1.46 A and 2.16		(b) $CH_3COOH + CH_3COOH$	OONa
A. The most probable type	e of structure exhibited		(c) 40 mL of 0.1 M	VaCN + 20 mL of 0.1 M
by it is			HCl	
(a) CsCl type (l	b) NaCl type		(d) All of these	
(c) ZnS type (c	d) CaF <sub>2</sub> type	63.	The rate of reaction is d	double for every 10°C rise
56. In a compound, atoms of	t element Y form ccp		in temperature. The inc	crease in reaction rate as a
lattice and those of eleme	ent X occupy 2/3rd of		result of temperature rise	e from 10°C to 100°C is
tetrahedral voids. The form	mula of the compound		(a) 112	(b) 512
will be			(c) 400	(d) 614
(a) $X_3 Y_4$ (1	b) $X_4 Y_3$	64.	Which one of the follow	ving arrangements does not
(c) $X_2 Y_3$ (c)	d) $X_2 Y$		truly represent the prope	erty indicated against it?
57. The half-life period of a	a first order chemical		(a) $Br_2 < Cl_2 < Fe_2$ : Elec	ctronegativity
reaction is 6.93 min. The	time required for the		(b) $Br_2 < Fe_2 < Cl_2$ : Ele	ctron affinity
completion of 99% of the	chemical reaction will		(c) $Br_2 < Cl_2 < F_2$ : Bond	d energy
be			(d) $Br_2 < Cl_2 < F_2$ : Oxic	lising power
(a) 230.3 min (l	b) 23.03 min	65.	General electronic confi	guration of lanthanides is
(c) 46.06 min (d	d) 460.6 min	-	(a) $(n-2) f^{1-14} (n-1) s^2 f$	$p^{6} d^{0-1} ns^{2}$
58. Gold number of protective	colloids A, B, C and D		(b) $(n-2) f^{10-14} (n-1) d^{10}$	$ns^2$
are 0.5, 0.01, 0.1 and 0.5 re	are 0.5, 0.01, 0.1 and 0.5 respectively. (c) $(n-2)f^{0-14}(n-1)d^{10}ns^2$		$\frac{1}{2}ns^2$	
The correct order of their pr	rotective powers is	(d) $(n-2) d^{0-1} (n-1) f^{1-14} ns^2$		$^4 ns^2$
(a) B < D < A < C	D < A < C < B	66.	$K_2Cr_2O_7$ on heating with	n aqueous NaOH gives
(c) C < B < D < A	d) A < C < B < D		(a) $Cr0_{4}^{2-}$	(b) $Cr(OH)_3$
59. Among the following subs	tituting silanes the one		(c) $Cr_2 0_7^{2-}$	(d) $Cr(OH)_2$
which will give rise to	cross linked silicon	67.	Which one of the fol	lowing complexes is not
polymer on hydrolysis is			expected to exhibit isom	erism?
	$0) K_4 S1 = 0$		(a) $[Ni(en)_3]^{2+1}$	
(C) K SIU13 (C) Which among the following	$J) K_2 S I U_2$		(b)[Ni(NH <sub>3</sub> ) <sub>4</sub> (H <sub>2</sub> O) <sub>2</sub> ] <sup>-1</sup>	
(a) Cl O	3 is paramagnetic:		(c) $[Pt(NH_3)_2Cl_2]$	
$(a) Cl_2 O \qquad (b) Cl_2 O = (b)$		6	(d) $[N1(CO)_4]$	• • • • • • • • • •
$(C) Cl_2 O_7 = (C)$	$\mathbf{J} \cup \mathbf{U}_2 \cup \mathbf{U}_6$	68.	Which one of the follow	ving will exhibit maximum
maximum number of hydr	g Uxyacius nas un		paramagnetic benaviour $(1)$ $D_{1}$	?
to D?	ogens uncerty attached		(a) $[Mn(H_2U)_6]$	(b) $[Fe(H_2O)_6]$
UF:			(c) $[CO(H_2O)_6]$	(d) $[Ur(H_2U)_6]$
	Space for R	lough	Work	





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(d) $\Delta H = -ve; T\Delta S = +ve$	e at any temperature	(b) Water pollution	
91. Lateral roots are arise fro	om	(c) Radioactive pollution	n
(a) pericycle	(b) cortex	(d) Soil pollution	
(c) endodermis	(d) stele	100. Spore of Funaria on ge	ermination gives rise to
92. Cytochrome oxidase con	ntain	(a) protonema	(b) sporophyte
(a) Fe	(b) Mg	(c) prothallus	(d) capsule
(c) Zn	(d) Cu	101. Maximum numbers of	vascular bundles are
93. Restriction endonuclease	e cuts	present in	
(a) One strand of DNA a	at specific site	(a) monocot	(b) monocot root
(b) Both strand of DNA		(c) dicot stem	(d) dicot root
(c) Both strand of DNA	at any site	102. Difference between rou	gh and smooth
(d) Single strand of RNA	A	endoplasmic reticulum	
94. Diameter of DNA is con	stant due to	(a) Rough has ribosome	es
(a) Hydrogen bonds betw	ween base	(b) Smooth has ribosom	es
(b) Phosphodiester bond	l	(c) Smooth takes part in	protein synthesis
(c) Disulphide bond		(d) Both has F <sub>1</sub> particles	
(d) Covalent bonds		103. Which is not related with	th N <sub>2</sub> - fixation?
95. Photosynthesis products	s translocated in the form	(a) Anabaena	(b) Rhizobium
of		(c) Pseudomonas	(d) Nostoc
(a) glucose	(b) sucrose	104. Vascular bundle in whi	ch two patchs of phloem
(c) maltose	(d) starch	are present on both side	e of xylem?
96. Maximum percentage of	which occur in plant ash?	(a) Collateral	(b) Bicollateral
(a) Mg	(b) $Zn$	(c) Concentric	(d) Radial
(c) K	(d) Ca	105. Which is a sex linked d	isease?
97. Submerged hydrophyte	s shows:	(a) Sickle cell anaemia	
(a) Stomata		(b) Haemophilia	
(b) Abundant air sacs		(c) Phenyl ketonuria	
(c) Developed mechanic	cal tissue	(d) Albinism	
(d) Secondary growth		106. Cell membrane controls	s:
98. Number of meiosis for	formation of 64 zygote in	(a) Exocytosis	
angiosperm in 80 but in	gymnosperms, number of	(b) Endocytosis	
meiosis for formation o	f 64 zygotes will	(c) Both Exocytosis and	Endocytosis
(a) 40	(b) 80	(d) Not controls movement	ent of substances
(c) 160	(a) 20	107. In photosynthesis NAD	PH <sub>2</sub> is formed but in
99. Catalytic converter in v	enicle is used for	respiration its forms du	ring
controlling		(a) HMP	(b) ETS
(a) Air pollution		(c) Krebs cycle	(d) None of these
	Space for R	ough Work	
	-		

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108. Last electron acceptor during ETC		(a) Works on garden pea	
(a) O <sub>2</sub>	(b) Cytochrome $a_3$	(b) Law of segration prov	ed by mono hydride
(c) Cytochrome <i>a</i>	(d) Cytochrome $a_2$	cross	
109. Net gain of ATP during	g Glycolysis are	(c) Discovered linkage	
(a) 2	(b) 4	(d) All of the above	
(c) 8	(d) 10	119. Auxin causes	
110. Term 'New Systematic	' was given by	(a) Growth of apical bud	
(a) Julian Huxley	(b) Bateson	(b) Growth of lateral bud	
(c) Linnaeus	(d) Darwin	(c) Seed dormancy	
111. Presence of persistant c	calyx is a feature of family	(d) Fall of leaf	
(a) Solanaceae	(b) Gramineae	120. In a double stranded DNA	A, the sequence of base
(c) Malvaceae	(d) Compositae	pairs in one starand are A	GCTAAGC. What is
112. Zygotic meiosis takes p	place in	the complementary seque	ence on the other strand?
(a) Chlamydomonas	(b) Bryophyte	(a) TCGATTCG	(b) VCGAUUCG
(c) Pinus	(d) Dryopteris	(c) ACGTAAGC	(d) CAUTAUCG
113. In which cell orgenelle	s a lipoprotein covering is	121. On Selfing RrTt we prod	uce 400 plans, find out
absent?		number of plants with ge	notype RrTt.
(a) Ribosomes	(b) lysosomes	(a) 100	(b) 225
(c) Mitochondria	(d) Peroxisome	(c) 50	(d) 300
114. Most diverse organism	of an ecosystem is	122. Gene regulation in bacter	ria is shown by
(a) Producer	(b) Consumer	(a) Jacob and Monod	
(c) Decomposer	(d) Carnivores	(b) Beadle and Tatum	
115. Which is correct		(c) Temin and Baltimore	
(a) RNA is genetic mate	erial of bacteria	(d) Kornberg	
(b) RNA is genetic mate	erial of all virus	123. Who proves plant absorb	s CO <sub>2</sub> and release O <sub>2</sub> ?
(c) DNA is genetic mate	erial of some organism	(a) Mayer	(b) Von Niel
(d) Some virus has RNA	A as genetic material	(c) Priestley	(d) Ingen house
116. Which is correct to sap	rophytic angiosperm?	124. Which is not correct for a	ancient plants?
(a) They secreates enzy	me outside the body and	(a) They have photosynthetic pigment	
absorbes		(b) They are primitive algae like	
(b) They have mycorrhiza with fungi		(c) They use $H_2S$ as hydrogen source	
(c) They takes food and then digested it		(d) They release $O_2$ as by product	
(d) They are photosynthetic		125. Which is correct for bacte	eria?
117. Parasitic algae is	117. Parasitic algae is(a) They have both cyclic and non – cycli		e and non – cyclic photo
(a) Cephaleuros	(b) Spirogyra	phosphorylation	
(c) Chlorella	(d) Anabaena	(b) The absorb light $> 900$	) nm of wavelength
118. Which is incorrect for 1	Mendelism?	(c) They release O <sub>2</sub> during	g photosynthesis

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(d) They use $H_2O$ during photosynthesis		134. Pollination occurring from one flower to another	
126. Modification of an organism to its external		of same plant is	
environment is example	e of	(a) autogamy	(b) allogamy
(a) Analogy	(b) Homology	(c) geitonogamy	(d) none of these
(c) Adaptation	(d) Speciation	135. Core of chlorophyll is fo	ormed by
127. Kyoto protocol is relate	ed with	(a) Fe	(b) Mn
(a) Ozone layer depletion	n	(c) CH <sub>3</sub>	(d) Mg
(b) Green – house effect	t	136. By anaerobic process, th	ne cow dung is used to
(c) Water pollution		produce	
(d) Conservation wild li	fe	(a) methane	(b) butane
128. Genetic diversity is rela	ated to	(c) ethane	(d) propane
(a) Gene based diversity	1	137. Fruits are formed in	
(b) Types of communitie	es in a area	(a) <i>Brassica</i>	(b) Fern
(c) Diversity and evolut	ion of species with a	(c) Cycas	(d) Funaria
genus		138.CO <sub>2</sub> in CAM plants is in	n
(d) Types of species wit	hin a community	(a) mesophyll cells	(b) bundle sheath
129. A pollutant can be best defined as it		(c) both (a) and (b)	(d) none of these
(a) Has natural geochem	nical cycles	139. If centromere is in the middle the chromosome is	
(b) Changes homeostasi	s of a place	called	
(c) Disturb natural flora of a place		(a) Sub –metacentric	(b) Meta –centhic
(d) Become stabilized in ecosystem forever		(c) Acenthic	(d) Telocenthic
130. Larger nucleus in a pol	len grain is	140. Which hormone is respo	onsible for mobilization of
(a) Tube nucleus	(b) Sperm nucleus	storage food during seed	germination
(c) Generative nucleus	(d) None of these	(a) Auxin	(b) Gibberellin
131. $C_4$ pathway for $CO_2$ fix	ation was proposed by	(c) cytokinin	(d) ethylene
(a) Benson and associat	es	141. P – proteins belong to	
(b) Arnon and associate	s	(a) Xylem parenchyma	(b) Trichomes
(c) Rouhani <i>et. al</i>		(c) Siece tube elements	(d) Tracheids and
(d) Hatch <i>et. al</i>		vessels	1 , •
132. Which of the following is exhaustible but limited		142. The organelles, those ta	ke part in
source of energy?	(h) Watan an anary	photorespiration are	ah an duia
(a) Nuclear fuels	(d) Salar anarray	(a) Chloroplast and mito	chonuria ndria and Danauiaama
(c) rossin rueis (d) Solar energy		(c) Mitochondria and pervisional	
amount of energy		(d) Mitochondria only	
(a) carnivores	(b) herbivores	143 Coding sequences of D	NA in solit genes are
(c) autotrophs	(d) omnivores	(a) exon	(b) intron
(c) autouopiis		(a) CAUII	

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(c) rhizoids (d) cistron		(c) Accumulation of Na ions		
144. Mark the correct sequence of layers found in root		(d) Membrane potential		
anatomy		153. Parkinson's disease (char	racterized by tremors and	
(a) Epiblema, cortex, en	dodermis, pericycle	progressive rigidity of lin	mbs) is caused by	
(b) Cortex, epiblema, pe	ericycle, endodermis	degeneration of brain net	urons that are involved in	
(c) Epiblema, pericycle,	endodermis	movement control and m	ake use of	
(d) Cortex, epiblema, er	dodermis, epidermis	neurotransmitter:	neurotransmitter:	
145. Which pigment involves	s in photoperiodic change	(a) Acetylcholine (b) Norepinephrine		
in plants?		(c) Dopamine	(d) GABA	
(a) Phytochrome	(b) Cytochrome	154. An acromian process	is characteristically	
(c) Chlorophyll	(d) Anthocyanin	found in the :		
146. A fruit in which seed co	at and fruit wall is fused	(a) Pelvic girdle of mam	mals	
known as caryopsis pres	ent in	(b) Skull of frog		
(a) wheat	(b) sunflower	(c) Pectoral girdle of ma	mmals	
(c) mango	(d) tomato	(d) Sperm of mammals		
147. A wastage process is		155. In a type of apomixes	s know as adventives	
(a) respiration	(b) photosynthesis	embryony, embryos deve	elop directly from the:	
(c) photorespiration	(d) movement	(a) Nucellus or integuments		
148. Which is absent in a	leaf:	(b) Synergids or antipodals in an embryo sac		
(a) Lenticel	(b) Stomata	(c) Accessory embryo sa	acs in the ovule	
(c) Mesophyll	(d) Chloroplast	(d) Zygote		
149. Pneumatophores are pre	sent in	156. Through which cell of the embryo sac, does the		
(a) mangroves	(b) xerophyte	pollen tube enter the embryo sac?		
(c) hydrophyte	(d) lithophyte	(a) Egg cell		
150. The wall of bacteria co.	150. The wall of bacteria consists of (b) Central cell			
(a) N – acetyl glucosam	ine	(c) Persistant synergid		
(b) N –n acetyl muramic	e acid	(d) Degenerated synergid		
(c) Both (a) and (b)		157. Epithelial cells of the intestine involved in food		
(d) Cellulose		absorption have on their surface:		
151. Which of the following is not used for disifection		(a) Pinocytic vesicles	(b) Phagocytic vesicles	
of drinking water?		(c) Zymogen granules	(d) Micro-villi	
(a) Phenyl	(b) chloramine	158. A patient is generally ad	vise to specially, consume	
(c) Chlorine	(d) Ozone	more meat, lentils, milk	and eggs in diet only	
152. Chemiosmotic theory of ATP synthesis is the		when he suffers from:		
chloroplasts and mitochondria is based on:		(a) Kwashiorkor	(b) Rickest	
(a) Portion gradient		(c) Anaemia	(d) Scurvy	
(b) Accumulation of K ions				
Space for Rough Work				

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159. Which one of the following pairs is	164. De Vries gave his mutation theory on organic
mismatched?	evolution while working on:
(a) Savanna – Acacia trees	(a) Althea rosea
(b) Prairie – Epiphytes	(b) Drosophila melanogaster
(c) Tundra – Permafrost	(c) Oenothera lamarckiana
(d) Coniferous forest – Evergreen trees	(d) Pisum sativum
160. All of the following statements concerning the	165. One of the examples of the action of the
actinomycetous filamentous soil bacterium	autonomous nervous system is:
Frankia are correct except the Frankia:	(a) Knee – ierk response
(a) Can induce root nodules on many plant species	(b) Papillary reflex
(b) Can fix nitrogen in the free-living state	(c) Swallowing of food
(c) Like <i>Rhizobium</i> , it usually infects it host plant	(d) Peristalsis of the intestines
through root hair deformation and stimulates	166. In contrast to annelids the Platyhelminthes
cell proliferation in the host's cortex	show :
(d) Forms specialized vesicles in which the	(a) Radial symmetry
nitrogenase is protected from oxygen by a	(b) Presence of pseudocoel
chemical barriers involving triterpene	(c) Bilateral symmetry
hopanoids	(d) Absence of body cavity
161. Which of the following is the relatively most	167. Which of the following statements regarding
accurate method for dating of fossils?	enzyme inhibition is correct?
(a) Potassium – argon method	(a) Non- competitive inhibition of an enzyme can
(b) Uranium –lead method	be overcome by adding large amount of
(c) Electron –spin resonance method	substrate
(d) Radio –carbon method	(b) Competitive inhibition is seen when a
162. Which one of the following represents an ovule,	substrate competes with an enzyme for binding
where the embryo sac becomes horse-shoe shaped	to an inhibition protein
and the funiculus and micropyle are close to each	(c) Competitive inhibition is seen when the
other?	substrates and the inhibitor compete
(a) Circinotropous (b) Anatropous	(d) Non- competitive inhibition often bind to the
(c) Amphitropous (d) Atropous	enzyme irreversibly
163. Potometer worked on the principle of:	168. The catalytic efficiency of two different enzymes
(a) Amount of water absorbed equals the amount	can be compared by the:
transpired	(a) The $K_m$ value
(b) Osmotic pressure	(b) The pH optimum value
(c) Root pressure	(c) Formation of the product
(d) Potential difference between the tip of the tube	(d) Molecular size of the enzyme
and that of the plant	( <i>c)</i>
Space for R	tough Work

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169. Using imprints from a plate with complete 174. A woman with 47 chromosomes du		omosomes due to three
medium and carrying bacterial colonies, you can	copies of chromosome 21 is characterize by :	
select streptomycin resistant mutants and prove	(a) Down syndrome (b) Triploidy	
that such mutations do not originate as adaption.	(c) Turner syndrome	(d) Super femaleness
These imprints need to be used :	175. Four healthy people in	their twenties got
(a) Only on plates with streptomycin	involved in injuries resulti	ng in damage and death
(b) On plates with minimal medium	of a few cells of the follow	ving. Which of the cells
(c) Only on plates without streptomycin	are least likely to be replace	ced by new cells?
(d) On plates with and without streptomycin	(a) Osteocytes	
170. Which of the following pairs is correctly matched?	(b) Malpighian layer of the	e skin
(a) Cartilaginous – Skull bones	(c) Liver cells	
joint	(d) Neurons	
(b) Hinge joint – Between vertebrae	176. Secretin and Cholecystokin	nin are digestive
(c) Fibrous joint – Between phalanges (d) Gliding joint – Between zygapophyses	hormones. They are secret	ed in:
of the successive	(a) Oesophagus	(b) ileum
vertebrae	(c) Duodenum	(d) pyloric stomach
171. Which one of the following makes use of RNA as	177. Which of the following unicellular organism has	
a template to synthesize DNA?	micro – nucleus for trophic function and one or	
(a) Reverse transcriptase	more micro – nuclei for reproduction?	
(b) DNA dependant RNA polymerase	(a) Euglena	(b) Amoeba
(c) DNA polymerase	(c) Paramecium	(d) Trypansoma
(d) RNA polymerase	178. AIDS is caused by HIV th	at principally infects:
172. Which of the following is generally used for	(a) all lymphocytes	(b) activator B cells
induced mutagenesis in crop plants?	(c) $T_4$ lymphocytes	(d) Cytotoxic T cells
(a) Alpha particle	179. Which one of the followin	g depresses brain
(b) X-rays	activity and produces feeli	ngs of calmness,
(c) UV (260 nm)	relaxation and drowsiness?	?
(d) Gamma rays (from cobalt 60)	(a) Valium	(b) Morphine
173. Haemophilia is more commonly seen in human	(c) Hashish	(d) Amphetamines
males than in human females because:	180. In a woody dicotyledonous	s tree, which of the
(a) This disease is due to an X-linked dominant	following parts will mainly	y cannot of primary
mutation	tissues?	
(b) A greater proportion of girls die in infancy	(a) Stem and root	
(c) This disease is due to an X-linked recessive	(b) All parts	
mutation	(c) Shoot tips and root tips	5
(d) This disease is due to a Y-linked recessive	(d) Flowers, fruits and leav	ves
mutation		
Space for Rough Work		

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