PACE-IIT & MEDICAL

Major Test – 3 - (NEET 2026 Aspirants) – Answer Key & Solutions

1.	(4)	2.	(3)	3.	(3)	4.	(4)	5.	(1)
6.	(1)	7.	(1)	8.	(1)	9.	(1)	10.	(4)
11.	(4)	12.	(2)	13.	(2)	14.	(4)	15.	(4)
16.	(4)	17.	(2)	18.	(2)	19.	(1)	20.	(4)
21.	(2)	22.	(4)	23.	(4)	24.	(2)	25.	(3)
26.	(3)	27.	(4)	28.	(4)	29.	(2)	30.	(3)
31.	(3)	32.	(1)	33.	(1)	34.	(4)	35.	(4)
36.	(4)	37.	(4)	38.	(3)	39.	(1)	40.	(1)
41.	(3)	42.	(4)	43.	(2)	44.	(1)	45.	(2)
46.	(4)	47.	(4)	48.	(3)	49.	(3)	50.	(4)
51.	(4)	52.	(4)	53.	(4)	54.	(3)	55.	(3)
56.	(3)	57.	(3)	58.	(2)	59.	(3)	60.	(1)
61.	(2)	62.	(3)	63.	(3)	64.	(4)	65.	(3)
66.	(4)	67.	(1)	68.	(2)	69.	(1)	70.	(3)
71.	(1)	72.	(4)	73.	(2)	74.	(4)	75.	(1)
76.	(3)	77.	(3)	78.	(4)	79.	(2)	80.	(3)
81.	(2)	82.	(3)	83.	(3)	84.	(2)	85.	(3)
86.	(2)	87.	(2)	88.	(2)	89.	(2)	90.	(3)
91.	(1)	92.	(1)	93.	(4)	94.	(3)	95.	(1)
96.	(3)	97.	(1)	98.	(2)	99.	(2)	100.	(3)
101.	(2)	102.	(2)	103.	(1)	104.	(2)	105.	(2)
106.	(1)	107.	(2)	108.	(1)	109.	(3)	110.	(2)
111.	(2)	112.	(2)	113.	(1)	114.	(2)	115.	(2)
116.	(2)	117.	(4)	118.	(2)	119.	(2)	120.	(2)
121.	(2)	122.	(4)	123.	(1)	124.	(1)	125.	(3)
126.	(4)	127.	(4)	128.	(4)	129.	(3)	130.	(1)
131.	(1)	132.	(3)	133.	(3)	134.	(2)	135.	(4)
136.	(2)	137.	(3)	138.	(4)	139.	(3)	140.	(2)
141.	(2)	142.	(1)	143.	(2)	144.	(3)	145.	(2)
146.	(4)	147.	(2)	148.	(2)	149.	(2)	150.	(1)
151.	(1)	152.	(1)	153.	(3)	154.	(3)	155.	(3)
156.	(2)	157.	(3)	158.	(1)	159.	(2)	160.	(3)
161.	(4)	162.	(3)	163.	(3)	164.	(2)	165.	(2)
166.	(3)	167.	(4)	168.	(1)	169.	(2)	170.	(2)
171.	(3)	172.	(2)	173.	(2)	174.	(3)	175.	(4)
176.	(1)	177.	(2)	178.	(3)	179.	(4)	180.	(3)
181.	(4)	182.	(3)	183.	(3)	184.	(3)	185.	(4)
186.	(2)	187.	(4)	188.	(1)	189.	(3)	190.	(4)
191.	(4)	192.	(2)	193.	(2)	194.	(3)	195.	(3)
196.	(2)	197.	(2)	198.	(3)	199.	(2)	200.	(4)

SOLUTIONS
PHYSICS

1. (4)
It cannot be zero, otherwise net torque or net angular acceleration will become zero.

2. (3)
We have, $\theta_1 = \frac{1}{2}(\alpha)(2)^2 = 2\alpha$
And $\theta_2 = \frac{1}{2}\alpha(4)^2 - \frac{1}{2}\alpha(2)^2 = 6\alpha$
$\because \quad \frac{\theta_2}{\theta_1} = \frac{3}{1}$

3. (3)
Angular velocity, $\omega = \alpha t$
$\therefore \quad \alpha = \frac{\omega}{t} = \frac{80}{5} = 16 \text{ rad s}^{-2}$
Now, $\theta = \frac{1}{2}\alpha t^2 = \frac{1}{2}\alpha t^2 = \frac{1}{2}(16)(5)^2 = 200 \text{ rad}$

4. (4)
Angular acceleration, $\alpha = \frac{\tau}{I} = \frac{1000}{200} = 5 \text{ rad s}^{-2}$
Now, angular velocity, $\omega = \alpha t = (5)(3) = 15 \text{ rad s}^{-1}$

5. (1)
$\therefore \quad I = mK^2 = 10(2)^2 = 40 \text{kg} - \text{m}^2$
Kinetic energy of rotation,
$K_R = \frac{1}{2}I\omega^2 = \frac{1}{2}(40)(5)^2 = 500 \text{ J}$

6. (1)
Torque, $\tau = r \times F$, i.e. τ is perpendicular to both r and F.
$\therefore \quad r \cdot \tau = 0$ and $F.\tau = 0$

7. (1)
$\omega = \alpha - \beta t$
Comparing with $\omega = \omega_0 - at$, we get
Initial angular velocity $= \alpha$
Angular retardation $= \beta$
$\therefore$ Angle rotated before is stops is
$0 = \alpha^2 - 2\beta\theta \Rightarrow \theta = \frac{\alpha^2}{2\beta}$

8. (1)

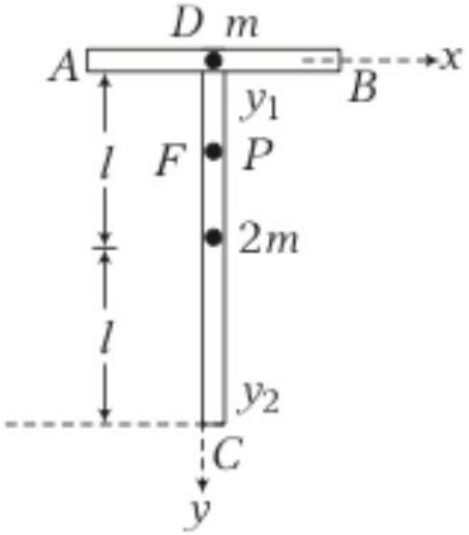
For uniform road, the moment of inertia about an axis passing through its centre is $mL^2/12$.

$\therefore$ Radius of gyration, $K = \sqrt{\frac{I}{m}} = \sqrt{\frac{\left(mL^2/12\right)}{m}} = \frac{L}{2\sqrt{3}}$

9. (1)

Here, the force F must be acting on CM of system.

Let, $m_1 = m, m_2 = 2m$



Taking D as origin , $y_{CM} = \frac{m\times 0 + 2ml}{m+2m} = \frac{2l}{3}$

From C, $CP = 2l - \frac{2l}{3} = \frac{4l}{3}$

10. (4)

The centre of mass of the object must lie on the line segment joining $(0,0)$ and $\left(R/\sqrt{2}, R\sqrt{2}\right)$. Here, $(0,0)$ is the centre of mass of the ring and $\left(R/\sqrt{2}, R/\sqrt{2}\right)$ is the centre of mass of the chord.

11. (4)

Here, $2\pi R = 2\pi \Rightarrow R = 1$

$\therefore$ $y_{CM} = \frac{m\times 0 + m\times 1 + m\times 1}{m+m+m} = \frac{2}{3}$

And $x_{CM} = \frac{m(\pi) + m(0) + m(2\pi)}{m+m+m} = \pi$

12. (2)

$$W = Fs = F\times\frac{1}{2}at^2 \quad \left[\text{from } s = ut + \frac{1}{2}at^2\right]$$

$$\Rightarrow W = F\left[\frac{1}{2}\left(\frac{F}{m}\right)t^2\right] = \frac{F^2t^2}{2m} = \frac{25\times(1)^2}{2\times 15} = \frac{25}{30} = \frac{5}{6}\,J$$

13. (2)
Work done on the body = K.E. gained by the body
$$Fs\cos\theta = 1 \Rightarrow F\cos\theta = \frac{1}{s} = \frac{1}{0.4} = 2.5\text{N}$$

14. (4)
$$s = \frac{t^2}{4} \quad \therefore ds = \frac{t}{2}dt$$
$$F = ma = \frac{md^2s}{dt^2} = \frac{6d^2}{dt^2}\left[\frac{t^2}{4}\right] = 3N$$
Now
$$W = \int_0^2 F\,ds = \int_0^2 3\frac{t}{2}dt = \frac{3}{2}\left[\frac{t^2}{2}\right]_0^2 = \frac{3}{4}\left[(2)^2 - (0)^2\right] = 3J$$

15. (4)
$$s = \frac{u^2}{2\mu g} = \frac{10\times10}{2\times0.5\times10} = 10\text{m}$$

16. (4)
Total mass $= (50+20) = 70\text{ kg}$
Total height $= 20\times0.25 = 5\text{m}$
$\therefore$ Work done $= mgh = 70\times9.8\times5 = 3430\text{ J}$

17. (2)
$$Wx\int_0^{x_1} F\cdot dx = \int_0^{x_1} Cx\,dx = C\left[\frac{x^2}{2}\right]_0^{x_1} = \frac{1}{2}Cx_1^2$$

18. (2)
Apparent depth , $h'\frac{d_1}{\alpha_1} + \frac{d_2}{\alpha_2} = \frac{d}{\alpha_1} + \frac{d}{\alpha_2 = d}\left(\frac{1}{\alpha_1} + \frac{1}{\alpha_2}\right)$

19. (1)
As, $d_{app} = \frac{d_1}{\alpha_1} + \frac{d_2}{\alpha} + \frac{d_3}{\alpha_3} = \frac{3}{3/2} + \frac{4}{4/3} + \frac{6}{6/5}$
= 2 + 3 + 5 = 10 cm

20. (4)
$$E = \frac{P^2}{2m} \therefore E \propto P^2$$
i.e. if P is increased n times them E will increase n^2 times

21. (2)
According to conservation of momentum
Momentum of tank = Momentum of shell

$125000 \times v_{tank} = 25 \times 1000 \Rightarrow v_{tank}\ 0.2\ ft/sec$

22. (4)

$s \propto u^2$ i.e if speed becomes double then stopping distance will become four times i.e. $8 \times 4 = 32m$

23. (4)

Condition for vertical looping $h = \frac{5}{2}r = 5cm \qquad \therefore r = 2cm$

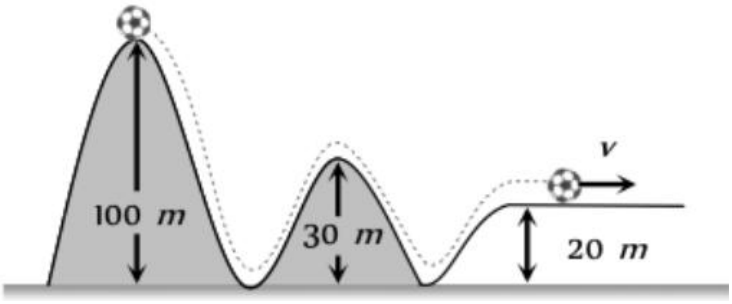
24. (2)

Change in gravitational potential energy

= Elastic potential energy stored in compressed spring

$\Rightarrow mg(h + x) = \frac{1}{2}kx^2$

25. (3)



Ball starts from the top of a hill which is 100 m high and finally rolls down to a horizontal base which is 20 m above the ground so from the conservation of energy

$mg(h_1 - h_2) = \frac{1}{2}mv^2$

$\Rightarrow \quad v = \sqrt{2g(h_1 - h_2)} = \sqrt{2 \times 10 \times (100 - 20)}$

$= \quad \sqrt{1600} = 40\ m/s$

26. (3)

When block of mass M collides with the spring its kinetic energy gets converted into elastic potential energy of the spring.

From the law of conservation of energy

$\frac{1}{2}Mv^2 = \frac{1}{2}KL^2 \qquad \therefore\ v = \sqrt{\frac{K}{M}}L$

Where v is the velocity of block by which it collides with spring So, its maximum momentum

$P = Mv = M\sqrt{\frac{K}{M}}L = \sqrt{MK}L$

After collision the block will rebound with same linear momentum.

27. (4)

$P = \vec{F} \cdot \vec{v} = ma \times at = ma^2t \qquad [as\ u = 0]$

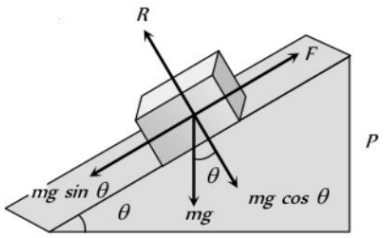
$= m\left(\frac{v_1}{t_1}\right)^2 t = \frac{mv_1^2 t}{t_1^2} \qquad [As\ a = v_1/t_1]$

28. (4)

$v = 7.2\frac{km}{h} = 7.2\times\frac{5}{18} = 2m/s$

Slope is given 1 in 20

$\therefore \sin\theta = \frac{1}{20}$



When man and cycle moves up then component of weight opposes it motion i.e $F = mg\sin\theta$

So power of the man $P = F\times v = mg\sin\theta\times v$

$= 100\times 9.8\times\left(\frac{1}{20}\right)\times 2 = 98W$

29. (2)

If a motor of 12 HP works for 10 days at the rate of 8 hr/day then

energy consumption $= power\times time$

$= 12\times 746\frac{J}{sec}\times(80\times 60\times 60)sec$

$12\times 746\times 80\times 60\times 60J = 2.5\times 10^9$ J

Rate of energy $= 50\frac{paisa}{kWh}$

i.e 3.6×10^6J energy cost 0.5 Rs

So 2.5×10^9 J energy cost $= \frac{2.5\times 10^9}{2\times 3.6\times 10^6} = 358$ Rs

30. (3)

Initial linear momentum of system $= m_A\vec{v}_A + m_B\vec{v}_B$

$= 0.2\times 0.3 + 0.4\times v$

Finally both balls come to rest

$\therefore$ final linear momentum = 0

By the law of conservation of linear momentum

$0.2\times 0.3 + 0.4\times v = 0$

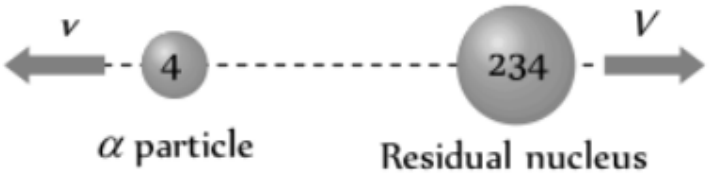
$\therefore \quad v_B = \frac{0.2\times 0.3}{0.4} = -0.15m/s$

31. (3)

For a collision between two identical perfectly elastic particles of equal mass, velocities after collision get interchanged.

32. (1)

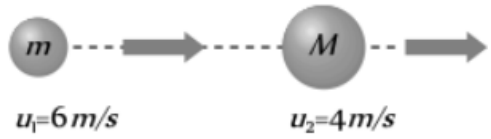
Initially U nucleus was at rest and after decay it part moves in opposite direction.



According to conservation of momentum

$$4v + 234V = 238 \times 0 \Rightarrow V = -\frac{4v}{234}$$

33. (1)



$$v_1 = \left(\frac{m_1 - m_2}{m_1 + m_2}\right)u_1 + \frac{2m_2u_2}{m_1 + m_2}$$

Substituting $m = 0,\ v_1 = -u_1 + 2u_2$

$\Rightarrow \quad v_1 = -6 + 2(4) = 2\,m/s$

i.e. the lighter particle will move in original direction with the speed of 2 m/s.

34. (4)

$$h_n = he^{2n} = 1 \times e^{2\times1} = 1 \times (0.6)^2 = 0.36\,m$$

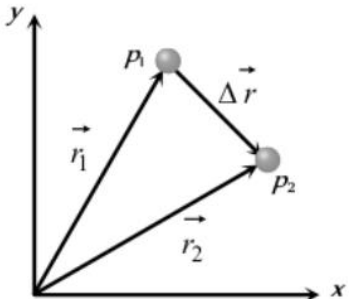
35. (4)

$h_n = he^{2n}$, if $n = 2$ then $h_n = he^4$

36. (4)

It is clear from figure that the displacement vector $\Delta\vec{r}$ between particles p_1 and p_2 is

$$\Delta\vec{r} = \vec{r}_2 - \vec{r}_1 = -8\hat{i} - 8\hat{j}$$



$$\left|\Delta\vec{r}\right| = \sqrt{(-8)^2 + (-8)^2} = 8\sqrt{2} \qquad \ldots \text{(i)}$$

Now, the particles are moving in same direction

$\left(\because \vec{v}_1 \text{ and } \vec{v}_2 \text{ are } +ve\right)$, the relative velocity is given by

$$\vec{v}_{rel} = \vec{v}_2 - \vec{v}_1 = (\alpha - 4)\hat{i} + 4\hat{j}$$

$$\vec{v}_{rel} = \sqrt{(\alpha - 4)^2 + 16} \qquad \ldots \text{(ii)}$$

Now, we know $\left|\vec{v}_{rel}\right| = \frac{\left|\Delta\vec{r}\right|}{t}$

Substituting the values of $\vec{v}_{rel}$ and $\left|\Delta\vec{r}\right|$ from equation (i) and (ii) and $t = 2s$,

then on solving we get $\alpha = 8$

37. (4)

Initially mass 10 gm moves with velocity 100 cm/s

$\therefore$ Initial momentum $= 10 \times 100 = 1000 \frac{gm \times m}{sec}$

After collision system moves with velocity $v_{sys.}$ then

Final momentum $= (10+10) \times v_{sys}$

By applying the conservation of momentum

$1000 = 20 \times v_{sys} \Rightarrow v_{sys} = 50\,cm/s$

If system rises upto height h then

$h = \frac{v_{sys}^2}{2g} = \frac{50 \times 50}{2 \times 1000} = \frac{2.5}{2} = 1.25\,cm$

38. (3)

Loss in kinetic energy

$= \frac{1}{2}\frac{m_1 m_2 (u_1 - u_2)^2}{m_1 + m_2} = \frac{1}{2}\left(\frac{40 \times 60}{40+60}\right)(4-2)^2 = 48J$

39. (1)

Spring constant $k = \frac{F}{x} = \text{Slope of curve}$

$\therefore \quad k = \frac{4-1}{30} = \frac{3}{30} = 0.1 kg/cm$

40. (1)

Work done = Area covered in between force displacement curve and displacement axis and displacement axis

= Mass × Area covered in between acceleration-displacement curve and displacement axis.

$= 10 \times \frac{1}{2}\left(8 \times 10^{-2} \times 20 \times 10^{-2}\right)$

$= 8 \times 10^{-2} J$

41. (3)

Work done = Gain in potential energy

Area under curve = mgh

$\Rightarrow \quad \frac{1}{2} \times 11 \times 100 = 5 \times 10 \times h$

$\Rightarrow \quad h = 11m$

42. (4)

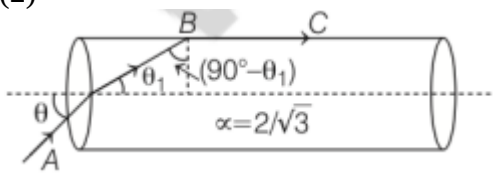
Initial K.E. of the body $= \frac{1}{2}mv^2 = \frac{1}{2} \times 25 \times 4 = 50J$

Work done against resistive force
= Area between F-x graph
= $\frac{1}{2}\times 4\times 20 = 40\text{J}$
Final K.E. = Initial + Work done by force
= $50+40 = 90\text{J}$

43. (2)
Critical angle $i_C = 45^0$
We know that, $\alpha = \frac{1}{\sin i_C} = \frac{1}{\sin 45^o} = \frac{1}{1/\sqrt{2}} = \sqrt{2}$
$\Rightarrow \alpha = \sqrt{2}$
$\Rightarrow \frac{Velocity\,of\,light\,in\,air}{Velocity\,of\,light\,in\,medium} = \sqrt{2}$
$\Rightarrow \frac{3\times 10^8}{v_m} = \sqrt{2}\ or\ v_m = \frac{3}{\sqrt{2}}\times 10^8 m/s$

44. (1)
Given , object distance , u = - 1.5 f
By mirror formula,
$\frac{1}{v}+\frac{1}{u}=\frac{1}{f}$
$\Rightarrow \frac{1}{\text{v}}+\frac{1}{-1.5\text{f}}=\frac{1}{-\text{f}}$
$\Rightarrow \frac{1}{\text{v}}=-\frac{1}{\text{f}}+\frac{1}{1.5\text{f}}$
$=\frac{1}{\text{f}}\left[-1+\frac{1}{1.5}\right]=\frac{1}{\text{f}}[-1+.$
$\Rightarrow \frac{1}{\text{v}}=\frac{1}{\text{f}}\left(-\frac{1}{3}\right)$
Or $\text{v}=-3\text{f}$

45. (2)



Since, BC grazes along surface.

$\Rightarrow$ Angle $(90° - \theta_1)$ = Critical angle C

$\therefore \quad \sin C = \frac{1}{\alpha}$

$$\sin(90° - \theta_1) = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \quad \cos\theta_1 = \frac{\sqrt{3}}{2}$$

$$\Rightarrow \quad \theta_1 = 30°$$

Now, using Snells' law on 1st interface, $\alpha_1 \sin\theta = \alpha_2 \sin\theta_1$

$$\Rightarrow \quad (1)\sin\theta = \frac{2}{\sqrt{3}}\sin 30° = \frac{2}{\sqrt{3}} \cdot \frac{1}{2}$$

$$\Rightarrow \quad \sin\theta = \frac{1}{\sqrt{3}}$$

$$\Rightarrow \quad \theta = \sin^{-1}\left(\frac{1}{\sqrt{3}}\right)$$

46. (4)

$$v = \sqrt{\mu r g} = \sqrt{0.2 \times 100 \times 10} = 10\sqrt{2} = 14 m/s$$

47. (4)

(a) v_{OM} = velocity of object with respect to mirror

$= -v_{IM}$

(Here, v_{IM} = velocity of image with respect to mirr

$$\Rightarrow \quad v_O - v_M = -(v_I - v_M)$$

$$4ms^{-1} - (-5ms^{-1}) = -v_I + (-5\ ms^{-1})$$

$$v_I = -14\ ms^{-1}$$

48. (3)

$$m = \frac{h_I}{h_O} = \frac{-v}{u} \Rightarrow m = \frac{-1}{2} = \frac{(-60)}{u} \Rightarrow u = 120$$

As, $\frac{1}{v} + \frac{1}{u} = \frac{1}{f} \Rightarrow \frac{-1}{60} - \frac{1}{120} = \frac{1}{f} \Rightarrow f = -40$

49. (3)

We know that, the relation for number of images formed for an object placed between the mirror.

$$n = \frac{360^0}{\theta} - 1$$

Given, $\theta = 50^0$

Now, number of images, n = $\frac{360^0}{50^0} - 1 = 7.2 = 7$

50. (4)
Angle between the two plane mirror , $\theta = 90^0$
As, reflected is independent of medium.
$\therefore$ Deviation produced by the combination of two plane mirrors is
$\delta = 2\pi - 2\theta = 2\pi - 2(\pi/2) = \pi = 180^0$

CHEMISTRY

No solutions

BOTANY

101. (2)
NCERT Pg .67

102. (2)
NCERT Pg. 75

103. (1)
NCERT Pg. 65

104. (2)
NCERT Pg. 76

105. (2)
NCERT Pg. 60-67

106. (1)
NCERT Pg. 76

107. (2)
NCERT Pg. 64-67

108. (1)
NCERT Pg. 75 & 76

109. (3)
Most advance family of dicot is Asteraceae.

110. (2)
Old NCERT Pg. 85

111. (2)
A family delimited by type of inflorescence is Asteraceae.

112. (2)
Old NCERT Pg. 79-81

113. (1)
NCERT Pg. 74

114. (2)
NCERT Pg. 63

115. (2)
A leaf having a single or undivided lamina is called simple leaf. The lamina can have different types of incisions, which may reach upto half (-fid), more than half (-partite) or near the base or midrib (-sect). Depending upon the pinnate or palmate venation, the incisions are known as pinnatifid, palmatifid, pinnatipartite, palmatipartite, pinnatisect and palmatisect etc.
NCERT Pg. 60

116. (2)
Old NCERT Pg. 79-81

117. (4)
NCERT Pg. 75-76

118. (2)
NCERT Pg. 74

119. (2)
Old NCERT Pg. 88

120. (2)
NCERT Pg. 65

121. (2)
Old NCERT Pg. 88

122. (4)
Old NCERT Pg. 79-81

123. (1)
NCERT Pg. 73

124. (1)
NCERT Pg. 64

125. (3)
Teak, mango and palm belong to angiosperms in which presence of vessels is a characteristic feature. Pine is a gymnosperm which lack vessels in their xylem.

126. (4)
Old NCERT Pg. 79-81

127. (4)
Sunflower belongs to family Asteraceae

128. (4)
NCERT Pg. 73, 74

129. (3)
NCERT Pg. 67

130. (1)
Pulses are obtained from Fabaceae

131. (1)
Numerous vascular bundles occur scattered n the ground tissue of Monocot stem.

132. (3)

133. (3)

134. (2)
Plants having column of vascular tissues bearing fruits and having a tap root system is Dicot

135. (4)
NCERT Pg. 74, 75

136. (2)
Diatomaceous earth used in polishing, filtration of oils and syrups due to its Gritty nature

137. (3)
NCERT Pg. 23

138. (4)
NCERT Pg. 32

139. (3)
NCERT Pg. 36

140. (2)
NCERT Pg. 23-24

141. (2)
NCERT Pg. 27

142. (1)
NCERT Pg. 35

143. (2)
NCERT Pg. 35

144. (3)
Syncytium is seen in Liquid endosperm of coconut

145. (2)
In Australian acacid, petiole modifies.

146. (4)
NCERT Pg. 76

147. (2)
NCERT Pg. 75

148. (2)
NCERT Pg. 67, 68

149. (2)
Poleward movement of dyads occurs during Anaphase I

150. (1)

ZOOLOGY

151. (1)
XI NCERT Body fluids and circulation, Disorders of circulatory system.

152. (1)
During contraction, there is no change in length of thin or thick filaments, only bands width is changed.

153. (3)
Lacteals transport absorbed fats from intestine and they appear milky.

154. (3)
Only ventricles have specialised cardiac muscles and papillary muscles

155. (3)
White muscle fibers - Myoglobin content is low , less number of mitochondria, they are adapted for fast contractions.

156. (2)
Ciliary movements are observed in few internal tubular organs like trachea, bronchiole, fallopian tubes etc About 40% of the body weight of a human adult is contributed by muscles.

157. (3)
Glutamic acid Aspartic acid are amino acids, whereas Lecithin is a phospholipid.

158. (1)
Dub-Sudden closure of semilunar valves at the beginning of ventricular diastole . Pulsation of the radial artery – Pulse rate. Initiation of the heartbeat – SAN.

159. (2)
XI NCERT Locomotion and movement, Disorders-weakening and paralysis of skeletal muscles.
Tetany occurs due to low Ca^{++} level in body fluid

160. (3)

161. (4)
Basophils – secretes heparin. RBC – formed in bone marrow after birth. WBC – formed in bone marrow and stored in lymph node .

162. (3)
Male chondrichthyes have claspers for copulation.

163. (3)

164. (2)
Adenylic acid or AMP is a nucleotide. Uridine & Guanosine-nucleosides .Guanine-N base.

165. (2)
SAN is the pacemaker of the heart as heart beat originates in SAN .It also maintains the rhythm of the heart.

166. (3)
Uric acid being insoluble in water makes the urine solid paste or pellets like.

167. (4)
Rh –ve person can take blood only from Rh –ve donor.

168. (1)

169. (2)
Gap junctions facilitate the cells to communicate with each other. Adhering junctions help to perform cementing to keep neighbouring cells together.

170. (2)
ANF- prevents conversion of angiotensinogen in blood to angiotensin. Aldosterone - enhances sodium reabsorption. Renin - causes vasoconstriction.

171. (3)
Vertebrate heart is myogenic i.e autoexcitable.

172. (2)
Loop of Henle along with vasa recta play a significant role in osmoregulation that is essential for water conservation.

173. (2)
Costal cartilage between ribs and sternum is synchondrosis i.e cartilaginous joint. Inter-vertebral disc between adjacent vertebra- cartilaginous joint. Pubic symphysis between coxal bones- cartilaginous joint

174. (3)
XI NCERT Excretory products and their elimination ,Disorders of excretory system.

175. (4)
XI NCERT Structural organization in animals, Cockroach, Reproductive system

176. (1)
XI NCERT Locomotion and movement, Types of skeletal muscles.

177. (2)
Blood is the only connective tissue devoid of fibers.

178. (3)
XI NCERT Breathing and exchange of gases, Respiratory volumes and capacities

179. (4)
XI NCERT Excretory products and their elimination, Physiology of excretion.

180. (3)
Henle's loop : Least reabsorption of the major substances from the glomerular filtrate.
Distal convoluted tubule : secretion of ions K^+ into the surrounding blood capillaries.
Efferent arteriole : Carries the blood away from the glomerulus towards renal vein

181. (4)
Vasopressin is also called ADH-antidiuretic hormone.

182. (3)
Ca^{2+} binds to a subunit of troponin that leads to conformation change in troponin & unmasks the thin filament.

183. (3)
Each meromyosin tail is called light meromyosin (LMM).

184. (3)
XI NCERT Excretory products and their elimination, osmoregulation

185. (4)
XI NCERT Body fluids and circulation, cardiac cycle

186. (2)
Coronary circulation is part of systemic circulation that starts at LV and reaches RA via body parts.

187. (4)
XI NCERT Body fluids and circulation, Blood groups

188. (1)
Muscle contraction is initiated by a signal sent by CNS via motor neuron. Unmasking of active site for myosin on actin filaments are activated.

189. (3)
Maintenance of pH of blood , secretion of Na^+ and removal of K^+ ions. Absorption of glucose and ammonia from the blood is done only by PCT. Allows reabsorption of urea to keep up osmolarity

190. (4)
XI NCERT Breathing and exchange of gases

191. (4)
Fore limbs have four digits without webs and hind limbs have five digits with webs

192. (2)
Glucose and amino acids being high threshold substances are actively reabsorbed from PCT. Cations too are actively reabsorbed.

193. (2)
Head of humerus bone articulates with glenoid cavity of scapula of pectoral girdle to form ball and socket joint.

194. (3)
Arthropoda is the largest phylum which includes insects, crustaceans, arachnids etc. They are Triploblastic, segmented and coelomate. They show direct or indirect development.

195. (3)
Eosinophilia means increased eosinophils count to fight against allergy or worm infections.

196. (2)
XI NCERT Excretory products and their elimination, diagram of Malpighian body

197. (2)
XI NCERT Locomtion and movement, Skeletal system,.Almost all mammals have 7 cervical vertebrae.

198. (3)

199. (2)
ECG measures the electrical activity of heart that helps in understanding the mechanical activity too. Flat line in between ECG means no electrical activity but cardiac cycle continues.

200. (4)