



SAMPLE PAPER

12th Pass Students

STREAM : [MEDICAL]

TIME : 2 Hours

FULL MARKS : 480

INSTRUCTIONS

[A] General

- 1. This Question paper contains THREE Parts, A, B and C (Physics, Chemistry, and Biology).
- 2. This Question Paper contains 20 pages including cover page.
- 3. This question paper contains total 120 questions (30 Question in Physics 30 in Chemistry and 60 Question in Biology)
- 4. The Question Paper has blank spaces at the bottom of each page for rough work. No additional sheets will be provided for rough work.
- 5. Blank papers, clip boards, log tables, slide rule, calculators, cellular phones, pagers and electronic gadgets, in any form, are NOT allowed.
- 6. The OMR (Optical Mark Recognition) sheet shall be provided separately.

[B] Answering on the OMR

- 7. In all the parts, each question will have 4 choices out of which only one choice is correct.
- 8. Darken the bubble with Ball Pen (Blue or Black) ONLY.

[C] Filling OMR

- 9. On the OMR sheet, fill all the details properly and completely, otherwise your OMR will not be checked.
- 10. Do not write anything or tamper the barcode in the registration no. box.

[D] Marking Scheme:

When he other blinds

11. For each question you will be awarded 4 marks if you darken the bubble corresponding to the correct answer ONLY and zero (0) marks if no bubble is darkened. In all other cases, minus one (–1) mark will be awarded.

Registration No			
NT DC-			

SECTION – A : PHYSICS

1. A ball is thrown vertically upward with a speed v from a height h meter above the ground. The time taken for the ball to hit ground is

(A)
$$\frac{v}{g}\sqrt{1-\frac{2gh}{v^2}}$$
 (B) $\frac{v}{g}\sqrt{1+\frac{2gh}{v^2}}$ (C) $\sqrt{1+\frac{2gh}{v^2}}$ (D) $\frac{v}{g}\left[1+\sqrt{1+\frac{2gh}{v^2}}\right]$

A particle moves along the positive branch of the curve $y = \frac{x^2}{2}$ where $x = \frac{t^2}{2}$ xand y are measured 2.

in metres and t in second .At t = 2 s, the velocity of the particle is (A) $2\hat{i} - 4\hat{j} m / s$

(B) $4\hat{i} + 2\hat{j}m/s$ (C) $2\hat{i} + 4\hat{j}m/s$ (D) $4\hat{i} - 2\hat{j} m / s$

(D)

(B) g and $\frac{g}{2}$

(D) $\frac{g}{2}$ and $\frac{g}{2}$

A ballon of weight w is falling vertically downward with a constant acceleration a (<g). The 3. magnitude of the air resistance is

(A) w (B) w
$$\left(1 + \frac{a}{g}\right)$$
 (C) w $\left(1 - \frac{a}{g}\right)$ (D) w $= \frac{a}{g}$

4. If the coefficient of friction between A and B is μ , the maximum acceleration of the wedge A for which B will remain at rest with respect to the wedge is

- (A) μg
- (C) $g\left(\frac{1-\mu}{1+\mu}\right)$
- 5. Two blocks of masses 2m and m are in equilibrium as shown in the figure. Now the string between the blocks is suddenly broken. The accelerations of the blocks A and B respectively at that instant are
 - (A) g and g
 - (C) $\frac{g}{2}$ and g
- 6. An object of mass m is tied to a string of length L and a variable horizontal force is applied on it which starts at zero and gradually increases until the string makes an angle with the vertical. Work done by the force F is







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and the second second

m B

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7. A car is circulating on a circular path of radius r. At some instant its velocity is v and rate of increase of speed is a. The resultant acceleration of the car will be

(A)
$$\sqrt{\frac{v^2}{a^2} + r^2}$$
 (B) $\sqrt{\frac{v^2}{r} + a}$ (C) $\sqrt{\frac{v^4}{r^2} + a^2}$ (D) $\left(\frac{v^2}{r} + a\right)$

8. A string of length I fixed at one end carries a mass m at the other end. The string makes $\frac{2}{\pi}$ rev/s around the axis through the fixed end as shown in the figure, the tension in the string is



(A) 16 ml
(B) 4 ml
(C) 8 ml
(D) 2 ml
(D

(A)
$$\frac{2as^2}{R}$$
 (B) $2as\left(1+\frac{s^2}{R^2}\right)^{1/2}$ (C) $as\left(1+\frac{s^2}{R^2}\right)^{1/2}$ (D) None of these

10. A simple pendulum is vibrating with an angular amplitude of 90° as shown in the figure. For what value of α, is the acceleration directed ?
 (i) Vertically upwards (ii) Horizontally (iii) Vertically downwards

(A)
$$0^{\circ}, \cos^{-1}\left(\frac{1}{\sqrt{3}}\right), 90^{\circ}$$
 (B) $90^{\circ}, \cos^{-1}\left(\frac{1}{\sqrt{3}}\right), 0^{\circ}$
(C) $0^{\circ}, \cos^{-1}\sqrt{3}, 90^{\circ}$ (D) $\cos^{-1}\frac{1}{\sqrt{3}}, 90^{\circ}, 0^{\circ}$

11. An object of mass 3 m splits into three equal fragements. The fragments have velocities V Ĵ and vî. The velocity of the third fragment is

(A)
$$v(\hat{J} - v\hat{i})$$
 (B) $v(\hat{i} - v\hat{J})$ (C) $-v(\hat{i} + \hat{J})$ (D) $\frac{v(i + J)}{\sqrt{2}}$

12. A body of mass m_1 moving with a velocity 3 ms⁻¹ collides with another body at rest of mass m_2 . After collision the velocities of the bodies are 2 ms⁻¹ and 5 ms⁻¹ respectively along the direction of motion of m_2 . The ratio $\frac{m_1}{m}$ is

(A)
$$\frac{5}{12}$$
 (B) 5 (C) $\frac{1}{5}$ (D) $\frac{12}{5}$



13. The moment of inertia of a semicircular ring of mass M and radius R about an axis which is passing through its centre and at an angle θ with the line joining its ends as shown in figure is



- (a) $\frac{MR^2}{4}at\theta = 0^{\circ}$ (b) $\frac{MR^2}{2}if\theta = 0^{\circ}$ (c) $\frac{MR^2}{2}if\theta = 45^{\circ}$ (d) $\frac{MR^2}{2}if\theta = 90^{\circ}$ (A) a, b, c (B) b, c, d (C) a, c, d (D) none
- A circular disc of mass m and radius R rests flat on a horizontal frictionless surface. A bullet, also of mass m and moving with a velocity v, strikes that disc and gets embedded in it.

The angular velocity with which the system rotates after the bullet strikes the hoop is (A) $\frac{v}{2R}$ (B) $\frac{v}{3R}$ (C) $\frac{2v}{3R}$ (D) $\frac{3v}{4R}$ From a circular disc of radius R and mass 9 M, a small disc of radius $\frac{R}{3}$ is removed from the disc, the moment of inertia of the remaining disc about an axis perpendicular to the plane of the disc and passing O is

- (A) $4MR^2$ (B) $\frac{40}{9}MR^2$ (C) $10 MR^2$ (D) $\frac{37}{9}MR^2$
- 16. Two spherical bodies of masses m and 5 m and radii R and 2R respectively are released in free space with initial separation between their centers equal to 12 R. If they attract each other due to gravitational force only then the distance covered by smaller sphere just before collision will be

(A) 5 R (B) 7.5 R (C)
$$\frac{2R}{3}$$
 (D) R

17. Two particles of mass m and M are initially at rest at infinite distance. Find their relative velocity of approach due to gravitational attraction when d is separation at any instant

(A)
$$\sqrt{\frac{2G(M+m)}{d}}$$
 (B) $\sqrt{\frac{G(M+m)}{d}}$ (C) $\sqrt{\frac{G(M+m)}{2d}}$ (D) $\sqrt{\frac{G(M+m)}{4d}}$

Space for Rough Work



15.

A solid sphere of uniform density and radius R applies a gravitational force of attraction equal to 18. F1 on a particle placed at a distance 2R from the centre of the sphere. A spherical cavity of radius $\frac{R}{2}$ is now made in the sphere as shown in the figure. The sphere with cavity now applies a gravitational force F_2 on the same particle. The ratio $\frac{F_2}{F}$ is 2R (A) $\frac{5}{9}$ (D) $\frac{7}{9}$ 3 4 (C) (B) 19. Gravitational field at the centre of a semicircle formed by a thin wire AB of mass M and length I is **▲** y (B) $\frac{GM}{\pi\ell^2}$ along y – axis (A) $\frac{GM}{\ell^2}$ along x – axis (C) $2\pi \frac{GM}{\ell^2}$ along x – axis (D) $\frac{2\pi GM}{\ell^2}$ along y-axis 20. The displacement equation of a particle is x = 3 sin 2t + 4 cos 2t. The amplitude and maximum velocity will be respectively (A) 5, 10 (B) 3, 2 (C) 4, 2 (D) 3.4 F(N) 21. A body of mass 0.1 kg executes simple harmonic motion (SHM) about x = 0 under the influence of a force shown in figure. The period of the SHM is 8.0 (A) 0.99 s (B) 0.52 s (C) 0.25 s +2.0 → x(m) (D) 0.31 s -2.0 -8.0

Space for Rough Work



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22. Two point masses of 3.0 kg and 6.0 kg are attached to opposite ends of horizontal spring whose spring constant is 300 Nm⁻¹ as shown in the figure. The natural vibration frequency of the system is approximately



24. A cylinder of radius r and of thermal conductivity K₁ is surrounded by a cylindrical shell of inner radius r and outer radius 2r made of a material of thermal conductivity K₂. The effective thermal conductivity of the system is

(A)
$$\frac{1}{3}(K_1 + 2K_2)$$
 (B) $\frac{1}{2}(2K_1 + 3K_2)$ (C) $\frac{1}{3}(3K_2 + 2K_1)$ (D) $\frac{1}{4}(K_1 + 3K_2)$

25. Three rods of same dimensions have thermal conductivities 3 K, 2 K, and K,. They are arranged as shown below





29. In Young's double slit experiment, white light is used. The separation between the slits is b. The screen is at a distance d(d>>b) from the slits. Some wavelengths are missing exactly in front of one slite. These wavelengths are

(A)
$$\lambda = \frac{b^2}{2d}$$
 (B) $\lambda = \frac{2b^2}{4}$ (C) $\lambda = \frac{b^2}{3d}$ (D) $\lambda = \frac{2b^2}{3d}$
30. Two ideal slits S₁ and S₂ are at a distance d apart and illuminated by light of wavelength λ passing through an ideal source slit S placed on the line through S₂ as shown. The distance between the planes of slits and the sources slit. Is D. A screen is held at a distance D from the plane of the slits. The minimum value of d for which there is darkness at O is
(A) $\sqrt{\frac{3\lambda D}{2}}$ (B) $\sqrt{\lambda D}$
(C) $\sqrt{\frac{\lambda D}{2}}$ (D) $\sqrt{3\lambda D}$ (D) $\sqrt{3\lambda D}$

Space for Rough Work



SECTION – B : CHEMISTRY

31.	The equation which is balanced and repre	esents the incorrect product(s) is :
	(A) $Ll_2O + 2KCI \rightarrow 2LICI + K_2O$	
	(B) $\left[\operatorname{CoCl}(\operatorname{NH}_3)_5\right]^+ + 5\mathrm{H}^+ \rightarrow \mathrm{Co}^{2+} + 5\mathrm{NH}^{-1}$	H <mark>4</mark> + CI [−]
	(C) $\left[Mg(H_2O)_6\right]^{2+} + (EDTA)^{4-}$ excess	^{NaOH} →[Mg(EDTA)] ⁻² + 6H ₂ O
	(D) $CuSO_4 + 4KCN \rightarrow K_3[Cu(CN)_4] + K_3$	2 ₂ SO ₄
32.	The colour of light absorbed by an aqueo	us solution of CuSO ₄ is
33	(A) Orange-red (B) Blue-green	(C) Yellow (D) Violet
00.	K_{a} [Fe(CN _a)](K), [Co(NH _a) _a]Cl _a (L), Na _a [C	$co(ox)_{a}$ (M), [Ni(H _a O) _a] Cl _a (N)
	$K_{a}[Pt(CN_{4})](O), [Zn(H_{a}O)_{a}](NO_{a})_{a}(P)$	
	the diamagnetic complexes are	
	(A) K, L, M, N (B) K, M, O, P	(C) L, M, O <mark>, P</mark> (D) L, M, N, O
34.	Extraction of metal from the ore cassiterit	e does not involves
	(A) carbon reduction of an oxide ore	(B) sel <mark>f-reacti</mark> on of a sulphide ore
	(C) re <mark>moval of c</mark> opper im <mark>purity</mark>	(D) r <mark>emova</mark> l of iron impurity
35.	Extraction of copper from copper pyrite (CuFeS ₂) does not involves
	(A) crushing followed by con <mark>centra</mark> tion o	f the ore by froth-flotation
	(B) removal of iron as slag	
	(C) self-reduction step to produce 'blister	copper' following evolution of SO ₂ .
	(D) refining of 'blister copper' by carbon	reduction
36.	Which of the following reactions produces	N ₂ O is
	(i) Zn+dil.HNO ₃ \longrightarrow	(ii) $NH_4NO_3 \xrightarrow{\Delta} \rightarrow$
	(iii) $SnCl_2 + HNO_3 \longrightarrow$	(iv) $NO + SO_2 + H_2O \longrightarrow$
	(v) $NO + H_2S \longrightarrow$	(vi) $NH_2OH \cdot HCI + NaNO_2 \longrightarrow$
	(A) only (i) & (ii)	(B) only (i),(ii) & (iii)
	(C) only (i),(ii),(iv) & (v)	(D) (i), (ii), (iii), (iv), (v) & (vi)
	Space fo	r Rough Work







(D) All the above

Space for Rough Work







[10]

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50.	Which of the following is	having maximum ato	ms		
	(A) 9.8g H ₂ SO ₄		(B)	342 g Sucrose	
	(C) 180 g Glucose		(D)	6.72 Litres of Buta	ne gas at NTP
51.	Which of the following is	not a state function?	•		
	(A) ∆S	(B) ∆G	(C)	ΔH	(D) Q
52.	What is $[H^{\dagger}]$ in mol/L of a CH ₃ COOH = 1.8 × 10 ⁻⁵	a solution that is 0. <mark>20</mark>	M in CH	l₃COONa and 0.10	M in CH_3COOH ? K _a for.
	(A) 3.5×10 ⁻⁴	(B) 1.1×10 ^{−5}	(C)	1.8×10 ^{−5}	(D) 9.0×10 ⁻⁶
53.	The freezing point depresent $45.0 \text{ g H}_2\text{O}$, the freezing	ession constant for w point is changed by -	ater is 1 -3.82°C.	.86° Cm ⁻¹ . If 5.00 Calculate the van't	g Na ₂ SO ₄ is dissolved in Hoff factor for Na ₂ SO ₄ .
	(A) 2.05	(B) 2.63	(C)	3.11	(D) 0.381
54.	Number of neutrons in a be	parent nucleus X whi	ich gives	₇ N ¹⁴ after two succ	cessive β -emission would
	(A) 6	(B) 7	(C)	8	(D) 9
55.	K _{SD} of CuS, Ag₂S and	HgS are 10 ⁻³¹ , 10 ⁻⁴⁴	and 10 ⁻	⁻⁵⁴ respectiv <mark>ely. S</mark> e	lect the correct order for
	their solubility in water.				
	(A) $Ag_2S > HgS > CuS$		(B)	HgS > CuS > Ag ₂ S	5
	(C) HgS > Ag ₂ S > CuS		(D)	Ag₂S > Cu <mark>S > H</mark> gS	6
56.	The standard oxidation respectively. The standa	potentials of C <mark>u/Cu³ rd elect</mark> rode potential	²⁺ and (of Cu ⁺ /(Cu ⁺ /Cu ²⁺ are E = · Cu wou <mark>ld be :</mark>	– 0.34 V and – 0.16 V
	(A) 0.18V	(B) 0.52V	(C) (0.82V	(D) 0.49V
57.	Which of the following ha	as s <mark>mallest</mark> numbe <mark>r of</mark>	f molecu	les?	
	(A) 0.1 moles of CO ₂ g	as	(B)	1 <mark>1.2 L o</mark> f CO ₂ gas	at NTP
	(C) 22.2 g of CO_2 gas		(D)	22.4×10 ³ mL of C	O₂ gas at NTP
58.	The average atomic weil as compared to the othe	ght of a <mark>n ele</mark> ment A_i r isotop <mark>e of mass 52 i</mark>	is 51.7. 1 is	The abundance of li	ghter isotope of mass 50
	(A) 15%	(B) 45 <mark>%</mark>	(C)	50%	(D) 85%
59.	8g of a radioactive subs substance is:	stance is reduced to	0.5g aft	er on <mark>e hour. The h</mark>	alf-life of the radioactive
	(A) 15 min	(B) 30 min	(C)	45 min	(D) 10 min
60.	For a reaction $\Delta H =$ be spontaneous ?	+3 kJ and $\Delta S = +$	- 10 J/ł	K at which tempe	rature this reaction will
	(A) 210 K	(B) 200 K	(C)	273 K	(D) 373 K

_____ [11]



SECTION – C : BIOLOGY

61.	Hart the f	Harbarium is one of the important tools that were used for identification of plants. Which one of the following is correct regarding it ?									
	(A)	It provides information	on ab	out the	e local <mark>flora a</mark> i	nd fau	na of that region.				
	(B)	The information provided by them are useful in locating wild varieties and relatives of economically important plants									
	(C)	The new material added to the collection of herbarium is known as acquisition.									
	(D)	It provides living pla	It provides living plant material for systematic work								
62.	An i	nsectivorous angiosp	erm i	n whicl	h roots are ab	osent i	s				
	(A)	Utricularia	(B)	Rhizo	phora	(C)	Nepenthes	(D)	Dracena		
63.	The com	organic substance p panion cells by	oresei	nt in m	esophyll cell	s are	passed into the	sieve tu	bes through their		
	(A)	an active transport	(B)	simple	e diffusion	(C)	facilitate <mark>d diffu</mark> s	ion <mark>(D) (</mark>	<mark>Osmos</mark> is		
64.	Gutt	ation takes plac <mark>e thro</mark>	ough								
	(A)	stomata	(B)	hydatl	hodes	(C)	water po <mark>re</mark>	(D)	both (B) and (C)		
65.	Whi	ch enzyme of TC <mark>A/Kı</mark>	rebs' (cycle is	s no <mark>t present</mark>	t in mitochondrial matrix ?					
	(A)	Malate dehydrogena	ase			(B)	Citrat <mark>e synth</mark> ase	e			
	(C)	Aconitase				(D)	Succinate dehy	drogena	se		
66.	Whi	ch a <mark>mong the f</mark> ollowir	ng is a	an inve	erted p <mark>yramid</mark>	?					
	(A)	Pyramid of energy in	n gras	sland		(B)	Pyramid of num	ber in p	ond ecosystem		
	(C)	Pyramid of number	in gra	ssland	l	(D)	Pyramid of biom	nass in a	an aquatic system		
67.	Mate	ch column I with colu	mn II	and se	elect the corre	ect opt	ion				
	Colu	umn I					Column II				
	1.	Golden rice				p.	High protein cor	ntent			
	2.	Brassica napus				q.	Cry 1 Ab				
	3.	Bt corn				r.	β –carotene				
	4.	Transgenic potato				s.	Hirudin				
	(A)	1–a, 2–p, 3–r, 4–q				(B)	1–r, 2–s, 3–q, 4	—р			
	(C)	1–q, 2–r, 3–p, 4–s				(D)	1–q, 2–s, 3–p, 4	1—r			

Space for Rough Work



[12]

- 68. Read the given statements.
 - In prokaryotes, the photosynthetic pigments are found in the _____. (i)
 - DCMU is a herbicide which blocks (ii)
 - Select the correct option which correctly fills the two blanks.

	(i)	(ii)
(A)	Thylakoid	PS II
(B)	Chloroplast	PS I
(C)	Thylakoid	PS I
(D)	Chloroplast	PS II

- 69. The thylakoids of chloroplast are removed and kept in a culture medium containing carbon dioxide and water. If the set up is exposed to light, hexose sugars are not formed as end products. The most appropriate reason for this is that
 - (A) carbon assimilation cannot take place in the presence of light
 - (B) the pigment systems are not working
 - (C) the enzymes are not available
 - (D) the light trapping device is non-functional
- 70. What does the following cross represents ?



- \downarrow
- F₁

↓Doubling

AAAABB

- (A) Autopolyploidy
- (C) Autoallopolyploidy
- (B) Allopolyploidy (D) Spontaneous mutation
- 71. Match the organisms given in column I with their common names in column II and choose the correct option.

Column-I

- A. Chondrus
- Β. Sphagnum
- Cladonia C.
- D. Selaginella
- (A) A-(iii), B-(i), C-(iv), D-(ii)(B)
- (C) A-(iv), B-(i), C-(iii), D-(ii)(D)

- - Column-II
- (i) Peat moss
- Spike moss (ii)
- (iii) Irish moss
- (iv) Reindeer moss
- A-(iii), B-(ii), C-(iv), D-(i)
- A-(i), B-(iv), C-(ii), D-(iii)

- 72. Pick out the wrong statements.
 - The stamens in the Family Cucurbitaceae are synandrous, extrose and monothecous (i)
 - (ii) The entire shoot is modified for assimilatory function in cladodes.
 - (iii) Adventitious roots of Pandanus is an example of clinging roots
 - (iv) Meristematic tissue is a group of thin-walled isodiametic cells which are capable of cell division.
 - (A) (i) and (ii) only (B) (iii) and (iv) only (C) (ii) and (iii) only (D) (i) and (iv) only

Space for Rough Work



[13]





INV	ENTO	RS TALENT SEARCH	EXAN	1 (ITSE) _12 th App	earing	/Pass		[15]				
81.	A st	age of hydrosere in v	which	Hydrilla and Potam	nogeto	on are found.						
	(A)	Submerged stage			(B)	Floating stage						
	(C)	Reed swamp stage			(D)	March meadow s	stage					
82.	The	double stranded DN	A has	s 15% of cytosine.	The pe	ercentage of adenin	e in DNA wil	l be				
	(A)	35%	(B)	30%	(C)	45%	(D) 70%					
83.	Triti	cum is known as fest	tucoid	grass becau <mark>se</mark>								
	(A)	vascular bundle is s	surrou	inded by sing <mark>le she</mark>	ath of	⁻ compactly arrange	d parenchyn	na cells				
	(B)	(B) vascular bundle is chlorenchymatous										
	(C)	(C) vascular bundle is sclerenchymatous										
	(D)	vascular bundle is s	surrou	inded by double sh	eath c	<mark>of comp</mark> actly arrange	ed paranchy	ma cells				
84.	Lyso	ozyme is not present	in									
	(A)	saliva	(B)	tears	(C)	tissue fluid	(D) swea	ıt				
85.	Warm blooded animals of colder areas have large body size compared to animals of warmer areas. This is											
	(A)	Allen's rule			(B)	Gloger's <mark>rule</mark>						
	(C)	Bergamann's rule			(D)	Jordan's ru <mark>le</mark>						
86.	Which of the followin <mark>g hor</mark> mones is used to prevent the sprouting o <mark>f pota</mark> toes ?											
	(A)	2–4–dichloroph <mark>eno</mark>	xy ac	etic acid	(B)	2, 4, 5–tr <mark>ichlor</mark> op	henoxy acet	c acid				
	(C)	Indole–3–Acetic aci	id		(D)	2–meth <mark>yl–4–c</mark> hlo	rophenoxy a	cetic acid				
87.	Nodule formation in roots of leguminous plants is stimulated by ———————————————————————————————————											
	(A)	cyto <mark>kinin, gibbe</mark> rellii	n		(B)	auxin, cytokinin						
	(C)	auxi <mark>n, ethylen</mark> e			(D)	<mark>gibbere</mark> llin, ethyle	ene					
88.	Sele	ect the incorrect state	ement	from the following.								
	(A)	Water is absorbed atm	by a	system having DPI	D = 1	atm from another	system hav	ing DPD= 5				
	(B)	The values of turgo	r pres	sure and solute po	tentia	l are same in case o	of fully turgid	cell.				
	(C)	DPD becomes 0 in	case	of a flaccid cells.								
	(D)	Osmotic potential is molecules per mola	s the r Il volu	eduction in free en me.	ergy o	of water due to decr	ease in num	ber of water				
89.	Whi	ch of the following pa	airs is	incorrectly matche	d ?							
	(A)	Kinetin	-	adenine derivative	•							
	(B)	Gibberelline	-	terpen <mark>es</mark>								
	(C)	Ethylene	-	gases								
	(D)	ABA	-	indole compounds	6							
90.	Flov	vers of Kigelia pinnat	a hav	e abundant nectar	and p	rominent stamens.	They are pol	linated by				
	(A)	insects	(B)	winds	(C)	birds	(D) bats					



91. This diagrammatic sectional view is the representation of

)	
	(A) Coelomate (B) Pseudocoelomate	(C)	Acoelemate	(D) Both 2 and 3
92.	True segmentation or metamerism means	()		
	(A) Body is externally and internally divided into a	segme	ents	
	(B) Each segment of body have serial repetition	of at le	east some organs	
	(C) Both (A) and (B)			
	(D) There is no repetition of any organ in success	sive se	egments.	
93.	Select the incorrect statement.			
	(A) In Urochordata, notochord is present only in I	larval t	ail.	
	(B) In Cephalochordate notochord is present in their life.	head	region only and is	persistent throughout
	(C) In vertebrata, notochord is replaced by vertek	oral co	lumn in ad <mark>ult.</mark>	
	(D) All vertebrates are chordates but all chordate	s are i	not vertebr <mark>ates.</mark>	
94.	Substrate concentration at which reaction attains h	nalf of	its maxim <mark>um ve</mark> loci	ty is called
	(A) 1/2 V _{max} (B) [S] 1/2	(C)	K _{max}	(D) K _m
95.	Increased liquidity of the faecal discharge is know	n as		
	(A) Indigestion (B) Constipation	(C)	Diarrhoea	(D) Vomiting
96.	The causes of indigestion are			
	(A) Inadequate enzyme secretion	(B)	Over eating and sp	<mark>picy food</mark>
	(C) Food poisoning and anxiety	(D)	All of these	
97.	A feeling of nausea before	(2)		
~~	(A) Indigestion (B) Constipation	(C)	Diarrhoea	(D) Vomiting
98.	Which of the following is not a correct matching g	roup o	f developmental fat	es of the primary germ
	layers?			
	(A) Ectoderm : Epidermis, Central	nervo	us system, sense o	rgans, neural crest
	(B) Mesoderm Skeleton, muscles,	, DIOOU and ra	vessels, neart, live	r, gonads
	(C) Endoderm . Lining of digestive	anu re	spiratory tracts, par	licieas
00	(D) Ecloderin . Pinear gland, pitulat	ary gia	nu, aurenai meuula PPCa, roopootivolv	d 0
99.	(Λ) 07% 70% (B) 07% 7%	(C)	70% 20 25%	י (ח) 07% 20 25%
100	How much percent of Ω_{2} and Ω_{2} is carried in a d	issolve	d state through the	D) 97 /0, 20-25 /0
100.	(A) 7% 70% (B) 3% 7%	(C)	7% 3%	(D) 7% 20–25%
101	a contain a very high concentration of ca	arboni	c anhydrase and m	inute quantities of the
	same is present in thebtoo.		e annyaraee ana n	
	Fill in the blanks.			
	(A) a–RBC, b–Plasma	(B)	a–Plasma, b–RBC	;
	(C) a–Hb, b–RBC	ÌD)	a–RBC, b–Serum	

[16]



102. Recognize the figure and choose appropriate match.



Space for Rough Work



105. Recognize the figure and give appropriate labelling from given options.





110. Recognize the figure and find the correct labelling.





INV	ENTO	RS TALENT SEAR	CH EXAM	1 (ITS	E) _12 th A	ppearing	/Pass				[20]
115.	Whi	ch part of the brai	n conne	cted to	the spina	I cord ?					
	(A)	Pons				(B)	Cerebell	um			
	(C)	Medulla				(D)	Cerebral	aquedu	ıct		
116.	Holo	oblastic cleavage	results ir	ı							
	(A)	Formation of a s	ymmetrio	cal bla	stula comp	posed of o	cells of app	oroxima	tely ec	lual size	
	(B) Formation of an asymmetrical blastula composed of cells of approximately unequal siz										
	(C)	Cell division of c	<mark>ells</mark> only	near t	he animal	pole					
	(D)	Cell division of o	<mark>nly th</mark> e c	ells ne	ear the veg	getal pole					
117.	Whi tran	ch contraceptive smission of sexua	methoo Illy trans	d is e mitted	effective a diseases?	at prever ?	nting fertil	ization	and	protectir	ig agains
	(A)	Oral contraceptiv	/es			(B)	Diaphrag	jms			
	(C)	Nirodh				(D)	Intrauter	ine devi	ce (IU	D)	
118.	The	wall layer of eye	ball whic	h look	s bluish in	colour					
	(A)	Sclera	(B)	Chor	oid	(C)	Cornea		(D)	Retina	l
119.	vvni	ch of the following	structur		is the birth	a canal ?	d				
	(A)	a and b	(B)	b ano	d c	(C)	c and d		(D)	a and	d
120.	Ova	ries are located o	ne on ea	ic <mark>h sid</mark>	e of						
	(A)	Lower pelvic reg	ion			(B)	Lower at	odomen			
	(C)	Upper abdomen				(D)	Lower th	oracic r	egion		

