## SAMPLE QUESTION

## PHYSICS + CHEMISTRY + MATHS + BIOLOGY

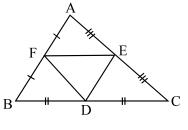
## PHYSICS

	PHISICS						
1.	Force F acts on a body such that force F makes an angle $\theta$ with the horizontal direction and the body is lso displaced through a distance S in the horizontal direction, then the work done by force is :						
	A) FS	B) FScosθ	C) $FSsin\theta$	D) zero			
2.	Work done by the force	Work done by the force of gravity, when a body is lifted to height 'h' above the ground is :					
	A) zero	B) positive	C) negative	D) none of these			
3.	The work done in holdin	ng 15Kg suitcase while wa	iting for a bus for 15 minut	tes is:			
	A) 225 J	B) 13500J	C) 1500 J	D) zero			
4.	If a body is moving on a	moving on a circular path then work done by the centripetal force will be :					
	A) zero	B) positive	C) negative D) none of the above				
5.	Work done by conservat	tive force in moving a com	plete round is :				
	A) $W_1$	B) $W_2$	C) O	D) None of these			
6.	If 784 J of work was don $g = 9.8 \text{ms}^{-2}$ )	ne for lifting 20kg mass, th	en calculate the height thr	ough which it was lifted (take			
	A) 2m	B)4m	C) 5m	D) 6m			
7.	Find out the equation of	relationship between forc	e and energy :				
	A) $\frac{\frac{1}{2}mv^2}{s}$	B) $\frac{\frac{1}{2}mu^2}{S}$	C) $\frac{\frac{1}{2}mv^2 - \frac{1}{2}mu^2}{S}$	D) $\frac{\frac{1}{2}mv^2 + \frac{1}{2}mu^2}{S}$			
8.	If a stone of mass 'm' fal	lls a vertical distance 'd' th	e decrease in gravitational	l potential energy is :			
	A) mgd	B) $\frac{Mg}{d}$	C) $\frac{Mg^2}{2}$	D) $\frac{Mg}{d^2}$			
9.	The potential energy of a freely falling object decreases continuously. What happens to the loss of poten- tial energy?						
	A) It is continuously converted into sound energy						
	B) It is continuously converted into kinetic energy						
	C) It is continuously destroyed						
	D) None of these						
10.	. The value of g on moon is 1/6th of the value of g on the earth. A man can jump 1.5m high on the earth. On moon he can jump up to a height of :						
	On moon he can jump u	p to a neight of .					
	A) 9m	B) 7.5 m	C) 6m	D) 4.5 m			
11.	A)9m		,	,			
11.	A)9m	B) 7.5 m	,	,			
	A) 9m The kinetic energy of an A) k	B) 7.5 m object is k. If its velocity i	s doubled then its kinetic e C) $\frac{k}{2}$	energy will be : D) 4k			
	A) 9m The kinetic energy of an A) k	B) 7.5 m object is k. If its velocity i B) 2k	s doubled then its kinetic e C) $\frac{k}{2}$	energy will be : D) 4k			
12.	A) 9m The kinetic energy of an A) k Two bodies of mass 1kg A) 4 : 1	B) 7.5 m object is k. If its velocity i B) 2k g and 4kg possess equal m	s doubled then its kinetic e C) $\frac{k}{2}$ omentum. The ratio of the C) 2 : 1	energy will be : D) 4k eir K.E D) 1 : 2			

14.	What horse power engine is required to lift 18.24 quintals of coal per minute from a mine 50m deep? (Take $g = 10 \text{ms}^{-1}$ )					
	A) 20 hp	B) 20.6 hp	C) 20.5 hp	D) 20.4 hp		
15.	The heart does 2.5J of work in each heart beat. How many times per minute does it beat, if its power is 4 watt.					
	A) 96 times	B) 60 times	C) 120 times	D) 70 times		
		CHEM	ISTRY			
16.	An isotone of ${}^{76}_{32}$ Ge is :					
	A) $_{32}^{77}$ Ge	B) $^{77}_{33}$ As	C) $^{77}_{34}$ Se	D) <sup>81</sup> <sub>36</sub> Kr		
17.	Rutherfords alpha scatter	ring experiment eventually	lead to conclusion that :			
	A) Mass and energy are	erelated				
	B) Electron occupy emp	ty space around the nucleu	18			
	C) Neutrons are buried of	leep in the nucleus				
	D) All of these					
18.	In which of the following proton is less than the nu		greater than the number of	neutrons, but the number of		
	A) $D_3O^+$	B) SO <sub>2</sub>	C) H <sub>2</sub> O	D) OH⁻		
19.	The total number of neut	tron present in ${}^{24}_{12}$ Mg is :				
	A) 12	B) 13	C) 14	D) 10		
20.	Bohr orbits are called sta	ationary state because :				
	A) Electrons in them are	stationary				
	B) Their orbits have fixed radii					
	C) The electrons in them	have fixed energy				
	D) All are correct					
21.	Atomic number of an ele	ement is equal to the numb	per of :			
	A) electrons	B) protons				
	C) neutrons	D) either electrons or pro	otons			
22.	Deflection back of $\alpha - p$	articles on hitting thin foil	of gold shows that :			
	A) Nucleus is heavy B) Nucleus is small					
	C) Both A & B D) Electron create hinderance in the movement of $\alpha$ – particles					
23.	The atomic mass of an element is 19. The second shell of its atom contain 7 electrons. The number of neutrons in its nucleus is :					
	A) 10	B) 9	C) 7	D) 12		
24.	The shape of 'P' orbital	is :				
	A) Sphere	B) Dump bell	C) Oval	D) None		
25.	Which of the following s	shows radio activity :				
	A) Co	B) Fe	C) Cu	D)Zn		
26.	The valency of Na is :					
	A) 0	B) 1	C) 2	D) 3		
27.	The correct electronic co					
	A) 1s <sup>0</sup>	B) 1s <sup>2</sup>	C) 1s <sup>3</sup>	D) 1s <sup>1</sup>		
28.		ectron present in 'N' shell is				
	A) 18	B) 32	C) 2	D) 8		

29.	The valency of ammonium ion is :					
	A) 1 E	3)3	C) 4	D) 5		
30.	The increasing order of ma	ss is :				
	A) $p > e > n$ E		C) $n > p > e$	D) none		
		BIOL	· •	,		
31.	Select which is not related	to health				
	A) Hygeine	B) Colour	C) Food	D) Habit		
32.	The non - infections disease is					
	A)AIDS	B)Arthritis	C) T.B	D) Mumps		
33.						
	A) Cancer	B) Nephritis	C) Haemophilia	D) Malaria		
34.	An allergic disease is					
	A) Scurvey	B) Rickets	C) Hay fever	D) Ring worm		
35.	The 'mumps' is caused by	y				
	A) Bacteria	B) Fungi	C) Protozoa	D) Virus		
36.	The food poisoning is caused by					
	A) Anabaena	B) Filaria	C) Clostridium	D)Ascaris		
37.	The ringworm is a					
	A) Bacteria	B) Fungi	C) Virus	D) Rickettsia		
38.	The first antibiotic was					
	A) Penicillin	B) OPV	C) DTB	D) Hepatitis - B		
39.	HIV is not transfer throug	h				
		B) Sexual contact	C) Water	D) By birth		
40.	The world health organisation is in					
	A) England	B) Ireland	C) Switzerland	D) Singapore		
41.	Cancer can be caused by					
		B) U-V rays	C) HIV	D) Temperature		
42.	The autibody against virus formed in our body is					
		B) Intrones	C) melatonin	D) interleukin		
43.	The test for AIDS is					
	A) DTP	B) PCR	C) ELISA	D) BCG		
44.	The lymphocytes are prod					
	·	B) brain	C) bone marrow	D) kidney		
45.	In man, leprosy is caused	-				
	A) mycoplasma	B) mycobacterium	C) Nesseria	D)Agrobacteria		
		MATHEN				
46.	When the diagonals of a pa	arallelogram are perpend	licular to each other, then	it is called a :		

- 46. When the diagonals of a parallelogram are perpendicular to each other, then it is called a :A) SquareB) RectangleC) RhombusD) Parallelogram
- 47. In figure, if  $ar(\Delta ABC) = 28cm^2$  then ar(AEDF) =

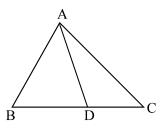


A) 21 cm<sup>2</sup>

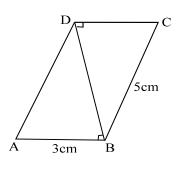
B) 18 cm<sup>2</sup>

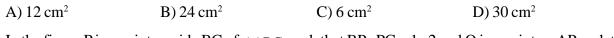
C) 16 cm<sup>2</sup>

D) 14 cm<sup>2</sup>



A) m: n B) (m+1): n C) m: (n+m) D) n: m 49. In the figure AD || BC, BD is a diagonal. Then area of quadrilateral ABCD is :

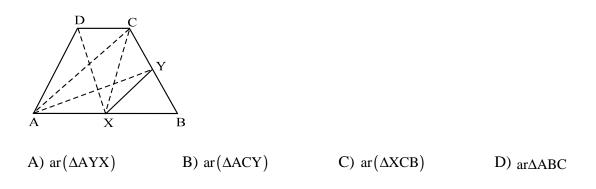




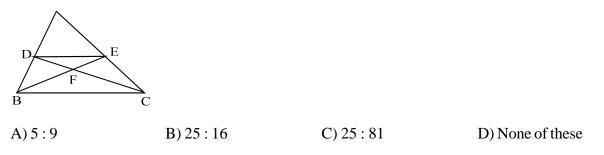
50. In the figure P is a point on side BC of  $\triangle ABC$  such that BP : PC = 1 : 2 and Q is a point on AP such that PQ : QA = 2 : 3. Then ar ( $\triangle AQC$ ) : ar ( $\triangle ABC$ ) is :



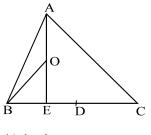
51. ABCD is a trapezium with AB  $\parallel$  DC. A line parallel to AC intersects AB at X and BC at Y. Then ar( $\triangle$ ADX) is equal to :



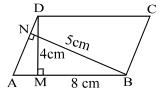
52. In the given figure DE || BC and AD : DB = 5 : 4. Then  $\frac{\text{area} (\Delta \text{DFE})}{\text{area} (\Delta \text{CFB})}$ 



- 53. Given two triangles, which are similar, of which has twice the perimeter of the other. By what factor is the area of the larger triangle bigger than the smaller.
  - A) 2 B) 4 C)  $\sqrt{2}$  D)  $2\sqrt{2}$
- 54. D is the mid point of side BC of  $\triangle ABC$  and E is the midpoint of BD. If O is the midpoint of BD. If O is the midpoint of AE, then ar( $\triangle BOE$ ): ar( $\triangle ABC$ ) =



- A) 1:4 B) 2:4 C) 1:8 D) None
- 55. In a parallelogram ABCD, AB = 8 cm. The altitudes to sides AB and AD are respectively 4cm and 5cm. Then AD =



	A) 6.8 cm	B) 6.4 cm	C) 4.6 cm	D) None of these			
56.	The sides BA and CD of	The sides BA and CD of a cyclic quadrilateral ABCD are produced to meet at P. The sides DA and CB					
	are produced to meet at	Q. If $\angle ADC = 85^{\circ}$ and $\angle I$	BPC = $40^{\circ}$ then $\angle COD$ eq	uals :			
	A) 50°	B) 45°	C) 30° D) 75°				
57.	57. In a circle of radius 10cm, the length of chord whose distance is 6cm from the centre is :						
	A) 4 cm	B) 5cm	C) 8 cm	D) 16 cm			
58.	8. In the given figure, if C is the centre of the circle and $\angle PQC = 25^{\circ}$ and $\angle PRC = 15^{\circ}$ , then $\angle QCR$ is equa						
	to:						
	A) 40°	B) 60°	C) 80°	D) 120°			
59.	59. In a cyclic quadrilateral, if $\angle A - \angle C = 70^\circ$ then the greater of the angles A and C is equal to :						
	A) 95°	B) 105°	C) 125°	D) 115°			

60. O is the centre of the circle BC is a chord of the circle and point A lies on the circle. If  $\angle BAC = x$ ,  $\angle OBC = y$  then x + y =



A) > 90°

B) =90°

C) <90°

D) >180°

## SAMPLE OUESTION- KEY Class : IX

		PHYSICS + CHEMISTRY + MATHS + BIOLOGY					
PHYSICS		<u>CHEMI</u>	<u>STRY</u>	BIO	<u>LOGY</u>	MAT	THEMATICS
1.	В	16. B	}	31.	В	46.	С
2.	С	17. B	5	32.	В	47.	D
3.	D	18. D	)	33.	С	48.	С
4.	А	19. A	L Contraction of the second se	34.	С	49.	А
5.	С	20. B	5	35.	D	50.	А
6.	В	21. D	)	36.	С	51.	В
7.	С	22. C		37.	В	52.	С
8.	С	23. A	L Contraction of the second se	38.	А	53.	В
9.	В	24. B	5	39.	С	54.	С
10.	А	25. A	L .	40.	С	55.	В
11.	D	26. B	}	41.	В	56.	А
12.	А	27. A	L .	42.	А	57.	D
13.	С	28. B	5	43.	С	58.	С
14.	D	29. A	L	44.	С	59.	С
15.	А	30. C	1	45.	В	60.	В