FIITJEE Talent Reward Exam-2014

for student presently in

Class 11

PAPER–2

Time: 3 Hours ***Maximum Marks: 207***

Instructions:

Caution: Question Paper CODE as given above MUST be correctly marked in the answer OMR sheet before attempting the paper. Wrong CODE or no CODE will give wrong results.

1. This Question paper consists of 2 sections. All questions will be multiple choice single correct out of four choices with marking scheme in table below:

Section	Subject	Question no.	Marking Scheme for each question	
			correct answer	wrong answer
SECTION – I	Physics	Q. 1 to 8	+3	–1
	Chemistry	Q. 9 to 16	+3	–1
	Mathematics	Q. 17 to 24	+3	–1
SECTION – II	Physics	Q. 25 to 34	+3	–1
		Q. 35 to 37	+5	–2
	Chemistry	Q. 38 to 47	+3	–1
		Q. 48 to 50	+5	–2
	Mathematics	Q. 51 to 60	+3	–1
		Q. 61 to 63	+5	–2

2. Answers have to be marked on the OMR sheet.
3. The Question Paper contains blank spaces for your rough work. No additional sheets will be provided for rough work.
4. Blank papers, clip boards, log tables, slide rule, calculator, cellular phones, pagers and electronic devices, in any form, are not allowed.
5. **Before attempting paper write your Registration Number, Name, Answer Sheet No.** and **Test Centre** in the space provided at the bottom of this sheet.

Note: ***Please check this Question Paper contains all 63 questions in serial order. If not so, exchange with the correct Question Paper.***

Registration Number : _____

Name of the Candidate : _____

Answer Sheet No. : _____

Test Centre : _____

Section-I Physics

Comprehension Passage Comprising of 3 Questions (1 – 3)

Straight Objective Type

A 2 kg block hangs without vibrating at the bottom end of a spring with a force constant of 800 N/m. The top end of the spring is attached to the ceiling of an elevator car. The car is rising with an upward acceleration of 10 m/s^2. When the acceleration suddenly ceases at time t = 0, the car moves upward with constant speed. (g = 10 m/s^2)

1. What is the angular frequency of oscillation of the block after the acceleration ceases?
   (A) $10\sqrt{2}$ rad/s (B) 20 rad/s
   (C) $20\sqrt{2}$ rad/s (D) 32 rad/s

2. The amplitude of the oscillation is
   (A) 7.5 cm (B) 5 cm
   (C) 2.5 cm (D) 1 cm

3. The initial phase angle observed by a rider in the elevator, taking downward direction to be positive and positive extreme position to have $\frac{\pi}{2}$ phase constant, is equal to
   (A) zero (B) $\frac{\pi}{2}$ rad
   (C) π rad (D) $\frac{3\pi}{2}$ rad

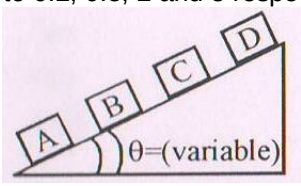
Space for rough work

Comprehension Passage Comprising of 5 Questions (4 – 8)

Straight Objective Type

Frictional forces are forces in nature that are not always unnecessary. For example, the force of friction between the tires of a car and the road is the reason why the tires can grip without slipping. The frictional force between two surfaces depends on the nature of the materials with which the surfaces are made. Such dependences are exhibited through the use of a dimensionless quantity known as the coefficient of friction. If the two surfaces in contact are not moving with respect to each other, the maximum force of friction acting between the surfaces is proportional to the normal force between the two surfaces, with the constant of proportionality being the coefficient of friction μ_s.

In the given figure, the coefficients of friction for contact between the inclined surface and the four boxes A, B, C and D are equal to 0.2, 0.5, 2 and 5 respectively. All the boxes have same mass (M).



4. A person has to push the four boxes on the incline. What is the most efficient way to arrange the boxes to minimize the force required to push?
   (A) Glued the boxes one above the other with box A at the bottom
   (B) Glued the boxes up one above the other with box D at the bottom
   (C) Align the boxes touching each other with box B in front
   (D) Align the boxes touching each other with box C in front

5. The box A is glued to the top of box B and others are removed. What is the effect on the maximum angle that the incline can have before the two boxes slide down by themselves? Compare it to the case when A alone is kept on the incline.
   (A) It would remain the same
   (B) It would decrease by a factor of 1.5
   (C) it would increase
   (D) It would decrease by a factor other than 1.2

6. If all the blocks placed on incline in order ABCD with D at top placed in contact initially and released from rest, then at the instant normal force between -
   (A) A and B = 2 $mg\sin\theta$
   (B) B and C = 3 $mg\sin\theta$
   (C) C and D = 4 $mg\sin\theta$
   (D) C and D = zero

7. If all the blocks placed on incline in order DCBA with A at top of incline placed in contact and released from rest, then after that instant
   (A) All the blocks can not be in contact.
   (B) All the blocks will always in contact.
   (C) Contact between blocks will depend on angle of inclined plane with horizontal
   (D) A and B will be in contact while C & D will not be in contact.

8. In the above problem 4, if $\tan\theta > 7.7$, then (Where θ is angle of inclination of inclined plane with horizontal)
   (A) All the blocks will move with different accelerations.
   (B) All the blocks will move with same acceleration
   (C) A and B will have same acceleration while C and D will have different acceleration while
   (D) ABC will have same acceleration while D will have different acceleration.

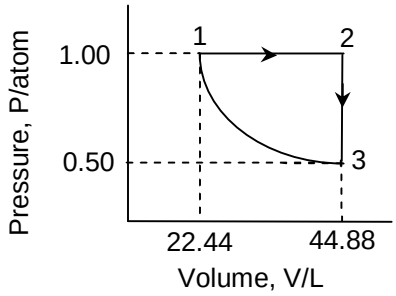
Space for rough work

Chemistry

Comprehension Passage comprising of 3 Questions (9 – 11)

Straight Objective Type

A sample consisting of 1 mol of a monoatomic perfect gas $\left(C_v = \frac{3}{2}R\right)$ is taken through the cycle as shown.



9. Temperature at points (1), (2) and (3) are respectively
   (A) 273 K, 546 K, 273 K
   (B) 546 K, 273 K, 273 K
   (C) 273 K, 273 K, 273 K
   (D) 546 K, 546 K, 273 K

10. ΔH for the overall cycle is:
   (A) $+5.67\times10^3$ J
   (B) -5.67×10^3 J
   (C) -11.34×10^3 J
   (D) zero

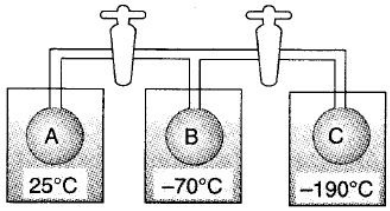
11. ΔE for the process $(1\rightarrow 2)$ is:
   (A) 0.00 J
   (B) $+3.40\times10^3$ J
   (C) -3.40 J
   (D) -3.40×10^3 J

Space for rough work

Comprehension Passage comprising of 5 Questions (12 – 16)

Straight Objective Type

The apparatus shown consists of three temperature jacketed 1.000 L bulbs connected by stopcocks. Bulb A contains a mixture of $H_2O(g)$, $CO_2(g)$ and $N_2(g)$ at 25^oC and a total pressure of 564 mm Hg. Bulb B is empty and is held at a temperature of -70^o C. Bulb C is also empty and is held at a temperature of -190^o C. The stopcocks are closed, and the volume of the lines connecting the bulbs is zero. CO_2 sublimes at -78^o C, and N_2 boils at -196^o C.



12. The stopcock between A and B is opened and the system is allowed to come to equilibrium. The pressure in A and B is now 219 mm Hg. Select correct alternate:
(A) A contains $CO_2(g)$ and $N_2(g)$ and B contains $CO_2(g)$, $N_2(g)$ and $H_2O(s)$
(B) A contains $CO_2(g)$ and B contains $N_2(g)$ and $H_2O(l)$
(C) A contains $CO_2(g)$, $N_2(g)$ and $H_2O(s)$ and B contains $CO_2(g)$ and $N_2(g)$
(D) A contains $H_2O(g)$ and B contains $H_2O(g)$, $N_2(g)$ and $CO_2(g)$

13. How many moles of H_2O are in the system?
(A) 0.026 mol (B) 0.0013 mol
(C) 0.013 mol (D) 0.13 mol

14. Both stopcocks are opened and the system is again allowed to come to equilibrium. The pressure throughout the system is 33.5 mmHg. Select correct alternate:
(A) Each bulb contains $N_2(g)$, $H_2O(s)$ and $CO_2(g)$
(B) Each bulb contains $N_2(g)$, $H_2O(g)$ and $CO_2(g)$
(C) Each bulb contains $N_2(g)$, $H_2O(g)$ and $CO_2(s)$
(D) A contains $N_2(g)$, B contains $N_2(g)$ and $H_2O(s)$; C contains $N_2(g)$ and $CO_2(s)$

15. How many moles of N_2 are in the system?
(A) 0.022 mol (B) 0.011 mol
(C) 0.018 mol (D) 0.036 mol

16. How many moles of CO_2 are in the system?
(A) 0.022 mol (B) 0.011 mol
(C) 0.018 mol (D) 0.036 mol

Space for rough work

Mathematics

Comprehension Passage comprising of 3 Questions (17 – 19)

Straight Objective Type

If $f(x) = 9\sin x + 4\operatorname{cosec} x$ for $0 < x < \pi$ & $g(x) = 4\sin x + 9\operatorname{cosec} x$ for $0 < x < \pi$, then answer the following problems.

17. Minimum value of $f(x)$ is

(A) 9 (B) 12
(C) 13 (D) None of these

18. Minimum value of $g(x)$ is

(A) 9 (B) 12
(C) 13 (D) None of these

19. If number of values of x for $f(x)$ is minimum is "m" & number of values of x for $g(x)$ is minimum is "n" then, $(m+n)$ is equal to

(A) 1 (B) 2
(C) 3 (D) 4

Space for rough work

Comprehension Passage comprising of 5 Questions (20 – 24)

Straight Objective Type

Two straight lines rotate about two fixed points (–a, 0) and (a, 0) respectively. If they start from their position of coincidence such that one rotates at the rate double that of the other and the locus of point of intersection of lines is the curve S = 0, then

20. The point (a, 0) always lies
(A) Inside the curve (B) Outside the curve
(C) On the curve (D) Cannot be determined

21. The point (–a, 0) always lies
(A) Inside the curve (B) Outside the curve
(C) On the curve (D) None of these

22. Locus of the curve is
(A) Circle (B) Straight line
(C) Parabola (D) Ellipse

23. Distance of the point (a, 0) from the variable point on the curve is
(A) 0 (B) 2a
(C) 3a (D) 4a

24. Distance of point (–a, 0) from the variable point on the curve is
(A) 0 (B) 2a
(C) 3a (D) None of these

Space for rough work

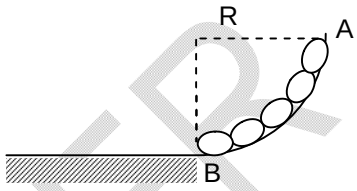
Section-II

Physics

Straight Objective Type

*Physics contains 13 multiple choice questions numbered 25 to 37. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

25. A smooth chain AB of mass m rests against a surface in the form of a quarter of a circle of radius R. If it released from rest, the velocity of the chain after it comes over the horizontal part of the surface is :



(A) $\sqrt{2gR}$ (B) $\sqrt{gR}$

(C) $\sqrt{2gR\left(1-\frac{2}{\pi}\right)}$ (D) $\sqrt{2}gR(2-\pi)$

26. A car of mass m is moving on rough horizontal circular track of radius R with tangential acceleration a, then friction force on car when speed of car is v –

(A) $\frac{mv^2}{R}$ (B) ma

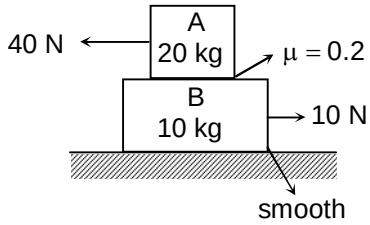
(C) $ma+\frac{mv^2}{R}$ (D) None of these

27. A car is moving with speed 10 m/s. At an instant driver see a wall in front of him at some distance, he applies hard brakes to avoid accident. Distance of car when driver applies brake from wall is 100 m and friction coefficient between car tyres and ground = 0.2 (Assume straight line motion of car)

(A) Distance of car from wall at t = 6 sec. 24 m
(B) Distance of car from wall at t = 6 sec. 26 m
(C) Distance of car from wall after t = 8 sec. 25 m
(D) Distance of car from wall after t = 8 sec. 84 m

Space for rough work

28. A block A of mass 20 kg is placed over block B of mass 10 kg which is kept on smooth horizontal surface. A force F = 40 N is applied on A towards left while F = 10 N on B towards right. [Friction coefficient between A & B is 0.2]



(A) Friction force between A & B is 40 N
(B) Friction force between A & B is 20 N
(C) Friction force between A & B is zero
(D) Friction force between A & B is 60 N

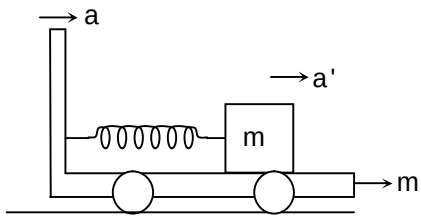
29. A block of mass 10 kg is placed on rough horizontal surface. The block can slide on rough surface with which of the given forces (coefficient of friction between block & surface = $\frac{3}{4}$ and take g = 10 m/s^2)

(A) 50 N
(B) 65 N
(C) 40 N
(D) must be greater than 75 N

30. A body is thrown at an angle θ_0 with horizontal such that it attains a speed equal to $\sqrt{\frac{2}{3}}$ times the speed of projection when the body is at half of its maximum height. Find the angle θ_0.

(A) $\sin^{-1}\left(\sqrt{\frac{2}{3}}\right)$
(B) $\tan^{-1}\left(\sqrt{\frac{2}{3}}\right)$
(C) $\cos^{-1}\left(\sqrt{\frac{2}{3}}\right)$
(D) $\cot^{-1}\left(\sqrt{\frac{2}{3}}\right)$

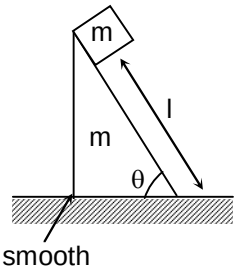
31. A wedge of mass m is moved with constant acceleration a. A block of mass 'm' attached with the wedge by light spring moves with an acceleration a' w.r.t. ground. When the wedge is stopped suddenly, neglecting friction between the contacting surfaces, the acceleration of the block just after this



(A) a'
(B) a'+a
(C) a'−a
(D) a

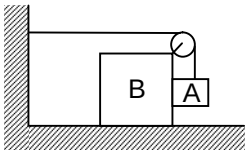
Space for rough work

32. If a block of mass 'm' placed on triangular wedge of same mass m which is placed on horizontal smooth surface so that wedge can move freely. When block moves from top to bottom of triangular wedge as shown in fig. Then work done on block by normal force which is acting on Q block due to triangular wedge –



(A) zero
(B) positive
(C) negative
(D) may be zero or positive

33. In the system shown in the diagram all surfaces are smooth; pulley and strings are ideal. If $\vec{a}_A$ and $\vec{a}_B$ are the acceleration of the two blocks, then just after the system is released from rest, then choose the incorrect statement:



(A) $|\vec{a}_A| = |\vec{a}_B|$
(B) $\vec{a}_A \perp \vec{a}_B$
(C) Acceleration of A relative to B is vertically downwards
(D) Normal force exerted by B on A is zero

34. Pressure p, volume V and temperature T for a certain gas are related by $p = \frac{AT - BT^2}{V}$, where A and B are constants. The work done by the gas as its temperature changes from T_1 to T_2 while pressure remains constant is

(A) $A - \frac{B}{2}(T_2 - T_1)$
(B) $A(T_2 - T_1) - B(T_2^2 - T_1^2)$
(C) $\frac{A}{T}(T_2^2 - T_1^2) - \frac{B}{3}(T_2^3 - T_{11}^3)$
(D) $A(T_2 - T_1)^2 - \frac{B}{3}(T_2 - T_1)^3$

Space for rough work

35. The maximum attainable temperature of ideal gas in the process

$$P = P_0 - \alpha V^2$$

where P_0 and α are +ve constants

(A) $\frac{2P_0}{3nR}\left(\frac{P_0}{3\alpha}\right)^{1/2}$ (B) $\frac{2P_0}{2nR}\left(\frac{2P_0}{3\alpha}\right)^{1/2}$

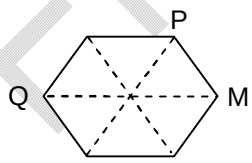
(C) $\frac{2nR}{P_0}\left(\frac{2P_0}{3\alpha}\right)^{1/2}$ (D) $\frac{2P_0}{nR}\left(\frac{P_0}{2\alpha}\right)^{1/2}$

36. A train moves towards a stationary observer with speed 34 m/s. The train sounds a whistle and its frequency registered by the observer is f_1. If the train's speed is reduced to 17 m/s, the frequency registered is f_2. If the speed of sound is 340 m/s, then the ratio f_1/f_2 is

(A) 18/19 (B) 1/2

(C) 2 (D) 19/18

37. Two identical point like sound sources emitting sound in same phase of wavelength 1m are located at points P and Q as shown in figure. All sides of the polygon are equal and of length 1m. The intensity of sound at M due to source P above is I_0. What will be the intensity of sound at point M when both the sources are on?



(A) $4\ I_0$ (B) 0

(C) $\frac{9}{4}I_0$ (D) $3\ I_0$

Space for rough work

Chemistry

Straight Objective Type

*Chemistry contains 13 multiple choice questions numbered 38 to 50. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

38. Which is not true about chemical equilibrium?
(A) It is dynamic in nature
(B) Free energy change $\Delta G = 0$
(C) Equilibrium state can't be affected by altering concentration
(D) Catalyst can change the state of equilibrium

39. For the reaction $NOBr_{(g)} \rightleftharpoons NO_{(g)} + \frac{1}{2}Br_{2(g)}$ K_p = 0.25 $atm^{1/2}$ at 190°C. If NOBr, NO and Br_2 are placed in a vessel (closed) at partial pressure 0.5 atm, 0.4 atm and 0.2 atm respectively, which is not true about it.
(A) At equilibrium partial pressure of NOBr is less than 0.5 atm
(B) At equilibrium partial pressure of NO is less than 0.4 atm
(C) At equilibrium partial pressure of Br_2 is less than 0.3 atm
(D) All of them

40. The equilibrium of which of the following reaction will not be disturbed by addition of an inert gas at constant volume.
(A) $H_{2(g)} + I_{2(g)} \rightleftharpoons 2HI_{(g)}$
(B) $N_2O_{4(g)} \rightleftharpoons 2NO_{2(g)}$
(C) $CO_{(g)} + 2H_{2(g)} \rightleftharpoons CH_3OH_{(g)}$
(D) All of them

41. If the shortest wavelength of H atom in Lyman series is x, then longest wavelength in Balmer series of He^+ is:
(A) $\frac{9x}{5}$
(B) $\frac{36x}{5}$
(C) $\frac{x}{4}$
(D) $\frac{5x}{9}$

42. Magnetic moments of V (Z = 23), Cr (Z = 24) and Mn (Z = 25) are x, y, z. Hence:
(A) $x = y = z$
(B) $x < y < z$
(C) $x < z < y$
(D) $z < y < x$

43. Salt $A + S \longrightarrow B \xrightarrow{BaCl_2} \downarrow$ white ppt.
A is paramagnetic in nature and contains about 55% K. Thus A is:
(A) K_2O
(B) K_2O_2
(C) KO_2
(D) K_2SO_4

Space for rough work

44. The relative thermal stabilities of alkali metal halides are such that:
(A) CsCl > RbCl > KCl > NaCl > LiCl
(B) LiCl > NaCl > KCl > RbCl > CsCl
(C) CsCl > RbCl > KCl > NaCl > LiCl
(D) CsCl < RbCl > KCl < NaCl > LiCl

45. For the reaction $N_2O_4\ (g) \rightleftharpoons 2NO_2(g)$, K_c is 6.10×10^{-3} at 25°C. Hence, K_c for the equilibrium reaction,
$NO_2(g) \rightleftharpoons \frac{1}{2}N_2O_4(g)$ is:
(A) 1.64×10^{2}
(B) 81.97
(C) 3.14
(D) 12.80

46. What is enthalpy change when 1 L of 1 M H_2SO_4 is completely neutralized by 1 L of 1 M $Ca(OH)_2$?
(A) -13.7 kcal
(B) -27.4 kcal
(C) -1.37 kcal
(D) -2.74 kcal

47. $[Ag^+]$ in saturated AgCl in presence of 0.1 M KCl is [Given: K_{sp} (AgCl) = 1×10^{-10}]:
(A) 1×10^{-5} M
(B) 1×10^{-20} M
(C) 1×10^{-10} M
(D) 2×10^{10}

48. H_2SO_4 is 98% by weight of solution. Hence, it is:
(A) 1 molal
(B) 10 molal
(C) 50 molal
(D) 500 molal

49. Select correct statement about stability of cations:
(A) $Ge^{4+} > Sn^{4+} > Pb^{4+}$
(B) $Ge^{2+} < Sn^{2+} < Pb^{2+}$
(C) $Pb^{2+} > Pb^{4+}$, $Sn^{4+} > Sn^{2+}$
(D) All are correct statements

50. Lead pencil contains:
(A) lead
(B) graphite
(C) alloy of lead and tin
(D) alloy of led and graphite

Space for rough work

Mathematics

Straight Objective Type

*Mathematics contains 13 multiple choice questions numbered 51 to 63. Each question has 4 choices (A), (B), (C) and (D), out of which **ONLY ONE** is correct.*

51. The perpendicular distances p_1, p_2, p_3 of points $(a^2, 2a)$, $(ab, a+b)$, $(b^2, 2b)$ respectively from straight line $x + y\tan\theta + \tan^2\theta = 0$ are in
(A) A.P. (B) G.P.
(C) H.P. (D) A.G.P.

52. If parabola $y^2 = 4aex$ and ellipse $\frac{x^2}{a^2} + \frac{y^2}{a^2(1-e^2)} = 1$ have same length of latus rectum then value of eccentricity of ellipse "e" is
(A) $\frac{1}{\sqrt{2}}$ (B) $\sqrt{2}-1$
(C) $2-\sqrt{2}$ (D) $\frac{\sqrt{3}}{2}$

53. If the line $y = mx$ meets the lines $x + 2y - 1 = 0$ and $2x - y + 3 = 0$ at the same point, then m is equal to
(A) 1 (B) –1
(C) 2 (D) –2

54. In the xy plane, the length of the shortest path from (0, 0) to (12, 16) that does not go inside the circle $(x-6)^2 + (y-8)^2 = 25$ is
(A) $10\sqrt{3}$ (B) $10\sqrt{5}$
(C) $10\sqrt{3} + \frac{5\pi}{3}$ (D) $10 + 5\pi$

Space for rough work

55. The complete set of real values of 'a' for which atleast one tangent to the parabola $y^2 = 4ax$ becomes normal to the circle $x^2 + y^2 - 2ax - 4ay + 3a^2 = 0$ is

(A) [1, 2] (B) $\left[\sqrt{2},\ 3\right]$

(C) R (D) $R - \{0\}$

56. A certain polynomial $P(x)$, $x \in R$, when divided by $x-5$, $x-4$ and $x-3$ leaves remainder 5, 4, 3 respectively. The remainder, when $P(x)$ is divided by $(x-5)(x-4)(x-3)$ is

(A) $x^2 + 1$ (B) x

(C) $2x^2 + 4 - 3$ (D) 12

57. If $y = x^2 + \ln x$ then $\frac{dy}{dx}$ at $x = -\frac{1}{2}$ is

(A) -3 (B) +1

(C) 3 (D) doesn't exist

58. In a ΔABC, if $\cos A \cos B \cos C = \frac{\sqrt{3}-1}{8}$ and $\sin A \sin B \sin C = \frac{3+\sqrt{3}}{8}$, then $\tan A + \tan B + \tan C$ is

(A) $\frac{3+\sqrt{3}}{\sqrt{3}-1}$ (B) $\frac{\sqrt{3}+4}{\sqrt{3}-1}$

(C) $\frac{6-\sqrt{3}}{\sqrt{3}-1}$ (D) $\frac{\sqrt{3}+\sqrt{2}}{\sqrt{3}-1}$

59. The sum of all the solutions of equation $\cos\theta.\cos\left(\theta+\frac{\pi}{3}\right).\cos\left(\frac{\pi}{3}-\theta\right) = \frac{1}{4}$, $\theta \in [0,\ 6\pi]$ is

(A) 15π (B) 30π

(C) $\frac{100\pi}{3}$ (D) None of these

Space for rough work

60. If $A = \phi$, then number of elements in $P\left(P\left(P\left(P(A)\right)\right)\right)$ is {$P(A)$ denotes power set of A}

(A) 0 (B) 4
(C) 8 (D) 16

61. If $\log(a-b) = \log a - \log b$ is true for a, $b \in R^+$ then minimum value of "a" is

(A) 1 (B) 2
(C) 4 (D) 8

62. If $f(x) = ax^7 + bx^3 + cx - 5$, a, b, c are real constants and $f(-7) = 7$, then range of $f(7) + 17\cos x$ is

(A) [–34, 0] (B) [0, 34]
(C) [–34, 34] (D) None of these

63. Let a and b be two roots of $x^2 + 3x + 5 = 0$. If $t = \frac{a+2}{b+2}$ and $s = \frac{b+2}{a+2}$ are two roots of $x^2 - mx + 1 = 0$, then m is

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

Space for rough work

FIITJEE Talent Reward Exam-2014

for student presently in

Class 11

PAPER–2

ANSWER KEYS

SECTION – I (PCM) (COMPREHENSION PASSAGE)		SECTION – II (PCM)			
Q. No	**Answer**	**Q. No**	**Answer**	**Q. No**	**Answer**
1.	**B**	25.	**C**	49.	**D**
2.	**C**	26.	**D**	50.	**B**
3.	**B**	27.	**C**	51.	**B**
4.	**A**	28.	**B**	52.	**B**
5.	**C**	29.	**B**	53.	**B**
6.	**D**	30.	**A**	54.	**C**
7.	**B**	31.	**A**	55.	**D**
8.	**B**	32.	**C**	56.	**B**
9.	**A**	33.	**C**	57.	**D**
10.	**D**	34.	**B**	58.	**A**
11.	**B**	35.	**A**	59.	**B**
12.	**A**	36.	**D**	60.	**D**
13.	**B**	37.	**C**	61.	**C**
14.	**D**	38.	**C**	62.	**A**
15.	**B**	39.	**A**	63.	**B**
16.	**D**	40.	**D**		
17.	**B**	41.	**A**		
18.	**C**	42.	**C**		
19.	**C**	43.	**C**		
20.	**A**	44.	**B**		
21.	**C**	45.	**D**		
22.	**A**	46.	**B**		
23.	**B**	47.	**C**		
24.	**D**	48.	**D**		