

AJMAL NATIONAL TALENT SEARCH (ANTS) EXAMINATION - 2014

Conducted by : **AJMAL FOUNDATION, A Registered Public Charitable Trust**

Hojai, Nagaon (Assam)

ANTSE/ IX/6000

Class / **ଅକ୍ଷୟ IX**

INSTRUCTIONS TO CANDIDATE

1. Write your **CENTRE CODE AND ROLL NO.** legibly in the **OMR ANSWER SHEET ATTACHED.** Do not write your name anywhere in the **ANSWER SHEET.**
2. Questions are of multiple-choice type carrying one mark each and all questions are compulsory.
3. Candidates are required to mark the correct choice by shading the circle completely with blue or black ball point pen. (Pencil is not allowed). For example, if the correct answer to question no 1. Is 'B' then the marking should be:



4. Only one circle, i.e. the correct one should be shaded and not more than one.
5. A candidate having completed his/her **OMR ANSWER SHEET** must hand it over, even if blank, to the invigilator before leaving the Examination Hall.
6. An examinee must not bring any loose paper, book, etc. except the **ADMIT CARD** to the Examination Hall. Any examinee found in possession of even loose papers will be **EXPELLED.**
7. No extra sheet will be provided for making notes or calculations. **CANDIDATES MAY USE THE INNER COVER PAGES OF THIS BOOKLET FOR THIS PURPOSE.**
8. An examinee must not talk to, disturb or seek help from a fellow examinee during the examination.
9. Any mechanical or digital calculating device (calculator etc.) shall not be used by the examinee during the examination.
10. Mobile Phones shall not be used by candidates inside the examination Hall.
11. No candidate will be allowed to leave the Examination Hall during the first hour of the examination.
12. Contravention of any of the instruction mentioned above shall render a candidate liable for disciplinary action as per rule.

ଅକ୍ଷୟ ଉତ୍ତର ଲେଖାଣି ପଦ୍ଧତି

- 1* ଅକ୍ଷୟ ଉତ୍ତର ଲେଖାଣି ପଦ୍ଧତିରେ ଉପରୋକ୍ତ ପ୍ରଶ୍ନର ଠିକ୍ ଉତ୍ତର ଖଣ୍ଡକୁ ଠିକ୍ ଭାବରେ ଚିହ୍ନଟିକିବାକୁ ହେବ । ଠିକ୍ ଉତ୍ତର ଖଣ୍ଡକୁ ଠିକ୍ ଭାବରେ ଚିହ୍ନଟିକିବାକୁ ହେବ ।
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CLASS : IX

Time : 2 Hours / দুই ঘণ্টা

Full Marks / মোট নম্বর (25+25+25+25)=100

General Knowledge / সাধাৰণ জ্ঞান / সাধাৰণ জ্ঞান

- If Tiger is India's National Animal, then India's 'National Heritage Animal' is :
 যদি টাইগাৰ ইণ্ডিয়াৰ জাতীয় প্ৰাণী হয়, তেন্তে ইণ্ডিয়াৰ 'জাতীয় ঐতিহ্য প্ৰাণী' হ'ব :
 (A) Lion (B) Elephant (C) Cow (D) Rhinoceros
 (A) সিংহ (B) হাতী (C) গাভী (D) গঁড়
- The only 'Bharat Ratna' awardee from Assam is :
 অসমৰ একমুঠ 'ভাৰত ৰত্ন' পুৰস্কাৰ বিজয়ী :
 (A) Bishnuram Medhi (B) Gopinath Bordoloi (C) Bhupen Hazarika (D) Lakshminath Bezbaruah
 (A) বিশ্বনৰাম মেধী (B) গপিনাথ বৰদলৈ (C) ভূপেন হাজৰিকা (D) লক্ষ্মিনাথ বেজবৰুৱা
- The largest southernmost single island in India is island.
 ভাৰতৰ দক্ষিণত অৱস্থিত সৰ্ববৰ্তমানৰ সৰ্ববৃহৎ দ্বীপ :
 (A) Rameswaram (B) Minicoy (C) Car Nicobar (D) Great Nicobar
 (A) ৰামেশ্বৰম (B) মিনিচয় (C) কাৰ নিকোবাৰ (D) গ্ৰেট নিকোবাৰ
- Which of the following rulers died while playing "Chaugan" ?
 তলত দিয়া কোনজন শাসক "চাউগান" খেলি মৃত্যুবন্দী হৈছে ?
 (A) Balban (B) Sher Shah (C) Jalal-ud-din Khilji (D) Qutab-Ud-din-Aibak
 (A) বাল্বান (B) শেৰ শাহ (C) জালাল উদ্দিন খিলজি (D) কুতুব উদ্দিন আইবাক
- The body that finalises the Five Year Plan proposals of India :
 ভাৰতৰ পঁচাত্তৰ বছৰীয়া পৰিকল্পনাৰ প্ৰস্তাৱসমূহৰ অন্তিম অনুমোদন কৰা সংস্থা :
 (A) Planning commission (B) Union Cabinet
 (C) National Development Council (D) Ministry of Planning
 (A) পৰিকল্পনা কমিছন (B) ইউনিয়ন ক্যাবিনেট
 (C) জাতীয় উন্নয়ন কাউন্সিল (D) পৰিকল্পনা মন্ত্ৰালয়
- A hen's egg is mostly composed of
 হাঁহৰ ডিম্বৰ প্ৰধান উপাদান :
 (A) Water (B) Protein (C) Fat (D) Cholesterol
 (A) পানী (B) প্ৰোটিন (C) চৰ্বি (D) কোলেষ্টেৰল

7. The industrialist who served as the treasurer of the Indian National Congress for many years till his death was :
কলিকাতার শিল্পী হিসেবে ভারতীয় জাতীয় কংগ্রেসের কয়েক দশক ধরে ত্রুটি হিসেবে কাজ করেছিলেন।
(A) G. D. Birla (B) Jamanlal Bajaj (C) Neville Wadia (D) Walchand Hirachand
কলিকাতার শিল্পী হিসেবে ভারতীয় জাতীয় কংগ্রেসের কয়েক দশক ধরে ত্রুটি হিসেবে কাজ করেছিলেন।
8. India opted for a federal form of government because of :
ভারত একটি কেন্দ্রীয় সরকার গঠন করেছিল কারণ :
(A) Vast territory (B) Cultural integration
খুব বড় ভূখণ্ড অঞ্চল সংস্কৃতির একত্রীকরণ
(C) linguistic and regional diversity (D) administrative convenience
ভাষাগত এবং অঞ্চলগত বৈচিত্র্য প্রশাসনিক সুবিধা
9. The 2014 Football World Cup is scheduled to be held in :
2014 ফুটবল বিশ্বকাপ অনুষ্ঠিত হবে :
(A) China (B) Australia (C) Japan (D) Brazil
চীন অস্ট্রেলিয়া জাপান ব্রাজিল
10. 'Interest scheme' is usually associated with
'স্বার্থসূচী' সাধারণত
(A) Dividend (B) Inflation (C) Loan (D) Salary
ভাগ্যভাগ্য মূল্যবৃদ্ধি ঋণ বেতন
11. In India, 'a Booth Level Officer works for the registration of
ভারতের 'বুথ লেভেল অফিসার' নিম্নলিখিত কোনটির নিবন্ধন করে :
(A) Voter (B) Aadhar card (C) Population (D) Ration card
ভোটার আইডি কার্ড জনসংখ্যা ভরণ কার্ড
12. Which of these Indian currency notes does not have the special geometrical shape that helps the visually impaired people ?
নিম্নলিখিত কোন ভারতীয় মুদ্রা নোটের বিশেষ আকৃতি নেই যা দৃষ্টিহীনদের জন্য সাহায্য করে ?
(A) 1000 (B) 100 (C) 50 (D) 10
13. Among the Indian languages, which one is spoken by the greatest number of people in the world after Hindi ?
ভারতীয় ভাষাগুলির মধ্যে, হিন্দি পরে বিশ্বের সর্বোচ্চ সংখ্যক মানুষের দ্বারা কী ভাষা বলা হয় ?
(A) Telugu (B) Tamil (C) Bengali (D) Malayalam
তেলুগু তামিল বঙ্গালি মালয়ালম
14. One barrel of oil is approximately equal to litres.
এক বারেল তেল প্রায় সমান লিটার।
(A) 131 (B) 159 (C) 257 (D) 321

15. The minimum voting age in India is 18 years. In which country is it 16 ?
 \phi Td 18 [K» a\o\VEo» [ya[ya[X]o]r a* aEoX av TdA r 16 [K» ?
 \o\T o AE L X a\o\o\y XKi T o [y a 18 [K]y* aV a T o 16 [K]y*
- (A) France (B) Brazil (C) Togo (D) Nigeria
 ZPa [L_ OaGc Xe+aL»r'c/ Xe+aL»r'c
16. is the present chancellor of Assam University.
 %a] y Vwic r, x _so» [vw]X %o^i aEoX ? / %ca] y Vwic a^ly]T oX %o^i*
- (A) Pranab Mukherjee (B) J.B. Patnaik (C) Tarun Gogoi (D) Gulzar
 YX[y]E d L P aL yY oX d^Eo T oS GeG / T oY S GeG m_Lc / m_Ld y
17. How many Lok Sabha Seats are reserved for scheduled caste (sc) candidates in Assam ?
 %a] T o] P o E o] X o a _E a \o %caX %X a E o T o L c T o [ya]y a e» a u o ?
 %ca] %X a E o T o L c T o Y L X i o a _E a \o %caX a e] y u o ?
- (A) 3 (B) 2 (C) 1 (D) 0
18. Which of the following tribes is not related to India ?
 T o » aEoX a o L X L c T o \o T o X c f ? / a^ L X L c T o Y a Y E o \o] T o Y a c U a X + T o c _ f -
- (A) Apatani (B) Jarawa (C) Masai (D) Santhal
 %c T o X L a»c / L d y^c]k e + /]c a e + k e X U c / a c T o c
19. Which one among the following is the main ingredient of cement ?
 T o » aEoX a o c _ s a ^ o [ya]y]E i = Y o v X ? / X a d] y a E o X o a a] a o] y]E = Y o v X ?
- (A) Gypsum (B) Clay (C) Coal (D) Limestone
 L Y k e] / L Y a c a] y E c / E o v c] c o E o _ c S S x _ / S c Y d U y
20. Mosquito can be a factor for the following diseases except :
]'c = T o » aEoX a o c a»G» E o S X c f ? /]`c X a d] y k e o] k [y E o d] y a G] y E o] S c a T o Y a d] y*
- (A) Filaria (B) Kala-zar (C) Dengue (D) Yellow fever
 Z o a _»r'c / Z o c] y^c k a l a j u r / k a l a - j u r a o d] c L % o / h l u d j u r
21. Put the correct answer in the place of '?'
 Y o A] y M E o s c o P e + T o E ^ u = w o a o [S C ^ c / Y o A] y M E o s c o] y o a X a P E o = w a] y] y a c f
-
- (A) 60 (B) 50 (C) 25 (D) 21

General English

26. Did you read very many books? Yes,
- (A) very little (B) quite a few (C) just a little (D) very few of them
27. You should be towards seniors.
- (A) respectable (B) respectful (C) respective (D) respecting
28. The old lady came near to of pneumonia but to everyone's amazement she pulled through.
- (A) being dead (B) dying (C) die (D) death
29. A biscuit? have that gorgeous apple?
- (A) had you better (B) would not you (C) wouldn't you rather (D) wouldn't you better
30. There 's no way I done it without your help.
- (A) would ever have (B) should never have (C) have ever (D) would ever
31. This time next week I won't be in a boring class, in Kolkata.
- (A) I'll have shopped (B) I'll shop (C) I'm shopping (D) I'll be shopping
32. Computers crash in the Operating System (OS) software or errors in the hardware.
- (A) due to errors (B) owing errors (C) resulting in errors (D) because of errors
33. I took great exception the charge that I was not telling the truth.
- (A) against (B) at (C) with (D) to
34. No one wants to have extra homework tonight, ?
- (A) don't he (B) do they (C) does he (D) don't they
35. The more I get to know him, the I like him.
- (A) much (B) lesser (C) less (D) most
36. How many books do you think he before he was awarded the Booker prize?
- (A) would have to write (B) was to have written
(C) must have been writing (D) had written
37. Capital punishment was done in Britain nearly half a century ago.
- (A) out for (B) over with (C) off by (D) away with
38. It's no good apologizing to me now.
- (A) for him (B) him (C) for him to (D) his

39. He is not In a tent.
(A) used to sleeping (B) use to sleeping (C) used to sleep (D) use to sleep
40. The use of credit cards in place of cash rapidly in recent years.
(A) have increased (B) has increased
(C) have been increasing (D) were increased
41. Ansh didn't know whether to sell his books or
(A) keeping them for reference (B) if he should keep them for reference
(C) to keep them for reference (D) kept for reference
42. you and your brother are welcome.
(A) neither (B) either (C) none (D) both
43. The excuse he offered would convince none but the most **credulous**. "Credulous" means.
(A) rigid (B) gullible (C) pious (D) obedient
44. The rhino population in Assam has **dwindled** fast in recent years. "Dwindle" means
(A) increase (B) remain constant (C) stagnant (D) diminish
45. "The **docile** masses accepted the draconian rule without protest". The opposite meaning or antonym of the word docile is :
(A) stubborn (B) childish (C) obedient (D) submissive
46. Gandhiji's **steadfast** resolve to free our country from the British made him a great leader. The opposite meaning or antonym of the word steadfast is :
(A) stiff (B) sincere (C) irresolute (D) firm determination
47. The practice of copying the work of another author and representing them as one's own is termed
(A) copycat (B) counterfeit (C) forgery (D) plagiarism
48. Smoking is the biggest preventable to mankind.
(A) tragedy (B) menace (C) solace (D) measure
49. Please stop **picking holes** in everything I say. "To pick holes" means to
(A) make fun of (B) disagree strongly (C) start a fight (D) find mistakes
50. " Don't be a **couch potato**, Manish. You know your final exam is near", said the mother to his son. " The meaning of the idiom "couch potato" is :
(A) do nothing the whole day (B) sit lazily and watch TV
(C) munching potato chips (D) talking to friends from mobile phone all day

General Maths / সাধারণ গণিত / সাধারণ গণিত

51. If $\frac{-3}{x} = \frac{x}{27}$ then 'x' is

$\frac{-3}{x} = \frac{x}{27}$ চক্রান্ত 'x' / $\frac{-3}{x} = \frac{x}{27}$ চক্রান্ত 'x'

- (A) a rational number (B) an integer (C) not a rational number (D) a natural number
 A০০ Y০০] aeFiç (B) A০০ %F%aeFiç (C) A০০ Y০০] aeFiç Xcç (D) A০০ 0০ ০/ E0aeFiç
 AE00Y [j] aeFiç AE00%F%aeFiç AE00Y [j] aeFiç X† AE000 ০/ [E0aeFiç

52. If $37a=37b=5661$, What is the average of a and b ?

$37a=37b=5661$ চক্রান্ত a ০ b » G0b-E0] ç ? / $37a=37b=5661$ চক্রান্ত a b A[y G0b E0] ?

- (A) 74.5 (B) 151 (C) 76.5 (D) 153

53. If $(x-2)$ is a common factor of $x^3 - 4x^2 + ax + b$ and $x^3 - ax + bx + 8$, then the values of a and b are respectively

$x^3 - 4x^2 + ax + b$ ০ $x^3 - ax + bx + 8$ » =e] c† =dY/E0(x-2) চক্রান্ত a ০ b »] ç y0]

$x^3 - 4x^2 + ax + b$ A[y $x^3 - ax + bx + 8$ A[y ad] S =dY/E0(x-2) চক্রান্ত a b A[y] ç y0]

- (A) 3, 5 (B) 2, - 4 (C) 4, 0 (D) none of these
 A0C Xcç / AE00C X†

54. A straight line passing through the points $(-1, 1)$, $(0, 0)$ and $(1, -1)$ has equation

$(-1, 1)$, $(0, 0)$ ০ $(1, -1)$ [y] ç a » a] E0 S0 ç ç :

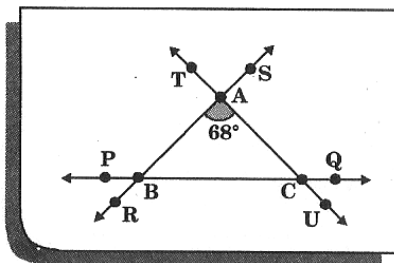
$(-1, 1)$, $(0, 0)$ A[y $(1, -1)$ [y] ç a] ç ç :

- (A) $y = x$ (B) $x + y = 0$ (C) $y = 2x$ (D) $2 + 3y = 7x$

55. In the figure given below $\angle ABP = \angle ACQ$, $\angle BAC = 68^\circ$ measure of $\angle ABC$ is

T0 T0] ç ç $\angle ABP = \angle ACQ$, $\angle BAC = 68^\circ$ ç $\angle ABC$ »] ç ç :

X† ç ç $\angle ABP = \angle ACQ$, $\angle BAC = 68^\circ$ ç $\angle ABC$ A[y] ç ç :



- (A) 124° (B) 56° (C) 60° (D) 52°

56. The area of the triangle formed between lines $x=0$, $y=0$ and $2x-3y+6=0$ is sq. units.

$x=0$, $y=0$ ০ $2x-3y+6=0$ ç ç ç =dY- E0ç ç ç ç ç :

$x=0$, $y=0$ A[y $2x-3y+6=0$ ç ç ç ç ç ç ç :

- (A) 3 (B) 4 (C) 2 (D) 5

57. X, Y, Z, U are four points in a straight line. If distance from X to Y is 15, Y to Z is 5, Z to U is 8 and X to U is 2, then the correct sequence of the points will be

X, Y, Z, U এর দূরত্ব যথাক্রমে XY = 15, YZ = 5, ZU = 8 এবং XU = 2 হলে পয়েন্টগুলির সঠিক ক্রম হবে

X, Y, Z, U এর দূরত্ব যথাক্রমে XY = 15, YZ = 5, ZU = 8 এবং XU = 2 হলে পয়েন্টগুলির সঠিক ক্রম হবে

- (A) X-Y-Z-U (B) X-Z-Y-U (C) X-U-Z-Y (D) X-Z-U-Y

58. If a and b are positive integers such that $a^b=125$, then $(a-b)^{a+b-4}$ is equal to

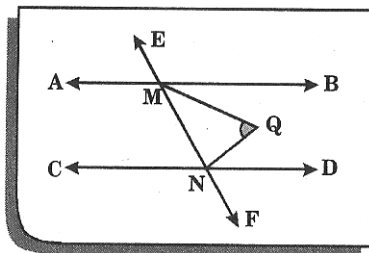
যদি a ও b ধনাত্মক পূর্ণসংখ্যা হয় এবং $a^b = 125$ হয়, তবে $(a-b)^{a+b-4}$ এর মান হবে

- (A) 16 (B) 25 (C) 28 (D) 30

59. AB is parallel to CD, EF intersects them at M and N. The bisectors of M and N meet at Q. If $\angle AME = 80^\circ$, then $\angle MQN$ is

AB, CD সমান্তরাল এবং EF এঁদের M ও N বিন্দুতে ছেঁয়। M ও N কোণের সমদ্বিভাজকগুলি Q বিন্দুতে মিলেছে। যদি $\angle AME = 80^\circ$ হয়, তবে $\angle MQN$ এর মান হবে

AB, CD সমান্তরাল এবং EF এঁদের M ও N বিন্দুতে ছেঁয়। M ও N কোণের সমদ্বিভাজকগুলি Q বিন্দুতে মিলেছে। যদি $\angle AME = 80^\circ$ হয়, তবে $\angle MQN$ এর মান হবে



- (A) 60° (B) 70° (C) 80° (D) 90°

60. What is the probability that there are 53 sundays in a leap year ?

৫৩ রবিবার থাকার সম্ভাবনীয়তা কিমান ?

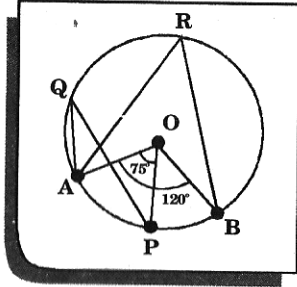
৫৩ রবিবার থাকার সম্ভাবনা কতটুকু ?

- (A) $\frac{1}{6}$ (B) $\frac{2}{7}$ (C) $\frac{3}{8}$ (D) none of these

কোনটিই নয়

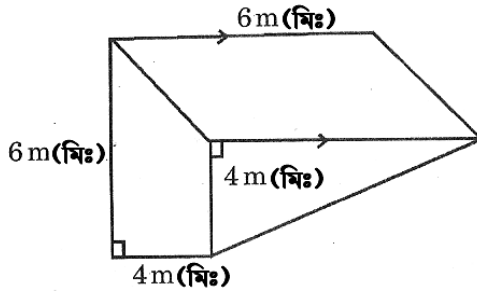
61. If $y = a + \frac{b}{x}$, where 'a' and 'b' are constants and if $y=1$ when $x = -1$, and $y=5$, when $x = -5$, then $a+b$ equals
62. Two parallel chords of a circle whose diameter is 13 m are, respectively 5 m and 12 m in length. If both the chords lie in a semicircle, then the distance between the chords is
63. A man has certain number of chickens and goats. Their head count is 30. If the total number of their legs is 84, What is the ratio between the number of chickens and goats ?
64. If the volume of two cubes are in the ratio 125 : 1, the ratio of their edges is
65. A rectangle and a parallelogram have equal areas. The base of the parallelogram is 20 m and altitude is 6 m. Which one of the following cannot be the ratio of dimensions of the rectangle ?
66. Arithmetic mean of 'n' observations is m. If two observations 0 and m are added, then the new mean will be

73. In the figure given below, if $\angle AOP = 75^\circ$, and $\angle AOB = 120^\circ$, then what is $\angle AQP$?
 To To V/c ^y To ^V \angle AOP = 75^\circ %>0 \angle AOB = 120^\circ c f, a T a U \angle AQP »] c X E o j c X ?
 X b o a V C f c ^y ^V \angle AOP = 75^\circ A j e \angle AOB = 120^\circ c f, T a j y \angle AQP A j y] c X E o j c X ?



- (A) 45° (B) 37.5° (C) 30° (D) none of these
 A o c X c f / A E o c X f

74. The area of the whole figure is / a G a b ^y a o E o / a j G D a y j E o
 a G a b ^y a o E o / a j G D a y j E o



- (A) 40 m^2 (B) 44 m^2 (C) 42 m^2 (D) 48 m^2

75. What must be subtracted from $4x^2 - 2x^3 - 6x^2 + x - 5$, So that the result is exactly divisible by $2x^2 + x - 2$?

$4x^2 - 2x^3 - 6x^2 + x - 5$ » Y » c E o j y j c E o a ^y j c G z o a o c 2x^2 + x - 2 a j Y S j a y ^y j a L i c a j y ?

$4x^2 - 2x^3 - 6x^2 + x - 5$ a U a E o E o j y j c E o j y j c G z o 2x^2 + x - 2 a j Y S j a y ^y j a L i c a j y ?

- (A) $-3x-5$ (B) $3x-5$ (C) $-3x+5$ (D) none of these
 A o c X c f / A E o c X f

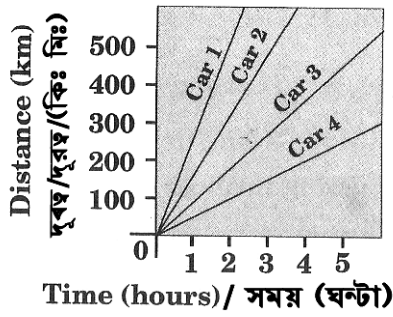
General Science / সাধারণ বিজ্ঞান / সাধারণ বিজ্ঞান

76. Rajib pulled a table cloth from a table without dislodging the dishes. This is due to
 » L j a o j c » C Y » T o Y c » a U c f E o j y » F X T o C Y » T o U E c U c - j c X » O j X » T o a c c e f E o j X = x j c t % c X a * A + a o j »
 বাবে সম্ভব হৈছে।

রাজীব টেবিলের উপরে পোতে রাখা কাপড়টি তার উপরে রাখা থালাবাসনকে না সরিয়ে টেনে আনে। এইটি এর জন্য সম্ভব হয়েছে।

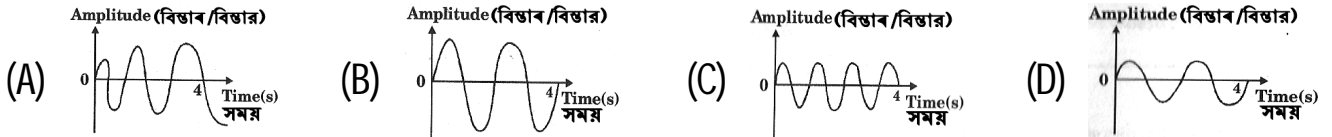
- (A) inertia (B) impulse (C) force (D) momentum
 L o j c H c t o j y \ o a j c / \ j a j c

77. The graph below shows the distance travelled and the time taken by four cars.
 টো টো/র চাঁ FT টো FX G QN %>T y 0 E o c V 6 + 6 %> 0 Y 0 c L X a c e / c a] r a V F C 3 / c e c a k *
 X l a o a V C r c a _ F o a T o c / y o G Q N %>T y 0 E d y V i y c Y a c L X i r a] r a V F c a X c a a k *



Which car travelled the slowest ? / া E o X F X G Q N %>T e o a _ a c :] r c ? / া E o X G Q N o a [y e + a T o M M] G > T y ?
 (A) Car 1 (B) Car 2 (C) Car 3 (D) Car 4
 G Q N 1 G Q N 2 G Q N 3 G Q N 4

78. Which of the following sound waves have the highest pitch
 টো » া E o X a o c ` E T o e G » T o e H c %>T e o a [y k : ? / X l a y a E o X ` C E T y a t [y T o e H c a [y e + a T o a [y Y ?



79. A ball of mass 2 kg. and another of mass 4 kg are dropped together from a 60 feet tall building after a fall of 30 feet, their respective kinetic energies will be in the ratio of
 2 E f G 0 %> 0 4 E f G 0 \ o » V o c [y 6 0 Z 0 = J o c o x y o e » Y c a Y _ c + V r c e c a k * 3 0 Z 0 %>T y 0 E o c » Y a T o + c e f o G > T o » A l p »
 % X Y c T o c f y
 2 E f G 0 C 4 E f G 0 \ a [y y V o c [y 6 0 Z 0 = J o t a [y x y o e a U a E o a Z o _ a V C r c c : * 3 0 Z 0 %>T y 0 E d y y Y l y C a M [y G > T o » A l l y
 % X Y c T o c a [y
 (A) $\sqrt{2} : 1$ (B) 1 : 4 (C) 1 : 2 (D) $1 : \sqrt{2}$

80. Rahul takes 1 minute to raise a box to a height of 1 meter and Rohan takes $\frac{1}{2}$ minute to do so, comment on the energy by the two.

» c S a _ A o c [y E o 1 x] o c » = J o t e _ V a l a T o 1 x] X o a] r _ r %> 0 a » c a X V a l a T o 1 / 2 x] X o a] r _ r * V o c a Y e r c G E o c ` A l p » x] b a r
] T o c] T o e c a k :

A E o o [y j , 1 x] o c] y = J o t a r = P a a T o [y S _ 1 x] X o a] r a X i r A [y e a [y c X a X i r 1 / 2 x] X o r V c a X i y Y e r c G E d y c ` A l l y x] b a r] U r y o c c : f -
 (A) Energy spent by Rahul is more (B) Energy spent by both Rahul and Rohan is same
 » c S a _ a [y k : ` A l p F » \$ o E o » » c S _ %> 0 a » c a X a] c X ` A l p F » \$ o E o »
 [y S _ a [y Y ` A l p F [y o E o l y [y S _ A [y e a [y c X a] c X ` A l p F [y o E o l y
 (C) Energy spent by Rohan is more (D) Cannot be said
 a » c a X a [y k : ` A l p F » \$ o E o » / a [y c X a [y Y ` A l p F [y o E o l y E d y a X c e / c » / [y a T o Y c l y X c

81. If the earth shrinks half in radius its mass remaining the same, then by what percentage will the weight of an object on earth change ?

- (A) Decreases by 50% (B) Increases by 50% (C) Decreases by 25% (D) Increases by 300%

82. In which of the following cases, the net force is zero ?

Tö » äEöX äEöX äEöX äEöX / XäEöX äEöX äEöX äEöX

- | |
|---|
| I. A ball freely falling from a certain height
নির্দিষ্ট উচ্চতার পৰা মুক্তভাবে সৰি পৰা বল এটা / নির্দিষ্ট উচ্চতা থেকে মুক্তভাবে পড়া একটি বল |
| II. A cork floating on the surface of water
জল পৃষ্ঠত উপড়ি থকা কৰ্ক এটা / জল পৃষ্ঠের উপরে থাকা একটি কৰ্ক |
| III. An object floating in air
বায়ুত উপড়ি থকা বস্তু এটা / বায়ুতে ভেসে থাকা একটি বস্তু |

- (A) I and II only (B) II and III only (C) III and I only (D) I, II and III

83. When the force retards the motion of a body, the work done by the force during retardation is

- (A) zero (B) negative (C) positive (D) None the these

84. Which of the following contains the same number of oxygen atoms ?

Tö » äEöX äEöX äEöX äEöX / XäEöX äEöX äEöX äEöX

- | |
|--|
| I. 1g of O atoms / 1 গ্রাম O পরমাণু / 1 গ্রাম O পরমাণু |
| II. 1g of O ₂ / 1 গ্রাম O ₂ |
| III. 1g of Ozone / 1 গ্রাম অজোন |

- (A) I and II only (B) II and III only (C) III and I only (D) I, II and III

85. Identify the correct increasing order of molecular weights.

- (A) H₂O > NO > CO₂ > SO₂ (B) H₂O < SO₂ < NO < CO₂ (C) SO₂ < CO₂ < NO < H₂O (D) H₂O < NO < CO₂ < SO₂

86. Which of the following statements about isotopes of an element is not correct ?

- (A) Isotopes have the same proton number (B) Isotopes have the same chemical properties
(C) Isotopes have the same nucleon number (D) None of these

87. Which of the following is a balanced chemical equation?
 (A) $3\text{Be} + 3\text{N} \rightarrow \text{Be}_3\text{N}_2$ (B) $2\text{NaOH} + \text{H}_2\text{O}_2 \rightarrow \text{Na}_2\text{O}_2 + \text{H}_2\text{O}$
 (C) $\text{SiCl}_4 + 2\text{H}_2\text{O} \rightarrow \text{SiO}_2 + 4\text{HCl}$ (D) $3\text{Cu} + 8\text{HNO}_3 \rightarrow 3\text{Cu}(\text{NO}_3)_2 + \text{NO} + 4\text{H}_2\text{O}$
88. Why a gas from a small container when transferred to a larger container is able to fully occupy all the space available?
 (A) Gas has no definite mass (B) Gas has no definite shape
 (C) Gas has no definite volume (D) Gas has no definite density
89. Which of the following element is least reactive?
 (A) ${}_8\text{X}^{16}$ (B) ${}_{10}\text{X}^{20}$ (C) ${}_{11}\text{X}^{23}$ (D) ${}_9\text{X}^{19}$
90. Identify a heterogeneous mixture from the following:
 (A) Brine solution (B) Gallium
 (C) Sulphur in carbon disulphide (D) Gun powder
91. Samir added sodium hydroxide to ferric chloride solution, he found that a reddish brown precipitate is formed. By what process is the precipitate separated from the mixture?
 (A) Evaporation (B) Sublimation (C) Filtration (D) Distillation
92. Which type of tissue supports, defends and stores food in the body?
 (A) Muscle tissue (B) Nervous tissue (C) Epithelial tissue (D) Connective tissue
93. How do animals get their nitrogen?
 (A) By absorbing nitrogen gas through the skin (B) By eating carbohydrates
 (C) From nitrates in their drinking water (D) By eating plants and other animals

94. How is osmosis different from diffusion ?

ওসমোসিস এবং ব্যাপন কীভাবে ভিন্ন? / ওসমোসিস এবং ব্যাপন কীভাবে ভিন্ন?

(A) Osmosis involves the movement of solids through a liquid

ওসমোসিস জড়িত করে কঠিন দ্রব্যের গতি। / ওসমোসিস জড়িত করে কঠিন দ্রব্যের গতি।

(B) Osmosis takes place with or without a membrane

ওসমোসিস ঝিল্লি বা ঝিল্লিহীন অবস্থায় ঘটে। / ওসমোসিস ঝিল্লি বা ঝিল্লিহীন অবস্থায় ঘটে।

(C) Osmosis is much faster than diffusion

ওসমোসিস ব্যাপন থেকে অনেক দ্রুত। / ওসমোসিস ব্যাপন থেকে অনেক দ্রুত।

(D) Osmosis involves only the movement of water molecules

ওসমোসিস জড়িত করে শুধুমাত্র পানির অণু। / ওসমোসিস জড়িত করে শুধুমাত্র পানির অণু।

95. Which of the following diseases is caused by virus ?

নিচের কোন রোগটি ভাইরাস দ্বারা সৃষ্টি? / নিচের কোন রোগটি ভাইরাস দ্বারা সৃষ্টি?

(A) Filariasis

(B) Cholera

(C) Dengue

(D) Malaria

ফিলারিয়াসিস

কোলেরা

ডেঙ্গু

ম্যালেরিয়া

96. Which of the following is not common to both plant and animal cells ?

নিচের কোনটি উদ্ভিদ এবং প্রাণী উভয় কোষেই পাওয়া যায় না? / নিচের কোনটি উদ্ভিদ এবং প্রাণী উভয় কোষেই পাওয়া যায় না?

(A) cell membrane

(B) cell wall

(C) nucleus

(D) cytoplasm

কোষঝিল্লি

কোষপ্রাচীর

কেন্দ্রক

কোষজাল

97. Which of the following is not a fossil fuel ?

নিচের কোনটি জীবাশ্ম ইন্ধন নয়? / নিচের কোন জীবাশ্ম ইন্ধন নয়?

(A) Petroleum

(B) Natural gas

(C) Coal

(D) Bio gas

পেট্রোলিয়াম

প্রাকৃতিক গ্যাস

কয়লা

বায়োগ্যাস

98. The information below shows a snake, a fish, a tortoise and an animal 'X' having the same characteristic.

নিচের তথ্যটি সর্প, মাছ, কচ্ছপ এবং প্রাণী 'X' এর জন্য একই বৈশিষ্ট্য নির্দেশ করে। / নিচের তথ্যটি সর্প, মাছ, কচ্ছপ এবং প্রাণী 'X' এর জন্য একই বৈশিষ্ট্য নির্দেশ করে।



Animal 'X' is most probably a :

প্রাণী 'X' সম্ভবত এটা। / 'X' প্রাণীটি সম্ভবত একটি।

(A) toad

(B) mouse

(C) pigeon

(D) platypus

কচ্ছপ

মাছ

পigeon

প্ল্যাটপাস

99. Read the information given below :

পাতত সমান্তরাল শিরা বিন্যাস আছে / পাতায় সমান্তরাল শিরা বিন্যাস আছে

Have leaves with parallel veins
পাতত সমান্তরাল শিরা বিন্যাস আছে / পাতায় সমান্তরাল শিরা বিন্যাস আছে
Have fibrous roots : / চুলি শিপা থাকে / তন্তুযুক্ত মূল
Have petals in multiples of 3 (3 ব গুণিতক সংখ্যক পুষ্প পত্র থাকে/ 3 এর গুণিতক সংখ্যক পুষ্প পত্র থাকে)

Which plants listed below have the above characteristics ?

কোন কোন গাছের পাতায় সমান্তরাল শিরা বিন্যাস আছে এবং পুষ্প পত্রের সংখ্যা 3-এর গুণিতক?

- (A) Paddy and Maize (B) Maize and Balsam
[paddy and maize] [maize and balsam]
(C) Balsam and sugar cane (D) Sugar cane and hibiscus
[balsam and sugar cane] [sugar cane and hibiscus]

100. Potato produces daughter plants through

.....-এর মাধ্যমে পটাতো গাছের সন্তান গাছের উৎপত্তি হয়।

- (A) Suckers (B) Bulbs (C) Tubers (D) None of these
[suckers] [bulbs] [tubers] [none of these]

XXXXXX