

AJMAL NATIONAL TALENT SEARCH (ANTS) EXAMINATION - 2014

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

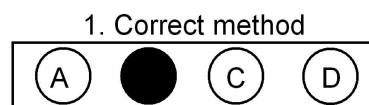
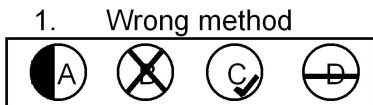
Hojai, Nagaon (Assam)

ANTSE/ VIII/6500

Class / **ଅଷ୍ଟମ** VIII

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.

ଅନୁପରାମର୍ଶ

- 1* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 2* ପ୍ରଶ୍ନଗୁଡ଼ିକର ଉତ୍ତର ଠିକ୍ ଭାବରେ ଚିହ୍ନଟିକିବାକୁ ହେବ । ଠିକ୍ ଉତ୍ତର ଠିକ୍ ଭାବରେ ଚିହ୍ନଟିକିବାକୁ ହେବ ।
- 3* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 4* କେବଳ ଗୋଟିଏ ଚିହ୍ନଟିକିବାକୁ ହେବ । ଅନ୍ୟ କୌଣସି ଚିହ୍ନଟିକିବାକୁ ହେବ ନାହିଁ ।
- 5* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
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- 7* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 8* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 9* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 10* ଅନୁପରାମର୍ଶ ଦେବା ପାଇଁ ଉପରୋକ୍ତ କୋଡ୍ ଓ ରୋଲ୍ ନମ୍ବର ସ୍ପଷ୍ଟ ଭାବରେ ଉପରୋକ୍ତ ଉପାଦାନରେ ଲେଖିବାକୁ ହେବ । ନାମ କେଉଁଠି ଲେଖିବାକୁ ହେବ ତାହା ଦେଖିବାକୁ ହେବ ।
- 11* କେବଳ ଗୋଟିଏ ଚିହ୍ନଟିକିବାକୁ ହେବ । ଅନ୍ୟ କୌଣସି ଚିହ୍ନଟିକିବାକୁ ହେବ ନାହିଁ ।

25. Which of the following countries has not hosted the Asian Games ?

- (A) Philippines (B) Thailand (C) Iran (D) Pakistan

General English

Fill in the dotted space with the correct choice from the options.

26. Mr Barua's house is over there. It's big one with lots of coconut trees in front of it.
(A) a (B) an (C) the (D) any
27. Any unilateral action is a undertaking.
(A) world-wide (B) cooperative (C) one-sided (D) malicious
28. Only by chance that she had been copying my notes.
(A) discovered I (B) did I discover (C) I had discovered (D) I discovered
29. How get back home if you lost your ticket ?
(A) had you to (B) might you (C) would you (D) have you
30. I benefited a great deal taking that online training course.
(A) for (B) with (C) by (D) from
31. You must phone us as soon as you Home.
(A) will have got (B) will get (C) are getting (D) get
32. Jaysh could not a moustache to the photo of the actress in the newspaper.
(A) resist for adding (B) resist to add (C) resist from adding (D) resist adding
33. He crept in his parents should wake up.
(A) otherwise (B) lest (C) unless (D) or
34. We've been friends for years. I him since I took admission in Don Bosco School.
(A) have known (B) am knowing (C) knew (D) know
35. What will she do when she her results ?
(A) would have (B) will have (C) has (D) should have
36. Only when I bend over the pain get worse.
(A) must (B) should (C) did (D) does

37. We are not in such a noisy place.
(A) used to live (B) use to live (C) use to living (D) used to living
38. his parents speaks English.
(A) None of (B) Neither of (C) Either of (D) None
39. "What are you going to buy?" "I'm going to buy"
(A) a bread (B) some bread (C) a loaf of bread (D) both (b) & (c) are correct
40. "What time did you arrive at the match?" "A little than usual.
(A) after (B) late (C) later (D) delay
41. "The recent speech of the leader **augmented** tensions in the North East". "Augmented" means.
(A) increased (B) segmented (C) decreased (D) divided
42. "The children's faces clearly expressed the frustration of the **baffled**". "Baffled" means.
(A) noisy (B) affluent (C) deprived (D) perplexed
43. He had the **audacity** to question his father's decision. The word opposite in meaning to "audacity" is
(A) bravado (B) cowardice (C) courage (D) pride
44. We have **ample** food for the party. The word opposite in meaning to "ample" is
(A) enough (B) heavy (C) meagre (D) copious
45. A man with a broad and international outlook is called a
(A) Globalist (B) Philanthropist (C) cosmopolitan (D) migrant
46. Much of the attraction of cricket is due to the fact that it is a sport.
(A) lucrative (B) controversial (C) celebrity (D) useful
47. Find the correctly spelt word.
(A) Facism (B) Fascism (C) Fasism (D) Fascizm
48. Seema **took her son to task** for watching television all evening. The meaning of the bold underlined phrase is :
(A) Gave him the task of watching television (B) Gave him a task to complete while watching television
(C) Scolded her son (D) Did the son's task by herself
49. The king ruled over his subjects with a **high hand**. The meaning of the bold underlined phrase is :
(A) kindly (B) oppressively (C) with great knowledge (D) with stupidity
50. Birds : Aviary :: Bees : ?
(A) Apiary (B) Hive (C) Flower (D) Honey

General Maths / সাধাৰণ গণিত / সাধাৰণ গণিত

51. If $1 + \frac{1}{x} = \frac{x+1}{x}$, what does 'x' equal to ?

যদি $1 + \frac{1}{x} = \frac{x+1}{x}$, তেন্তে 'x' ৰ কিমান মান সম্ভৱ ? / যদি $1 + \frac{1}{x} = \frac{x+1}{x}$, তেন্তে 'x' ৰ কিমান মান সম্ভৱ ?

- (A) 1 or 2 only
কিমে 1 বা 2
- (B) 1 and 0 only
কিমে 1 আৰু 0
- (C) +1 or -1 only
কিমে +1 বা -1
- (D) any number except 0
কিমে 0 ব্যতীত যিকোনো সংখ্যা

52. How many of the following four numbers are rational ?

নিচলৈকে দিয়া চাৰি সংখ্যাৰ কোনখিনিটিৰ মান যুক্ত ?

$$\sqrt{3} + \sqrt{3}, \sqrt{3} - \sqrt{3}, \sqrt{3} \times \sqrt{3}, \sqrt{3} \div \sqrt{3}$$

- (A) One
এক
- (B) Two
দুই
- (C) Three
তিনি
- (D) Four
চাৰি

53. If $1^3+2^3+3^3+ \dots + 9^3 = 2025$, then the value of $(0.11)^3+(0.22)^3+ \dots +(0.99)^3$ is close to

যদি $1^3+2^3+3^3+ \dots + 9^3 = 2025$ তেন্তে $(0.11)^3+(0.22)^3+ \dots +(0.99)^3$ ৰ মান কিমানৰ ওচৰত ?

- (A) 0.2695
(B) 2.695
(C) 3.695
(D) 2.025

54. Multiplicative inverse of '0' is

'0' ৰ গুণকৰ বিপৰীতমুখী সংখ্যা কিমান ? / '0' ৰ গুণকৰ বিপৰীতমুখী সংখ্যা কিমান ?

- (A) $\frac{1}{0}$
(B) 0
(C) does not exist
(D) none of these

55. The value of 'x', when $3^x = \frac{\sqrt{3}}{9}$ is

যদি $3^x = \frac{\sqrt{3}}{9}$ তেন্তে 'x' ৰ মান কিমান ? / যদি $3^x = \frac{\sqrt{3}}{9}$ তেন্তে 'x' ৰ মান কিমান ?

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

56. If $a+b+c = 0$, then the value of $(a+b-c)^3+(b+c-a)^3+(c+a-b)^3$ is

যদি $a+b+c = 0$ তেন্তে $(a+b-c)^3+(b+c-a)^3+(c+a-b)^3$ ৰ মান কিমান ?

- (A) $8(a^3+b^3+c^3)$
(B) $a^3+b^3+c^3$
(C) 24 ab
(D) -24 abc

57. If a four - digit perfect square number is such that the number formed by the first two digits and the number formed by the last two digits are also perfect squares, then the four digit number is

(A) 6416 (B) 3618 (C) 1681 (D) 1664

58. If $P = \left(\frac{-3}{4}\right)^3$, $Q = \left(\frac{-2}{5}\right)^2$, $R = (0.3)^2$, $S = (-1.2)^2$, then

(A) $P > Q > R > S$ (B) $S > P > Q > R$ (C) $S > Q > R > P$ (D) $S > R > P > Q$

59. If 50% of $(x-y) = 30\%$ of $(x+y)$, then what percent of 'x' is 'y'?

(A) 25% (B) $33\frac{1}{3}\%$ (C) 40% (D) 400%

60. Match List-I with List-II and select the correct answer :

List - I / তালিকা - I	List - II / তালিকা - II
P : opposite sides equal and parallel বিপরীত বাহু সমান আৰু সমান্তৰাল বিপরীত বাহু সমান এবং সমান্তৰাল	1. Rectangle আয়তক্ষেত্র
Q : opposite sides equal and one angle 90° বিপরীত বাহু সমান আৰু এটা কোণ 90° বিপরীত বাহু সমান এবং একটি কোণ 90°	2. Square বর্গ
R : All sides equal and one angle 90° আটাইকেইটা বাহু সমান আৰু এটা কোণ 90° সবকয়টি বাহু সমান এবং একটি কোণ 90°	3. Rhombus ৰহ্মাচ রহ্মাস
S : All sides equal and diagonals at right angles আটাইকেইটা বাহু সমান আৰু কর্ণ দুডাল পরস্পৰ লম্ব সবকয়টি বাহু সমান এবং কর্ণ দুটি পরস্পৰ লম্ব	4. Parallelogram সামন্তৰিক সামন্তরিক

(A) P-4, Q-1, R-3, S-2 (B) P-4, Q-1, R-2, S-3 (C) P-3, Q-4, R-2, S-1 (D) P-2, Q-4, R-1, S-3

61. If $x-y=1$ and $x^2+y^2=41$, then the value of $x+y$ will be

(A) +9 (B) +1 (C) 5 or 4 (D) - 5 or - 4

68. If the radius and the height of a right circular cylinder are doubled, then its volume increases by how many times ?

AC a) [vudh \$1 qEETo [y00A0] [ycad] %p0 = Jd q VhX Eo a + r q % d TX Eo] cX mS [k uc aly?

AEo0 a) [vudh \$1 qEETo [y00AE00] [ycad] C = Jd q VhS Edy ca, To] y % d TX EdomS [k uc aly?

- (A) 2 (B) 3 (C) 4 (D) 8

69. A cycle is sold for ₹ 880 at a loss of 20%. For how much should it be sold to gain 10% ?

AFX \$c+ aEo 880 OE qToa [ya 20% a cEoX cF * k+ aEo FX Eo] cX OE qToa [ya 10% c\oc aly?

AEo0 a) aEo 880 OE q a [ya 20% a cEoX cF * a+ aEo EdomEo a [ya 10% c\oc aly?


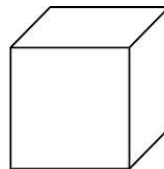
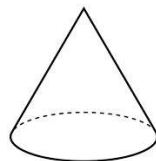
- (A) ₹ 1000 OE q / OE q (B) ₹ 1100 OE q / OE q (C) ₹ 1210 OE q / OE q (D) ₹ 1400 OE q / OE q

70. $(a+b)^2 = a^2 + 2ab + b^2$ is true for all

$(a+b)^2 = a^2 + 2ab + b^2$ »] c aEo c » [ya [ya To* / $(a+b)^2 = a^2 + 2ab + b^2$ A] y] c aEo A] y LXi aTo*

- (A) Natural numbers (B) integers (C) Real numbers (D) None of these
 00 q Eoae Fi q / 00 q Eoae Fi q % F % ae Fi q [y00 % ae Fi q / [y00 % ae Fi q A00 C Xc F / AE00 C Xr

71. Which of the following is a polyhedron ? / To » aEo Xa0 [y Z0 Eo? / Xb d] yaEo X0 [y Z0 Eo?

- (A)  (B)  (C)  (D) All the above
 %00 q+ aEo 00 q a [Eo X0

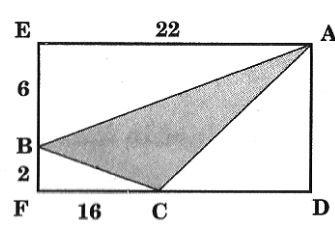
72. In the given figure, EADF is a rectangle and ABC is a triangle whose vertices lie on the sides of EADF. AE=22, BE=6, CF=16 and BF = 2. Find the length of the line joining the mid points of the sides AB and BC.

\$y ToEADF A00 % d To] iy % q 0ABC A00 A] \ L ^ c ` Vb] yVcaEo 0 EADF ToUcaEo ^ v AE=22, BE=6, CF=16 % q 0

BF = 2 cF aT d] AB % q 0BC »] V] yVcaEo ^ cY a] Fc0] » eVHi Xsr Eo c*

\$y EADF AEo0 % d To] iy A] e ABC AEo0 A] \ L ^ d] y Vb] yVh_ EADF A % c k = ^ v AE=22, BE=6, CF=16 A] e

BF = 2 cF, To] y AB C BC A] y] V] yVcaEo ^ cY a] Fc0] y eVHi Xsr Edy



- (A) $4\sqrt{2}$ (B) 5 (C) 3.5 (D) None of these
 A00 C Xc F / AE00 C Xr

73. If the digit 1 is placed after a two digit number whose tens digit is 't' and units digit is 'u', the new number is

V00 % eEo y k roae Fi q A00 VcEo H» » % eEo t % q 0AEo H» » % eEo u' A+ ae Fi q a bTo] % eEo [S % q XT0 ae Fi q c aly*

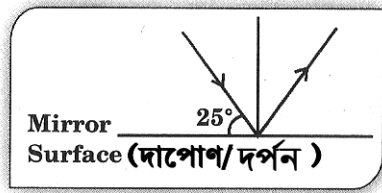
V00 % eEo y k roAEo0 ae Fi q yV aEdy Ha] y % eEo t' A] e AEo Edy Ha] y % eEo u' A] y Ya 1 % eEo [ya XT0 ae Fi q c aly*

- (A) $10t + 4 + 1$ (B) $100t + 10u + 1$ (C) $t + u + 1$ (D) None of these
 A00 C Xc F / AE00 C Xr

74. $(256)^{0.16} \times (256)^{0.09} = \dots\dots\dots$
 (A) 4 (B) 16 (C) 64 (D) none of these
75. If the division $x \div 5$ leaves a remainder of 3, what might be the ones digit of 'x' ?
 (A) 2 (B) 3 (C) 4 (D) 6

General Science / সাধারণ বিজ্ঞান / সাধারণ বিজ্ঞান

76. Observe the figure below :



Find the angle between the incident ray and the reflected ray.

- (A) 65° (B) 50° (C) 130° (D) 25°
77. A rainbow is formed as a result of the by the raindrops.
 (A) absorption of sunlight (B) reflection of sunlight
 (C) dispersion of sunlight (D) All of these
78. Which sound is correctly related to its pitch and frequency ?

Sound (শব্দ)	Pitch (তীব্রতা)	Frequency (কম্পনাংক)
(A) High note on whistle হাইসেলের শব্দ / হাইসেলের শব্দ	Low (কম)	High (বেছি / বেশী)
(B) Vibration of wings of a mosquito মহর পাখির কম্পন / মশার পাখার কম্পন	High (বেছি / বেশী)	High (বেছি / বেশী)
(C) Base note on a guitar গিটারের শব্দ / গিটারের শব্দ	High (বেছি / বেশী)	Low (কম)
(D) Sound produced by Jet plane জেট প্লেনে কবা শব্দ / জেট প্লেনের শব্দ	Low (কম)	Low (কম)

92. Which method of water purification does not kill micro-organisms?
 YcXy » aEoXaOq » [E x iEoS YyO' cToI QP%Sc L%a] E=V[ea XcF ? / L a [yaEoX » [E x iEoS YyO' d' I QP%XC L[ya] E=V[ea cF Xc?
 (A) Boiling (B) Filtration (C) Chlorination (D) Distillation
 =Tä _ç/ ZQaXç Y»QP/S Eoç/ Y»[Q]S zö»aXcX / zö[pa] X YcTS
93. Which of the following is not a **rabi** crop?
 Tö » aEoXaOq » [y` ai XcF ? / X[ad]yaEoX » [y]y` ai Xr ?
 (A) Rice (B) Wheat (C) Mustard (D) Potato
 WpX aH\$ / G] a»r'c-/` ai %c_ç
94. The extra protection in a plant cell which is made up of cellulose is
 aöo _ç _cl_ä » G-PÖTö a' => aV aEobEo%Tö» Np a\$ i ç » V a* / äa _ç _cl_ä G-PÖTö => aV aEobEo%Tö [Yp a]y i ç » V a*
 (A) cell membrane (B) plasma membrane (C) cell wall (D) all of these
 aEobç » S / aEobç [Y]S Y[ä] _ç » S / Y[ä] _cl_ä [Y]S aEobä]y / aEobYVÖ %Qq+äEo-Qq / a[EÖ' » Ö
95. What is common among bacteria, algae and fungi?
 ä[ya] » r'ç ä _ç » %Qq\ä [Eö] »]cl_Tö » Eö] _ %çäK=? / ä[ya] » r'ç ä [ç _ A [ç K » çäEö]y] äly » Eö] _ %çäK=?
 (A) All are autotrophs (B) All are decomposers (C) All have cell wall (D) All contain pigment
 %Qq+äEo-Qq ÖaYçöY %Qq+äEo-Qq » [y] _cl_ä Eö %Qq+äEo-Qq » aEobä]y %çäK= %Qq+äEo-Qq » tEöYVçJi UçEö
 a[y]m_ ÖaYçöY a[y]m_ » [y] _cl_ä Eö a[y]m_ [yaEobYVÖ] %çäK= a[y]m_ ä[ö] [y]t EöYVçJi %çäK=
96. Uncontrolled deforestation leads to
 %Xr » äEöG » Tö [YçTü _ W[ya Eö]ä cF* / %Xr » äEöG » Tö [YçTü _ W[ya Eö]ä cF*
 (A) the destruction of habitats (B) landslides
 Y»ä[ya] W[ya cF / Y»[ya]y W[ya cF \ä] _ X
 (C) flooding (D) All the above
 [y]XyçY / [Y]ç %Qq+äEo-Qq / a[EÖ' » Ö
97. Internal fertilization occurs in
 » ä[ya]Tö %UP » XäbX cF* / A[ya]l äy %UP » XäbX cF*
 (A) bird, fish (B) reptile, frog (C) mammal, frog (D) reptile, mammal
 \$öç+,]çä- a»äY, äEö_Y ÖW[YçY, äEö_Y a»äY, ÖW[YçY
 YçY,]çä- a[ya]Y, [y]çö ÖW[YçY, [y]çö a[ya]Y, ÖW[YçY
98. Insufficient production of insulin in the human body causes
]çX% äVc » TöYä' cl_X äççç %Xçç'Y +XKçç_X c»]'X YÖP'öaXçççç » Zö_Tö
]çX[ya]äc » Yä' cl_X cçr'ç %Xçç'Y +Xaç_X cç]]X YÖP'öXçç cä cF*
 (A) hepatitis (B) polio (C) diabetes (D) none of these
 äççççç / äççççç Yç_% / Yç_C]W]çç / [S]ç AÖç XcF / äEoX » Ö Xr
99. The disease caused by virus which affects the liver cells is
 ^Eö' äEobEöI uTö adW Eöç \ç » çL » XTö » çç » W[ya]çäK=
 ^Eö' äEob I uTö Eö]y \ç » [ya]L » XTö [y]ççççç f
 (A) influenza (B) measles (C) hepatitis (D) Polio
 \$öVY a»VÖ a»ö%ç / çç] L » çç / äççççç Yç_
100. Which of the following reduces oxygen carrying capacity of blood?
 Tö » aEoXaOq » äTö » %j äLX EöKçç I u]Tö ä[ya] Eö ? / X[ad]yaEoX » [y]Np » j äLX [ç » X]y I u]Tö ä[ya] Eö]y?
 (A) CO₂ (B) CO (C) H₂ (D) SO₂

XXXXXX