Soal medan magnet kelas 12 pdf

Fisikastudycenter.com-Here are a few examples of magnetic field material discussed in Class XII (12) SMA, straight wire, circular wire, solenoida and toroid: Problem No. 1Seutas wire flowing electric current i 2 A as the next image ! Point out: (a) Magnetic field strength at point P b) Magnetic field direction at P (c) Magnetic field strength at point (d) Magnetic field direction at point (a) Magnetic field force (B) from point A far from the long direct wire with a strong current i: Strong magnetic field at point P: b) Direction determined by the right hand rule, where the thumb represents the direction of the current and the finger like the direction of a magnetic field with the position of the hand holding the wire. Thus, the strong direction of the magnetic field at P point is outside the reading field (approaching the reader). c) Strong magnetic field at point : d) Direction of the entry field in the reading box (away from the reader) question No. 2 Watch the following image! Identify the large and strong direction of the magnetic field at P! The current A discussion will generate a magnetic field at point P with the direction of entry into the field, while current B generates a magnetic field with the direction of the field exit. The appropriate direction of BA is in the field. Problems Nos. 3Kawat A and B are separated by 1 m from each other and flow with successive electric currents 1 A and 2 A with directions, as shown below. Determine the location of point C where the magnetic field is zero! Discussion In order to be a strong zero field, a strong field produced wire AND wire B must be of the opposite direction and equally large. The possible position is to the left of the A wire or to the right of the B wire. Thus, the position to the left of the wire A just name the distance as x. Problem No. 4Trie a piece of wire with the value and direction of the current, as shown in the next image! Identify the large and strong direction of the magnetic field at P point, which is 1 meter from the third wire! Discussion At Point P has three magnetic wire fields I (in the field), Wire II (exit field) and Wire III (in the field). Read the direction of entry into the field. Issue 5 Please note the following image. The A and B wires flow with electric currents I1 and I2 2 A and 3 A respectively with the exit direction of the reading field. Identify the large and strong direction of the magnetic field at point C, which forms a triangle equal to points A and B! Discussion Seeking B1 and B2 Strong common fields at point C use vector formulas and 10'7, for example, as x. Magnetic Field Direction: Problem No. 6 Point P is about two semicircular and long straight wire delivery parts as the next picture! Identify a strong magnetic field at P! Discussion Strong terrain semi-circle wire direction entry field B1 and strong magnetic field direct wire name B2 the direction of the exit reading field : The direction according to the direction of B1 enter the reading field. (Thank you Desti,..) Issue No. 7 Identify the magnetic field at point P is located on a circular delivery shaft at a distance of 8 cm, if the current force flows on the wire 1 A! DiscussionSo. 8 Notice the image: I - long wire A - perpendicular flat field I N - Point is in the field 1 cm from i Wire I, leaking I and 50 amp i up. Large magnetic induction in B.... A. 10-2 webber m2 B. 10-3 Webber m.2 K. 10-4 webber m.2 D. 10-5 webber m.2 E. 10-6 webber m2 (from Ebtanas 1986) Discussion of the Strong Magnetic Field around the direct wire current Issue 9 2-meter selenoid with 800 turns and a radius of 2 cm. If the solenoid flows at 0.5 A, determine the magnetic induction at the end of the coalinide. (No 4 .10-7 Wb.A-1.m-1). A. 4 .10-5 Wb.m-2 B. 8 .10-7 Wb.m-2 C. 4'10-6 Wb.m.-2 D. 8 '10-5 Wb.m-2 E. 2 .10-4 Wb.m-2 (From 1988 Ebtanas issue) Strong discussion of the magnetic field solenoida, location at the solenoid end of the question No. 10 Long thread of wire flowing i. Point from the wire has a magnetic induction B. Large magnetic induction at point 3a from ... A. 3B B. 2B C. B D. 1/2 B E. 1/3 B (Ebtanas Problem 1993) Discussion of the comparison of strong magnetic fields between two points around the straight wire a1 - a2 and 3a B1 and B B2.... The no.11 Wire quarters of the circle flows 5 A as the next picture. If the circular wire has a radius of 40 cm, determine the strength of the magnetic field at P! Discussion Strong magnetic field on the wire quarter circle at point P So (Stub) Squad, do you know that a straight wire and a circular wire when this electric current will generate a large different magnetic field? Why is this so? This is due to differences in the direction of the current and the direction of the magnetic field around the wire. For more information we'll take a look at the next discussion, Kuy! The magnetic field around the direct wire, which flows with electric current, will produce a homogeneous magnetic field at the same distance from the wire. The resulting magnetic field forms a circle around the wire, and its direction is determined by the right hand rule. The thumb of the right hand indicates the direction of the electric current, and the other four fingers, which bend, indicate the direction of the magnetic field. For more information see the following image: Source: slideshare.net Large magnetic field around the electric direct wire depends on the large lyrical current and the distance of the point of view against the wire. The more current is given and the closer it is to the wire, the larger the magnetic field. A strong magnetic field on a long straight wire can be formulated below: Next we try to work on the example of the problem below the yuka, Squad! Long straight wire flows in the toke 3 A. Determine the size of the terrain which is 3 cm from the wire! (No 0 and 4 x 10-7 WB/am) Known: I 3 A p 3 cm and 3 x 10-2 m 0 x 4 x 10-7 Wb/Am Asked: B ? Answer: Read more: Legal understanding of the Coulomb Magnetic field around the circular wire circular wire circular wire, flowing electric current in a certain direction, then on the central axis of the circle there will be a magnetic field in a certain direction. The magnetic field around the circular wire can also be determined by the right hand rule. Unlike the long straight wire, the circular wire of the right thumb indicates the direction of the magnetic field, and the other four fingers that bend indicate the direction of the electric current, as in the following image: Source: slideshare.net Large magnetic field around the circular wire depends on the large fox current and the radius of the wire circle. The larger the current and the smaller the wire range radius, the larger the magnetic field. A strong magnetic field on a circular wire can be formulated below: Next we try to work on the example of the problem below the yuk, Squad! A circular wire with a radius of 10 cm flows 4 A with a large 10-loop wire loop. What is the size of the magnetic field on the wire? (No 0 x 10-7 WB/Am) Known: r 10 cm, 10 x 10-2 x 10-3m I y 4 A 0 x 10-7 Wb/Am Asked: B? Answer: Ok Squad, now you understand how to calculate the size of a magnetic field on a straight wire and circular wire? If you still have any other examples of this stuff write in the comments box yes. Don't forget to learn more fun using your study. You can find out through a full animated video with examples of questions, discussions and a summary of the squad. Let's use it now! Home ELECTRIC ELECTRIC ALTERNATING MAGNETIC FIELD PHYSICS THE QUESTION 30 AND LAST MAGNETIC FIELD UNTIL ALTERNATING CURRENT (1) The magnetic field is one of the physics materials studied in the class of 12 semester 1, so here I try to do an exercise about the magnetic field of the material and discuss it in detail, can be used as an exercise for students to better understand the magnetic field of material or reference teachers. The problem presented has many types of questions taken from entrance exam questions or UN, so it is suitable in order to learn before daily playback or will take the test. Enjoy the double selection of question number 1 The next image shows the correct direction of magnetic induction due to the current conductor I .... Key Answer: D discussion question No. 1: To know the direction of the magnetic field around the flowing wire, we can use the right hand of the rule as follows If applied to the aforementioned question, the direction of the magnetic field becomes If compared to the choice of answers to the question will be known The correct direction of the magnetic field is indicated by option D Problem Number 2 Please note the following image! Two very long wires are located parallel to the distance d. Each wire flows current as large as I am, as shown in the picture above. area or dot that allows the magnetic field to be zero.... A. Only at P B. point at all points located on the AA' C. line at all points along the two D. wires at all points contained within a 2D radius with a central point in P E. does not allow areas or points whose magnetic field is zero Key answer: And the discussion question no 2: The direction of the magnetic field on both wires is determined by using the right hand sniper rule to determine the direction of the magnetic field at the point around the current wire, pay attention to the image (A), the position of the hand as in the image, the thumb indicates the direction of the current and indicate four fingers to the point intended, the direction of the magnetic field at this point is indicated by the perpendicular direction of the palm. So in the image above there is a magnetic field at points A, A', and P, as in the image (B) In order for the magnetic field to be zero as a result, both magnetic fields (from both wires) must be opposite and equally large, this can only occur at point P question No. 3 Suppose that the flash can be simulated as a very long direct current. If the 14.4C payload passes a point of 1.60 x 10-3 s, then a large magnetic field at a perpendicular distance of 30 m from a lightning outbreak. ... A. 7 x 10-7 T B. 6 x 10-5 T C. 8 x 10-4 T D. 5 x 10-2 T E. 2 x 10-2 T Key Answer: B Discussion question No. 3: Based on the question may be known q 14.4 C t 1.60 x 10-3 s with 30 m y 0 x 4 x 10-7 TM / A To determine the size of the magnetic field can use the equation Where, current strength can be determined by i q/t i q/t 1 The magnetic field is so large the magnetic field because lightning is 6 x 10-5 T Problem number 4 When the solenoid, which is electrically inserted metal, then magnetic energy increases. Which of the following statements is true? A. Magnetic energy in the metal rod B. The permeability of the metal rod is smaller than vacuum C. A strong solenoid magnetic field remains D. Mechanical energy in the soleids is not dependent on the metal type E. Mechanical energy on the solenaids increases because the metal rod affects the electric current Key answer: A question No. 5 Two circular coils M and H are placed on the same field as the center. Coil M has 15 turns, a radius of 2 cm and a leaked 3 A. Coil N has 50 turns, a radius of 6 cm. The size and direction of the current in N is set in such a way that the magnetic field formed at the point of the center of the joint is zero. Big current in the N.... coil 0.8 Answer B. 1.5 A C. 1.6 A D. 2.4 A E. 2.7 Key answer: E question 6 In the picture below shows the wire running the current 4 A. In the image, the line drawn from the current comes from the outflow direction that crosses the central point of the circle perpendularally. The round wire part is 2 cm strong terrain at point P is .... A. 0.30 mt B. 0.94 mt S. 1.24 mt D. 3.14 mt E. 5.20 mT Key answer: B question discussion No. 6: Based on the question it may be known that I am 4 a r 2 cm and 2 x 10-2 m magnetic field at point P depends on the semi-circular wire, which is electrically current, so the size of the magnetic field at point P can be determined by the equation So the magnetic large field at point P is 0.942 m. Problem number 7 Two wires each carry current I, shown in the following image Both wires extend on a very long straight line. The first wire has a semi-circular loop with a radius and is centered at point x. Appropriate statement for the magnetic field in the center x .... A. 0i/4a - B. q0i/2a exit page B. q0i/2a output paper page C. q0i/4a - q0i/2'a enter paper page D. Enter the paper page E. q0i/2a - q0i (2'a) enter the paper page Key answer: C question No. 8 Positive charge moves at a straight V speed, controlled by an electric current the size of i, as seen in the image, magnetic force that will be tested by the charge of its direction.... A. Direction v B. Direction i C. to wire D. stay away from the E. wire leaves the paper field Key answer: Discussion question B 8: Use the right hand rule to determine the magnetic field around the positive charge and magnetic force so that it will get the following results! Thus, the direction of magnetic force on the charge to the Soal Number 9 wire Area has a uniform magnetic field of 4 Tesla, in a northerly direction. The payload point of 3 x 10-10 Coulomb moves south if this magnetic field does not exist, at a speed of 200 meters per second. the force that the point of charge is done by the magnetic field.... A. 24 x 10-8 N, north of B. 24 x 10-8 N, south of C. 24 x 10-10N, east of D. 24 x 10-10 N, west of E. zero Key answer: E question No. 10 Charged particle is at a certain distance from the long wire flowing electricity. Particles move at a constant speed perpendicular to a magnetic field derived from the current wire. If the electric current on the wire doubles and the particle rate becomes twice that, then the force that works on the current particle .... A. increased to four times original B. increased to two times original C. fixed D. reduced to two times original E. reduced to four times original Key answer: discussion question C 10: The question of the type of comparison, with the initial we give the a index and after all, we give index B, so based on the problem you can learn IB 2IA vB 1/2 vA lorentz style equation F and Bqv (B - 0I/2'a) F (No0I/2)qv ... (1) Based on the equation (1) above, we can learn that the lorentz style (F) is comparable to the current force (I) Lorenz style (F) comparable to speed (V) So it can be written in the equation of comparison So the size of the force remains issue number 11 Wire Row with a length of 100 cm carries a 2A current in an area with a homogeneous magnetic field, which has a large 100 Tesla towards the X. Magnetic power on the wire, θ 450 is the angle between the wire and the X axis .... (The k vector is the vector of the unit in the direction of the q axis). A. 70.7 k N B. 141.4 k N C. 0 N D. -70.7 k N E. -141.4 k N Key answer: E question No. 11: The aforementioned question can be illustrated as follows based on the image above, first we project the power of the electric current against the x-axis and axis, then we can record the magnetic field and the force of the electric current as the magnitude of the vector that has The vector unit accordingly follows the magnitude of magnetic force can be determined by multiplying the vector (cross product) between the magnetic field, the current force and the length of the following image F and IL x F (√ 2 I √2 j) 1 x (100 i) F (√2 i and √2 j) x (100 i) F (- √2 . 1 (- √2 . 100)k F -141.4 k N Problem number 12 Two metal wires P and q in separate vacuums at a distance of 4 cm and consistently carrying the same 2 A and 5 A flowing in one direction. if the P is kept still, while q is free to move, the force per meter that must be superimposed on q to stay in the same position stands about .... A. 2.5 x 10-5 N/m is approaching P B. 2.5 x 10-5 N/m from P C. 5 x 10-5 N/m approaching P D. 5 x 10-5 N/m from P E. 7.5 x 105 N/m perpendicular field formed P and No Key Answer: D issue No. 13 Wire Coil P has 10 turns and q wire coil has 30 lilies placed in the center. The following image shows both coils visible from above. The radius of the P coil is 5 cm, and the coil is 20 cm. strong current running through the coil is i'20 A, and the strong magnet in the center of the circle is zero. What is the power of the current flowing in the P (iP) wire? A. 15 A B. 20 A C. 25 A D. 30 A E. 35 Key answer: A question No. 14 Note of the next image! Two straight wires parallel to the electric shock of the i1 and i2A and i2 3A apart at a distance, as in the photo. Another direct delivery wire (3) is electrically current that will be placed around both wires, so that the wire does not test magnetic force. Wire (3) should be placed at a distance .... A. 0.5 a in left wire (1) B. a on the left wire (1) C. 2 a on the left wire (1) D. a on the right wire (2) E. 2 a on the right wire (2) Key answer: C issue 15 Two long wires aligned as far as d flows the same big current i.e. I so that there is magnetic force between the two F wires. The next statement is correct between two parallel wires, so that the magnetic force between the two F wires is.... A. I'm not going to have the current force changed to 3I, and the distance changed to 3D B. The current is changed to 3I and the distance changed to 9d C. The current is changed to 3I, and the distance is changed to 6d D. The current is changed to 6I, and the distance is changed to 3d Discussion 15: The issue is a matter of comparison type in magnetic force. To determine the comparison equation pay attention to the following long equation of magnetic force of unity, based on the equation above, you may know that F is comparable to I2 F back to so, that the comparison equation can be written by Sharpened: Note the comparison of the equation above, there is a square factor in variable I while in the variable does not exist, it means that the magnetic force remains then the variable must be raised with a constant that squared the number of variable constant I. A suitable option only C. Testimony is the following question No. 16 Positive particle charge q and m mass to move on perpenicular trajectory. Particles move in the R-radius circle with a frequency of f. Large magnetic field .... Answer A. mf/q B. 2'fm/q C. m/2'fq D. mc/qr E. mqf/2'R Key answer: B question No. 17 Double negatively charged ion (O2-) and li' single positively charged lithium ions move at the same speed and in the same direction as perpenary homogeneous magnetic across. The relative atomic mass of oxygen and lithium is 16 and 7, respectively. The value of comparing the radius of the O2 orbit/orbital radius is whether.... A. 16 : 7 B. 8 : 7 C. 2 : 1 D. 7 : 8 E. 7 : 16 Key answer: B Discussion of question No. 17: Based on the question you can find out qO No 2 qLi No 1 MrO No 16 MrL No 7 Where the relative atomic mass (Mr) - average atomic mass (m) / (1/12 x atomic mass C-12 (u) Mr. m0/u mO . u mO - 16u mLi - MrLi . u mLi No 7u To determine the comparison of the radius of the orbit of O2- and Li, then we can use equations such as in the equation question no 16 Based on the equation, then it can be known R directly proportional m R back to q So the comparison of the radius 8 : 7 question number 18 Note the image below! A metal rod with a weight of 1 m and a length of L 1 m is placed on a metal rail connected to a permanent current source, so that the scheme flows electric current I q 0.5 A. The chain is located in the area of the battlefield Form with a big B and directional, as in the picture. If the static friction factor between the rod and the rail is 0.25 euros and the gravitational acceleration is g 10 m/s2, the maximum B for hit is still .... A. 1 T B. 2 T C. 3 T D. 4 T E. 5 T Key answer: E question No. 19 Particle charged 2 x 10-7 C and weight 4 x 10-4 kg moving with an acceleration of 3.2 m/s2 that is in the magnetic field 8T particle speed .... A. 400 m/s perpendicular magnetic field B. 400 m/s forms an angle of 300 against the magnetic field C. 800 m/s parallel to the magnetic field D. 800 m/s, Forming an angle of 300 against the magnetic field E. 800 m/s perpendicular magnetic field Key answer: E discussion question No. 19: Based on the question you can find out q 2 x 10-7 C m 10-4 kg a 3.2 kg B and 8T To determine the speed of an object, you can use the following equation F and Bqv sin θ (say θ 900) ma and Bqv sin θ 4 x 10-4 . 3.2 and 8. 2 x 10-7 v . 1 2 x 103. 0.4 - v 800 m/s - v This speed is 800 m/s - this is the maximum speed that a particle has because of its maximum sinus value (θ and 900) or when the speed is perpendicular to the magnetic field. In the available answer options when using a 300 angle the speed will be 1600 m/s (not according to available options) question Essay question No. 1 Two long straight wires and parallel 4 A and 10 electric currents in the opposite direction, respectively. Two wires 12 cm apart. Determine the size of magnetic induction at a point in the middle of the hyphen between two wires! Problem number 2 Straight Wire line is curved forming radial lines and circular arcs centered at point P, as shown in the following image! Determine the size and direction of B magnetic induction in P! Issue 3 In the picture below shows three pieces of parallel wire running through the electric current. Enter the size and direction of magnetic force per unit of length on the wire located: a) left b) in the center of the) to the right of the discussion of question number 3: to know the size and direction of magnetic force per unit of length on each wire, we must first know the direction of magnetic force as a result of the magnetic field of other wires. A new vector is then indicated. (a) The direction of the left wire of the magnetic field and the magnetic force on the left wire, because the other two wires can be described as follows because of the direction of the F12 and F13 forces in the direction, then as a result of the long unity of magnetic force on the left wire can be determined by the long unity of magnetic force on the left wire 3.1 x 10-5 N/m b) the middle direction of the magnetic field wire and magnetic force on the medium wire, because the other two wires can be described as follows because the direction of F21 and F23 forces is the opposite, hence, as a result, the magnetic force of long unity The left wire can be determined by means, so that the long unity of magnetic force on the medium wire is 6.7 x 10-4 N/m) the right direction of the magnetic field wire and magnetic force on the right wire, because the other two wires can be described as follows thanks to the direction of the F31 and F32 forces in the direction of the then long unity of magnetic force on the left wire can be determined by the long unity of magnetic force on the right wire 3.7 x 10-5 H/m Problem No. 4 In the image next to the painted, that long and straight pq wire passes the electric current I1 and 12 A and abcd the rectangular wire runs through the current I2 and 6 A. determine the size and direction of force faced by abcd rectangular wire (indicate in micronuton) issue number 5 Particle charged 3 C , moving perpendicular to the magnetic field of area B with a pulse of 6 x 10-11 kg m/s. If the radius of the trajectory is 20 cm, determine the size of B. So practice the issue along with discussing the physics field material for class 12, little I can write can hopefully provide benefits for readers of all. If you want to subscribe to this blog, or give criticism, suggestions and opinions in the comments column below. Thank you soal dan pembahasan medan magnet kelas 12. soal pilihan ganda medan magnet kelas 12. soal hots medan magnet kelas 12. soal pg medan magnet kelas 12. soal dan pembahasan medan magnet kelas 12 pdf. soal dan pembahasan materi medan magnet kelas 12. soal dan pembahasan tentang medan magnet kelas 12. soal dan pembahasan fisika bab medan magnet kelas 12