ITI monthly test

Q. ID: ITISKILL8761EC

February 2026 | **GOVT ITI TAGADURU** | Question Paper

Duration: 30 Mins | **Total Marks: 166** | **ID: ITISKILL8761EC**

Student Name: _____ Roll No: _____

1. What is the carbon percentage in medium carbon steel?

A) 0.25% to 0.5% B) 0.5% to 1.5%
C) 0.05% to 0.15% D) 0.15% to 0.25%

2. What is the formula for velocity?

A) Distance covered/Time B) Change of momentum/Time
C) Displacement/Time D) Change in velocity/Time

3. Which metal cannot be forged?

A) Steel B) Cast iron
C) Mild steel D) Alloy steel

4. Which property of a metal enables it by which it can be drawn out into wires under tension without rupture?

A) Brittleness B) Hardness
C) Ductility D) Malleability

5. What is the square root of 0.017?

A) 0.000001 B) 0.00001
C) 0.001 D) 0.13

6. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

A) 395 volts B) 400 volts
C) 405 volts D) 390 volts

7. How much work done in one hour, if a pump can raise 100 liters of water through a height of 200 meters in one minutes?

A) 12 x 104 kg meter B) 12 x 105 kg meter
C) 12 x 106 kg meter D) 12 x 107 kg meter

8. What is the area of an ellipse if the major and minor axes are 5 cm and 3 cm respectively?

A) 27 cm² B) 57 cm²
C) 37 cm² D) 47 cm²

9. What is called if a force of 1Newton acts on a body and moves it through a distance of 1 metre?

A) 10 dynes B) 10 Joules
C) 1 Joule D) 1 dyne

10. What is the x value for x² + 62 = 126?

A) 4 B) 10
C) 6 D) 8

11. What is the speed of a train of 80 metre long train passes a railway station platform of 120 metres length in 20 seconds?

A) 34 km/hour B) 36 km/hour
C) 32 km/hour D) 30 km/hour

12. Which is mineral insulator

A) Mica B) Porcelain
C) Quartz D) Glass

13. How many hours will take for a 100 watts bulb to consume 1 kwh energy?
 W = 1 Kwh
 P = 100 Watts
 t = _____Hours

A) 10 hours B) 12 hours
C) 24 hours D) 18 hours

14. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

A) 17 ohms B) 11 ohms
C) 1/17 ohms D) 7 ohm

15. What is the power required?
 I = 0.455 Amps
 R = 484 Ohms
 P = _____Watts

A) 99.2 watts B) 98.2 watts
C) 100.2 watts D) 101.2 watts

16. What is the formula for finding volume of a hollow cylinder having outer radius 'R' inner radius 'r' and height 'h'?

A) 4/3 Pi (R² - r²)h B) Pi (R² - r²)h
C) Pi/3 (R² - r²) h D) 2/3 Pi (R² - r²) h

17. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?

A) Specific resistance
B) Non absorption
C) Di-electric strength
D) Mechanical strenth

18. What is the improper fraction for the given mixed fraction ? 7 x (3/7)

A) "7/52"
B) "7/28"
C) "28/7"
D) (52/7)

19. Which is the unit of resistance?

A) Watt
B) Ampere
C) Volt
D) Ohm

20. Which metal contains iron as a major content?

A) Bronze metal
B) Brass metal
C) Zinc
D) Ferrous metal

21. What metals contained in brass alloy?

A) Copper and lead
B) Copper and tin
C) Copper and aluminium
D) Copper and zinc

22. Which is the unit of current?

A) Watt
B) Volt
C) Ampere
D) Ohm

23. What is the formula for kinetic energy?

A) (1/2) mv joule
B) (2/3) mv joule
C) (2/3) mv² joule
D) (1/2) mv² joule

24. What percentage of 80 is 20?

A) 0.2
B) 0.4
C) 0.25
D) 0.8

25. Convert 0.456 decimal fraction into percentage?

A) 0.456
B) 45.6
C) 0.000456
D) 0.0456

26. How many watts for 1 horse power in metric system?

A) 745.5 watts
B) 735.5 watts
C) 755.5 watts
D) 725.5 watts

27. Which metal is widely used for making casting of machinery parts?

A) Grey cast iron
B) White cast iron
C) Wrought iron
D) Malleable cast iron

28. What is the ratio of power output to power input?

A) Efficiency
B) Work
C) Acceleration
D) Energy

29. Simplify: (17.49x5.2)/(6.5)

A) 13.79
B) 13.69
C) 13.99
D) 13.89

30. What is velocity of a body travels a distance of 168 metres in a line in 21 seconds?

A) 12 m/sec
B) 8 m/sec
C) 6 m/sec
D) 10 m/sec

31. Which insulating material is used for making switches?

A) Porcelain
B) Bakelite
C) Ebonite
D) PVC

32. What is the side of a square whose area is 625 mm²?

A) 30 mm
B) 25 mm
C) 15 mm
D) 20 mm

33. Which is brittle metal?

A) Cast iron
B) Alloy steel
C) Steel
D) Mild steel

34. What is the weight force of a car has a mass of 800 kg?(Take g = 9.81m/sec)

A) 7748 Newton
B) 7848 Newton
C) 7487 Newton
D) 7847 Newton

35. Which is the example for statically induced emf?

A) Refrigerator
B) Motor
C) Transformer
D) Generator

36. What is called if a body posses only magnitude or size alone?

A) Velocity
B) Scalar quantity
C) Speed
D) Vector quantity

37. Convert decimal 0.000659 to fraction?

A) (659/10000)
B) (659/1000)
C) (659/100000)
D) (659/1000000)

38. What is the acceleration of an aeroplane taking off from landing field has to run 700 metres if it leaves the ground in 10 seconds from the start?

A) 8 metre/sec²
B) 12 metre/sec²
C) 10 metre/sec²
D) 14 metre/sec²

39. What is called mass per unit volume of a substances?

A) Density B) Weight
C) Volume D) Mass

40. What is the current Flow in the bulb?
 P = 550 watts
 R = 22 Ohms
 I = _____Amps

A) 4 Amps B) 2 Amps
C) 5 Amps D) 3 Amps

41. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?

A) 85 cm² B) 75 cm²
C) 80 cm² D) 90 cm²

42. What is the flow of electrons in any conductor?

A) Current B) Power
C) Resistance D) Voltage

43. A motor cycle tyre is sold for Rs 300/- what is the purchase price if 25% profit is added to it.

A) Rs 200 B) Rs 220
C) Rs 240 D) Rs 260

44. What is the volume of a rectangular tank of 30 m length, 20m width and 10m height?

A) 6200 m³ B) 6100 m³
C) 5900 m³ D) 6000 m³

45. What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 seconds?

A) 0.30 m/sec² B) 0.20 m/sec²
C) 0.40 m/sec² D) 0.10 m/sec²

46. Which property of a substance is opposing the flow of electric current?

A) EMF B) Voltage
C) Current D) Resistance

47. What maximum height a stone will reach if it is thrown upwords with a velocity of 20m/sec?(g = 10m/sec²)

A) 20 m B) 30 m
C) 10 m D) 40 m

48. How much is 8% of 40 kg?

A) 2.2 kg B) 4.2 kg
C) 5.2 kg D) 3.2 kg

49. Which property of a metal possessed by it melts when heat is applied?

A) Fusibility B) Tenacity
C) Conductivity D) Malleability

50. What is the carbon percentage in high carbon steel?

A) 0.15% to 0.25% B) 0.02% to 0.03%
C) 0.25% to 0.50% D) 0.50% to 1.50%

51. What is the voltage?
 R = 250 Ohms
 I = 0.44 Amps
 V = ____Volts

A) 100 Volts B) 105 Volts
C) 108 Volts D) 110 Volts

52. How many ergs for 1 Joule?

A) 10^3 ergs B) 10^7 ergs
C) 10^9 ergs D) 10^5 ergs

53. How many watts for 1 horse power in British system?

A) 736 watts B) 726 watts
C) 746 watts D) 756 watts

54. What are the two classifications of system of units?

A) British and Metric B) Metric and International
C) Fundamental and derived D) Gravitational and non-gravitational

55. What is the formula for potential energy?

A) 1/2 mgh joule B) mgh joule
C) mgh² joule D) 2/3 mgh joule

56. What is the area of a right angled triangle having a base 10 cm and height 5 cm?

A) 20 sq.cm B) 30 sq.cm
C) 35 sq.cm D) 25 sq.cm

57. What is the work done, if a force of 250 newtons acted upon a body and the body has been moved through a distance of 15 metres?

A) 3750 Joules B) 3740 Joules
C) 3730 Joules D) 3720 Joules

58. What is the length L2, if total length (L) is 2.75 metre and L1:L2 = 2:3?

A) 1.75 metre B) 1.1 metre
C) 1.25 metre D) 1.65 metre

59. What is the other name of low carbon steel?

A) High alloy steel B) Mild steel
C) Low alloy steel D) High speed steel

60. What is the LCM of 12, 18, 6, 36?

A) 42 B) 18
C) 36 D) 12

61. Which statement is correct according to ohm's law?

A) I = V/R B) I = R/V
C) I = 1/V D) I = R

62. What is the voltage of the immersion heater?
P = 500 watts
 I = 2.27 Amps
 V = _____Volts

A) 210.3 volts B) 230.3 volts
C) 220.3 volts D) 200.3 volts

63. What is the definition of ratio?

A) Relation of two quantities of the different kind B) Relation of two quantities of the same kind
C) Equality between two ratios D) Inequality between two ratios

64. Find the total surface area of cube whose side is 25 cm.

A) 3745 cm² B) 3750 cm²
C) 3755 cm² D) 3740 cm²

65. What is the equivalent unit for 1 horse power in metric system?

A) 75 kg.m/sec B) 78 kg.m/sec
C) 77 kg.m/sec D) 76 kg.m/sec

66. Which is equal to electric power?

A) R²I watts B) I²R watts
C) IRA D) RI

67. What is the primeter of scalene. Triangle having sides of 40mm, 20mm and 28mm?

A) 98 mm B) 68 mm
C) 78 mm D) 88 mm

68. What is the power if an emf of one volt causes a current flow of 1ampere?

A) 1 watt B) 1 kilowatt
C) 1 Kilowatt hour D) 1 HP

69. How much watt second in 1 watt hour?

A) 4000 watt sec B) 3600 watt sec
C) 2000 watt sec D) 1000 watt sec

70. Which law states about electromagnetic induction?

A) Faraday's law B) Ohm's law
C) Lenz's law D) Hooke's law

71. Which property of metal has its power of returning to its original shape after the applied force is released?

A) Plasticity B) Elasticity
C) Tenacity D) Malleability

72. What is the length of each part is a copper wire of 225 metre long is cut into 900 equal parts?

A) 0.28 metre B) 0.25 metre
C) 0.29 metre D) 0.23 metre

73. What is the rate of change of displacement of a body?

A) Body at rest B) Body at motion
C) Velocity D) Speed

74. What is the cross sectional area of a circular ring of D = 38 mm d = 32mm?

A) 320 mm² B) 330 mm²
C) 350 mm² D) 340 mm²

75. What is the perimeter of a rectangle whose length and breadth are 20 cm and 18 cm?

A) 66 cm B) 76 cm
C) 86 mm D) 56 cm

76. What denotes letter M in MKS system?

A) Mile B) Meter
C) Millimeter D) Micron

77. What is the HCF of 18, 42, 24?

A) 24 B) 6
C) 2 D) 18

78. What is the unit of acceleration of an object?

A) Metre/second B) Metre/minutes
C) Metre/minutes² D) Metre/second²

79. How many liters of water a cylindrical tank of radius 75 cm and height 100 cm can hold?

A) 1767.25 liters B) 1769.25 liters
C) 1766.25 liters D) 1768.25 liters

80. What is the unit of speed?

A) Metre/second² B) Metre/second
C) Metre/hour D) Metre/minute

81. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

A) 9.2 watts B) 9.6 watts

C) 9.8 watts D) 9.4 watts

82. How many millimetres are there in 1 inch?

A) 2.45 mm B) 24.5 mm
C) 2.54 mm D) 25.4 mm

83. What are fundamental units?

A) Length, Pressure, Volume B) Length, Mass, Volume
C) Length, Mass, Time D) Length, Mass, Area

84. What is the diagonal of a square plate whose side is 28 cm?

A) 39.29 cm B) 39.39 cm
C) 39.49 cm D) 39.59 cm

85. What is the area of a (A) semicircle whose dia is 20 cm (d)?

A) 157.1 cm² B) 147.1 cm²
C) 167.1 cm² D) 177.1 cm²

86. What is the volume (V) of mercury in cm3, if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm³?

A) 73.23 cm³ B) 73.43 cm³
C) 73.33 cm³ D) 73.53 cm³

87. What is the density (r) in g/cm3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm,³?

A) 7.5 g/cm³ B) 6.6 g/cm³
C) 7.2 g/cm³ D) 6.9 g/cm³

88. Which alloy steel is used to make permanent magnets?

A) Silicon steel B) Vanadium steel
C) Manganese steel D) Cobalt steel

89. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

A) 97.8 ohms B) 95.8 ohms
C) 94.8 ohms D) 96.8 ohms

90. Which is very good conductor?

A) Cast iron B) Copper
C) Steel D) Wrought iron

91. What is the potential energy in a body of mass 10 kg kept on the top of a pole 20 metres height?

A) 1942 Joules B) 1972 Joules
C) 1962 Joules D) 1952 Joules

92. What is volume of the cylinder whose radius is 7 cm and height 12 cm?

A) 1847 c.c B) 1844 c.c
C) 1842 c.c D) 1846 c.c

93. Which is the unit electrical power?

A) Ampere B) Ohms
C) Volts D) Watts

94. What is the specific gravity of the metal, if the weighs 6.5 kgf in air and 3.5 kgf in water?

A) 1.166 B) 6.166
C) 2.166 D) 3.166

95. Convert 52% into fraction?

A) (13/25) B) (17/25)
C) (11/25) D) (9/25)

96. Which machine converts mechanical energy into electrical energy?

A) Battery B) Iron box
C) Generator D) Heater

97. What is the formula for speed?

A) Change in velocity/Time B) Change in momentum/Time
C) Distance in definite direction /Time D) Distance covered/Time

98. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm³?

A) 18.5 B) 8
C) 19.5 D) 19

99. What is the name of furnace to obtained cast iron?

A) Alloy metal - Electric furnace B) Cupola
C) Steel - Rever battery D) Mild steel - Blast furnace

100. What is the force with which a body is attracted by the earth towards its centre?

A) Weight B) Density
C) Mass D) Volume

101. What is called if a body does not change its position with respect to its surroundings?

A) Velocity B) Body at motion
C) Speed D) Body at rest

102. What is the block weighs (W) in kg, if volume (V) is 320 cm3 and density 8.9 g/cm³?

A) 2.848 kg
B) 2.648 kg
C) 2.948 kg
D) 2.448

103. What is the mass in gram, if a force of 15 dyres acting on a mass m producing an acceleration of 2.5 cm/sec²?

A) 7 grams
B) 9 grams
C) 6 grams
D) 8 grams

104. What is the formula for acceleration?

A) Metre/second
B) Metre/minute
C) Metre/hour
D) Metre/second²

105. What is the carbon percentage in low carbon steel?

A) 0.02% to 0.03%
B) 0.25% to 0.50%
C) 0.50% to 1.50%
D) 0.15% to 0.25%

106. What is the volume of mercury in cm3, if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm3?

A) 13.6 cm³
B) 136 cm³
C) 10.6 cm³
D) 10.0 cm³

107. What is the area of a square whose side is 18 cm?

A) 36 cm²
B) 26 cm²
C) 324 cm²
D) 72 cm²

108. What is the unit for velocity?

A) Metre/second
B) Metre/second²
C) Metre/hour
D) Metre/minute

109. What is the current?
 R = 50 Ohms
 220 Volts
 I =_____Amps

A) 4.4 Amps
B) 4.1 Amps
C) 4.2 Amps
D) 4.3 Amps

110. Wha is the mass if the density of a body is 7.6 g/cm³ and its volume is 25 cm³?

A) 200 grams
B) 190 grams
C) 210 grams
D) 220 grams

111. What is the unit of intensity of magnetic field?

A) m/wb
B) wb/m
C) Hertz
D) Coloumb

112. What is the kinetic energy of a bullet of mass 5gm travels with a speed of 500 m/sec?

A) 635 Joules
B) 630 Joules
C) 625 Joules
D) 620 Joules

113. What is called if a body changes its position with respect to its surroundings?

A) Velocity
B) Speed
C) Body at rest
D) Body at motion

114. What is the total surface area of a cylinder having radius 2 metres and height 5 metres?

A) 86 sq.metre
B) 90 sq.metre
C) 92 sq.metre
D) 88 sq.metre

115. What is the square root of 529?

A) 12
B) 43
C) 33
D) 23

116. What is the square root of decimal number 550.37?

A) 21.26
B) 22.46
C) 22.26
D) 23.46

117. What is the formula for total surface area of a cylinder?

A) 2 Pi r (h + r)
B) 2 Pi rh
C) Pi rh
D) Pi r (h + r)

118. What is the potential energy, if a body of mass 250 kg is at a height of 30 metre?

A) 73.57 KJ
B) 72.57 KJ
C) 75.57 KJ
D) 74.57 KJ

119. Which is same in series connection of resistors in a circuit?

A) Current
B) Voltage
C) Power
D) Resistance

120. What is termed as the quantity of matter contained in a body?

A) Density
B) Specific gravity
C) Mass
D) Volume

121. Which among the following is an insulator?

A) Silver
B) Aluminium
C) Copper
D) Mica

122. Which is the example for dynamicallly induced Emf?

A) Generator
B) Motor bike
C) Car
D) Motor

123. Divide (20/31)/(15/62)

A) 2(3/2)
B) 2(1/3)

C) 2(4/3) D) 2(2/3)

124. What is the area of a sector of a circle of radius 5 cm and its angle is 96 Degree?

A) 20.93 cm² B) 20.89 cm²
C) 20.39 cm² D) 20.98 cm²

125. Which alloy used in electric lamp as filament?

A) Vanadium B) Cobalt
C) Tungsten D) Silicon

126. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

A) 2.4 B) 10
C) 5 D) 4

127. What is the capacity of a body to do work is called?

A) Power B) Energy
C) Acceleration D) Force

128. What is the decimal fraction of conversion of 18.5%?

A) 0.195 B) 0.185
C) 0.175 D) 0.165

129. What is the volume of sphere of radius 7 cm?

A) 1463 cm³ B) 1436 cm³
C) 1636 cm³ D) 1346 cm³

130. What is the acceleration of a car if the speed of the car has increased from 25 km per hour to 40 km per hour in one minute?

A) 0.69 m/sec² B) 0.059 m/sec²
C) 0.59 m/sec² D) 0.069 m/sec²

131. What will be the rpm of smaller gear if a 180 mm dia meshes with 60 mm dia gear and the bigger gear makes 60 rpm?

A) 120 rpm B) 140 rpm
C) 180 rpm D) 160 rpm

132. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?

A) 15 B) 6
C) 25 D) 10

133. Which alloy steel is using for making precious instrument?

A) Silicon steel B) Vanadium
C) Manganese steel D) Invar steel

134. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

A) 1.2 W B) 3 W
C) 12 W D) 10 W

135. Find the total surface area of a cast iron bar whose length, width and height are 20m, 15m and 12m.

A) 1640 m² B) 1440 m²
C) 1340 m² D) 1540 m²

136. Which rubber is used as insulator for power cables and control wires?

A) Butyl B) Silicon
C) Hypalone D) Nitrite butadiene

137. What is the formual for induced emf?

A) BL sinq volts B) B²L sinq volts
C) BLV sinq volts D) B²V sinq volts

138. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

A) Cu 98% B) Cu 94%
C) Cu 96% D) Cu 92%

139. Find the curved surface area of a cylinder 10 cm dia and 20 cm height?

A) 638 cm² B) 620 cm²
C) 628 cm² D) 630 cm²

140. What is the name of the metal which do not contain iron?

A) Ferrous metals B) Non-Insulating metals
C) Non-ferrous metals D) Insulating metals

141. Which law states that at constant termperature the current passing through a closed circuit is directly proportional to the potential difference and inversely proportional to the resistance?

A) Hooke's law B) Newton's law
C) Lenz's law D) Ohm's law

142. What is the product of 0.003 x 0.5?

A) 0.0015 B) 0.00015
C) 0.15 D) 0.015

143. What is the area of a circle of diameter 50 cm?

A) 1962.5 cm² B) 1952.5 cm²
C) 1942.5 cm² D) 1932.5 cm²

144. What is the area of an equilateral triangle of side 450 mm?

A) 876.82 cm² B) 866.82 cm²
C) 856.82 cm² D) 886.82 cm²

145. Which insulator is used in over head lines?

A) Porcelain B) P.V.C
C) Mica D) Rubber

146. How much power does it consumes if an electric heater draws a current of 10 amps at 200 volts?

A) 2010 watts B) 2020 watts
C) 2030 watts D) 2000 watts

147. What is called if a body posses both magnitude and direction of velocity?

A) Velocity B) Speed
C) Scalar quantity D) Vector quantity

148. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?

A) Ductility B) Malleability
C) Hardness D) Toughness

149. What is called the ratio between the density of a substances density of water at 4 Degree Centigrade?

A) Specific gravity B) Mass
C) Weight D) Density

150. Which cast iron cannot be welded?

A) White cast iron B) Nodular cast iron
C) Malleable cast iron D) Grey cast iron

151. Which one of the following properties is the mechanical properties of metal?

A) Ductility B) Fusibility
C) Structure D) Corrosion

152. How many days a mechanic takes to assemble 64 machines if he assembles 8 machines in 3 days?

A) 24 days B) 26 days
C) 20 days D) 22 days

153. What is the density of aluminium?

A) 4.7 g/cm³ B) 3.7 g/cm³
C) 2.7 g/cm³ D) 5.7 g/cm³

154. Which property of material enables to formation of permanent deformation without fracture?

A) Elasticity B) Ductility
C) Plasticity D) Brittleness

155. How many newtons for 1 kilogram?

A) 9.81 Newtons B) 98.1 Newtons
C) 981 Newtons D) 0.981 Newtons

156. What is the work done in joules if a load of 15.5 kg is lifted through a height of 4.4 metres?

A) 669 Joules B) 659 Joules
C) 649 Joules D) 639 Joules

157. What is the ore of aluminium?

A) Lemonite B) Bauxite
C) Hematite D) Mallatite

158. Simplify: (3/4)+(2/5)-(5/20)

A) (3/10) B) (13/10)
C) (12/10) D) (9/10)

159. What is the ratio of 4 kg to 800 grams?

A) 02:04 B) 04:08
C) 08:04 D) 05:01

160. Which steel is used for making files and cold chisel?

A) Stainless steel B) High carbon steel
C) Midium carbon steel D) Low carbon steel

161. What does EMF stands for?

A) Electro Motive Force B) Electro Magnetic Force
C) Electronic Magnetic Force D) Electromated Force

162. What is the capacity of a conical tank of radius 2 m and height 5m?

A) 31 m³ B) 11 m³
C) 41 m³ D) 21 m³

163. What is the resistance?
 I = 11.5 Amps
 V = 380 Volts
 R = _____Ohms

A) 33 ohms B) 43 ohms
C) 13 ohms D) 23 ohms

164. What is the work done in unit time?

A) Power B) Acceleration
C) Energy D) Force

165. Which furnace is used to get pig iron from iron ore?

A) Mild steel - Rever battery B) Blast furnace
C) Electric furnace D) Cupola

166. Which one is non-metal?

A) Graphite B) Brass
C) Iron D) Mercury